The Next Generation in User Experience

White Hat

UX

Trine Falbe
Kim Andersen
Martin Michael Frederiksen

Preface by Aral Balkan
With contributions by
Amul Kalia and Andreas Ramos

The web addresses referenced in this book were live and correct at the time of the book's publication but may be subject to change.

Marketing, IT and sales people all over the world work hard every day to make deceptive user experiences. **You are better than that.**

Evaluate

Build

Join the Light Side of the Force

Aral Balkan, Malmö

DESIGN OR DECORATION?

Y ou are reading this book at a time when the business of mainstream technology is not to create useful products and services for people but to create products and services that exploit one group of people for the benefit of another group.

In Silicon Valley parlance, the former group are called "users" and the latter group are called "customers." This is the business of nearly every mainstream technology company today, including Facebook, Google, and Snapchat. These companies care deeply about what they call UX (User Experience), but they do so not for the reasons that you might think.

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.

You might be wondering why these companies do this. The answer is simply that it's their business model; monetising their users is how they make money. This is a systemic problem that stretches back all the way to the way in which these companies are funded and the the socio-economic system in which they are founded.

Soshana Zuboff from Harvard Business School calls this socio-economic system 'Surveillance Capitalism'. Surveillance Capitalism is what you get when you combine the accrual of wealth that is the hallmark of Capitalism with the accrual of information that you get from surveillance. It creates a feedback loop between the two where technology acts as an amplifier that accelerates the gap between the haves and the have-nots while simultaneously eroding our democratic institutions and human rights.

I call the business model of companies operating within Surveillance Capitalism "people farming."

People farming is the process of obtaining, storing, and exploiting information about people. In industry parlance, we call this information data and the aggregations of your data held by corporations are known as profiles. These profiles, far from being static pieces of paper in a manilla envelope somewhere, are dynamic simulations of you. The more data these companies have about you, and the more time they have to keep analysing them using their algorithms, the more accurate these simulations get. And the more accurate your simulation gets, the better these corporations can exploit you.

At this point, if you're somewhat repulsed and perhaps a little angry or scared, good. That's the correct response to what is, quite frankly, an entirely unpalatable system that is toxic to social justice, democracy, and our human rights.

This is where the role of a UX designer and the marketing team comes in.

The goal of the UX designer in mainstream technology is to create a seamless experience that will distract or amuse you. Other goals are to addict you to the product so that you will keep using it (and thus divulge even more information about yourself). Your focus must be kept on the features of the product, the delight of the experience, and on the value you derive from the product so that you do not worry about what the product is actually doing (which is that is it tracking, storing, and analysing your behaviour so that it can exploit it for the benefit of the company and its customers).

If you're happy with this, you can stop reading now. You have a potentially lucrative career in UX Design to look forward to. Congratulations, may it bring you much money, a big house, and a fancy car.

If, however, you want to do better and make meaningful experiences that truly improve people's lives, read on.

All design is influence but design without ethics is manipulation. In fact, it isn't design at all; it is decoration.

Design is the holistic process of creating organisations, processes, and practices that enable the production of experiences that improve people's lives. Decoration is the process of hiding the true intent of a product or service so as to trick people into using them when they otherwise would not.

Design attempts to empower people; decoration attempts to make sure an otherwise unpalatable system is not rejected by the people decorators call "users."

So if you want to practice design, not decoration, start by removing the euphemism "user" from your lexicon. Instead, start calling people "people." It's a small but important step.

But we don't have to stop there. Let's go further and adopt a core ethical framework to our work.

The Ethical Design Manifesto is one such framework.

Ethical Design is not rocket science. It has three basic tenets, all of which are actually extensions of one core tenet: respect.

To practice design (not decoration), build organisations, processes, policies, products, services, and experiences that respect human rights, human effort, and human experience.

If that seems rather abstract to you, let me elaborate: Products that respect human rights are zero-knowledge and decentralised. That means that they do not track people's behaviour or hoard their data. This is as simple as designing a product so that instead of a cloud (someone else's computer), it stores its data and algorithms on the person's own devices. Whenever that's not possible, any centralised nodes use end-to-end encryption and act merely as facilitators to aid in availability and findability.

Furthermore, products that respect human rights are interoperable and free and open, so that they do not suffer from lock-in and so that you don't have to trust them (as they can be independently-verified).

And, as importantly, products that respect human rights are accessible to people of different abilities.

But we can't stop there. While respect for human rights constitutes the core of Ethical Design, we must also make sure that our products are functional and convenient to use. (Otherwise, quite simply, people will not use our products or services, no matter how much they respect human rights like privacy.)

And let's not stop there either: let's create products that respect human experience; experiences that are beautiful, amusing, and delightful.

This book will teach you how to do that. But remember that a tool is just a tool. You can use the lessons within this book either for decoration or design.

I hope you will choose the latter and join us in making the world a better, fairer, kinder and more delightful place.

Aral Balkan

INTRODUCTION

A few words are missing
from the dictionary

We already know the terms white hat, grey hat and black hat from SEO (Search Engine Optimisation). White hat is SEO done right and with decency.

Getting a decent ranking in a Google search by using white hat methods is not unrealistic. The same result is achievable with black hat methods, but it represents the other side of the coin: improving results through manipulation.

When we decided to write a book about getting better results by utilising UX, we realised that user experience design has the exact same good/evil dilemma as SEO.

The importance of digital projects is rising, e-commerce is growing and the battle for the online market is intensifying. Thus increasing the motivation to cheat, and with growing sophistication in the methods used to do so.

On that notion, we have invented three new dictionary terms inspired by SEO.

White Hat UX are good user experiences that generate happiness and good results.

Grey Hat UX is somewhere in the grey, middle area. Incompetence is often the reason why websites, apps or features end up in the grey zone. It has not been designed that way on purpose, but it is unclear to the user what the system is doing. The design is not intentionally malicious, but from the user's perspective, it serves a bad experience.

Black Hat UX covers deliberately deceptive and manipulative experiences designed to get users to do the exact opposite of what they intended. To us, this approach is not a sustainable, long term strategy.

We cannot remove every con artist and deceptive website on the internet. But people will increasingly discover it, and they will speak up and spread the word. Social media is the perfect place to cook up a shitstorm. And this is just one of many reasons why Black Hat UX is an unwise strategy.

The Three Sections in the Book

The book is split into three main sections:

Discover. This section gives an overview of design patterns, especially anti-patterns and dark patterns. What is happening to our internet and why is it a problem?

Evaluate. How to evaluate the quality of your own systems and clarify your own strengths and weaknesses? How do you perform constructive tests without drowning in tasks and priority lists?

Build. This section has tips on how to cooperate across teams, how to become better at what you are doing and, not the least, how to design White Hat UX experiences instead of using dark patterns.

Deception

Normally, it is not punishable by law to design bad user experiences.

This book does not only address the challenges related to the protection of online privacy. The book is also about the bad user experiences we are bound to face evermore frequently as the online economy grows.

Some people believe this type of deception is worth it in the long run. We do not share that belief.

A deceptive user experience may be designed by building an ingenious system that makes the user do something wrong. This type of dialogue, as an example, is pure and simple manipulation: "Tick this box if you do not want to receive our newsletter".

The deception may also happen by not holding one's promise to treat the user's information confidentially. Online competitions, as an example, often serve as a way to harvest email addresses with the purpose of selling them to a third party.

We are more worried about our online privacy than ever before. And with good reason. We are under surveillance. Social media is registering far more information than is necessary. Online security is generally not good enough, and "confidential" data is hacked.

The tricky thing to understand is that so-called free services are often designed in a way that the "product" is free. But in fact, the product is you. The business model is to collect the highest possible volume of user data and then, subsequently, determine who is willing to pay the most for the hoarded business intelligence.

While all this is happening, global consumer trends are also sliding. As consumers, we believe in openness, honesty, confidentiality, shared economy, responsibility and sustainability.

In the near future, we will see an increasing amount of examples of how executives in large companies tell beautiful stories about their business values. They will say all the right things in the media: They believe in treating children, animals, plants and trees well, in supporting the poor and building wind turbines. All of it done sustainably whilst riding a unicorn.

But the same company has a problem on their hands, if they act in direct opposition to these values in the online space.

White Hat UX is not about being self-righteous.

In the end, you get better results if you design good, fun, exciting, lovely, interesting and real user experiences. You will also sleep better at night, be able to look yourself in the mirror - and live longer. Okay, perhaps not entirely true, but almost. Whatever the case, we have written this book to show how to create excellent user experiences online. It is neither difficult nor unrealistic.

The book walks you through the most important terms related to user experience. It has everything you need to get a solid start to White Hat UX.

It is the right thing to do.

Discover

WHITE HAT, GREY HAT AND BLACK HAT UX

White Hat UX

The term "white hat" in internet slang refers to an ethical computer hacker or a computer security expert, who specializes in penetration testing and in other testing methodologies to ensure the security of an organization's information systems.

Wikipedia

White Hat UX is all about using the UX toolbox to design better systems and achieve better results by the means of transparent and honest methods.

When a business refrains from tracking sensitive user data, they only collect the necessary data to enable the customer to finish their purchase. And they do not sell the data to other businesses.

However, they may choose to track user behaviour to enhance the user experience.

Test is an integrated part of a White Hat UX approach. You involve your users and you treat them well in all touchpoints they have with your business. And you make amends if you happen to forget your best behaviour on rare occasion.

Grey Hat UX

The term "grey hat" refers to a computer hacker or computer security expert who may sometimes violate laws or typical ethical standards, but does not have the malicious intent typical of a black hat hacker
Wikipedia

In the Grey Hat scenario you use patterns that are borderline OK. Facebook's targeted ads that are based on the websites you have visited is an example of Grey Hat UX.

Using methods in the grey zone is either a deliberate strategy or incompetence. The deliberate strategy aims to exploit immoral, but not illegal, methods. Incompetence results in systems with severe usability issues.

Black Hat UX

A black-hat hacker is a hacker who violates computer security for little reason beyond maliciousness or for personal gain.   Wikipedia

Several methods can be classified as Black Hat.

Dark Patterns fall under Black Hat UX by aiming to get users to do the opposite of their intentions.

"Tick this box if you do not want to subscribe to the newsletter" is a dark pattern.

Other methods include:

- Subscription services where you actively have to unsubscribe several products.

- Hidden advertising in the shape of content fields that when clicked opens up an ad.

- The user is required to submit irrelevant information, like indicating their age to buy a book.

- Road Blocks. When the user is forced to switch off their ad blocker to see the content of a website.

- A competition that requires you to submit your email address and telephone number to participate.

Black Hat UX and Communication

Black Hat problems are also found in the field of communication and UX.

Imagine that the marketing department has created a campaign site that - from a UX standpoint - meets all standards.

The traffic on the site is too low, so the marketing department asks Bureau X to help create more traffic. Bureau X is commissioned and are paid only if they produce results.

Without the marketing department's knowledge, Bureau X now buys 100,000 email addresses that have been collected with borderline illegal methods. In other words, the marketing department might not know that they are in fact part of a Black Hat project.

The consumers, on the other hand, will find out.

A BRIEF INTRODUCTION TO UX

UX is an acronym for User Experience and denotes the user experience in a digital channel.

You may take a wider perspective with Experience Design, in which case the term covers digital and physical experiences. It could be a shopping experience where you face the physical shop layout, use digital systems such as touch screens, and pay through your phone.

Since digital plays a role in nearly any everyday experience, taking a general look at Experience Design is beneficial.

Many people do in fact refer to both digital and physical experiences when using the term UX. We will do so too in this book. In our terminology, UX is the entire user experience, whatever the channel.

Digital and physical aspects of UX intertwine:

- A good experience in the physical world may be ruined by a bad digital experience.
.
- The opposite might also be the case.

You always remember the worst experience afterwards, whether you are buying theatre tickets, ordering a pizza, sending a text message or entering a supermarket.

UX focuses on the user's behaviour, attitudes and emotions while using a product, system or service.

The user experience can be broken down into levels:

- The user's precise needs have to be met without any fuss or hassle. This requires the user to receive or have all necessary information to perform the task at hand, no more and no less.

- The process cannot contain any redundant steps or requirements to remember something from an earlier step.

- The interaction must be well-known.

- Errors have to be handled effectively and discretely. If the user makes a mistake, it must be easy to correct it.

- If a function is used frequently, it must be efficient to use, for instance through shortcuts.

- The user has to feel in control the entire time. The user has to control the system and not vice versa.

- The experience must be memorable, which is best achieved by adding a layer that creates an emotional reaction. Something delightful and unexpected, a "wow" experience or a quality level off the scale. The tricky part is to figure out exactly what makes the individual user's experience memorable.

A Constantly Moving Target

One of the big challenges in UX is that expectations are constantly changing. Just take a look at how we search online.

Before Google, the biggest search engines were designed according to the LSD principle. And no, it is not the drug. The acronym means "logo, search, directory." Sites like yahoo.com consisted of a logo, a search field and a categorised outline.

Since online search was still a new phenomenon, the search field was not noticed by many users. Instead they saw the categorised outline as a sort of modern telephone directory.

Then Google and others came along and made search the primary method of finding things on the internet.
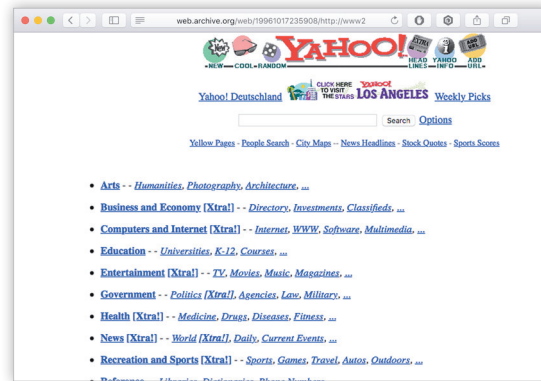
In 1996 the Yahoo search engine consisted of a Logo, Search and a Directory. A so-called "LSD"
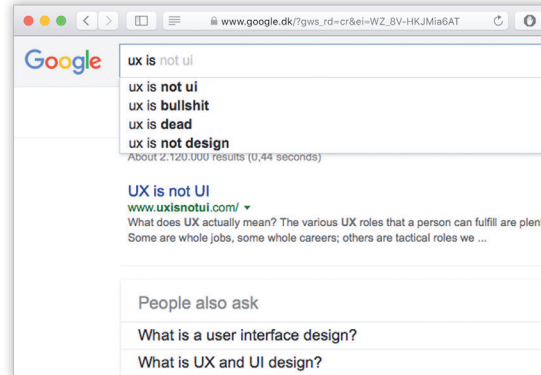
Modern search engines like Google use type ahead to ease the search process.

Google's search engine was launched onto a market already crowded with search engines such as Infoseek, Altavista, Yahoo, Lycos, LookSmart and HotBot. Google stood out with its minimalist interface with only a logo and a search field. The search itself, however, was fast, and the formatting of the search results was top of the line.

Google's design influenced not only search engines, but the entire internet. Search is used everywhere and every time Google introduces a new feature, it gets replicated across many other websites.

When Google introduced type ahead (where the system makes relevant suggestions after three or more characters have been entered into the search field), many websites were frowned at as being old-fashioned.

Thus, the best experiences become the new baseline, and users expect all other systems to introduce the same improvements.

Businesses who do not meet the expectations of their users are left behind. There are plenty alternatives – competitors – if an experience does not meet the standards.

Two Different Definitions of UX

User experience (UX) refers to a person's entire experience using a particular product, system or service

Wikipedia

User experience encompasses all aspects of the end-user's interaction with the company, its services, and its products

NN Group

The big difference between the two definitions is the scope. According to Wikipedia, UX is about the product. NN Group goes one step further and includes the interaction with the company as a part of UX.

Almost Like a Decathlon

UX is difficult to learn, because it involves understanding the emotions and impressions of people, and in that respect, analysing systems becomes a rather subjective task.

In addition, systems are mostly digital, and their performance, retention rate and return on investment are measured extensively every time a new version is launched.

UX designers have to master qualitative and quantitative survey methods in combination with the ability to perform test automatisation and understand data analysis.

It is almost like a decathlon. The key is to become skilled at a number of disciplines and compete well within each discipline. It is practically impossible to win if you botch the final two disciplines, even if you excel at the first eight.

Decathlon For Teams

To make everything even more complicated, today's user experiences are digital and physical mix & matches.

This means that the team behind a good project might include concept developers, programmers, system architects, testers, decorators, interior designers, marketing folks and sales staff.

Who will glue all this together and make everything work?

That would be us - the people who work with UX.

UX, UI, UCD - U Tell Me!

People who work with user experience and experience design like to use other types of U words. Apart from UX, the dictionary includes:

UCD. User Centered Design. A method that aims to involve the user in the entire design process, from concept development to finished product.

Usability. There is no acronym for usability. Usability is briefly defined as "ease of use", i.e. how easy something (a system or a physical product) is to use. When you work with usability, most of the time is spent testing.

UI. User Interface design. This often means buttons, layout and aesthetics. Typically referred to as "the design", which is not entirely correct.

All these U words are part of the UX umbrella. The experience is influenced by many variables:

- Is the product a solution to my problem and does it cover my need?

- Is it easy to use?

- Is it pleasing and friendly looking?

The context of use also influences the user experience. So do factors outside of your control. When you experience an app that will not load on your phone, you are likely to blame the app. But the issue might as well be caused by a network or third-party error.

Finally, there is a secret ingredient in UX: the emotional factor. The emotional reaction that people get from using the product or the service.

The attentive reader is now wondering: is it a realistic ask of a UX designer to work with and solve all these factors that influence the user experience? Can we expect a UX designer to be a designer-programmer-usability-expert-brandmanager-psychologist all in one?

The short answer is "no." However, it comes with a "but."

As we have just read, the user's experience is influenced by all imaginable processes in a business.

Therefore it is a seriously wrong decision to only include UX in the design team. What do you do when the user had a bad experience with the incredibly gorgeous product, because the communications people were doing a bad job? Could it have been avoided if UX had been part of the communications department? Perhaps. But probably not.

UX is a team discipline, a decathlon for teams, not an individual sport.

UX is everyone's business.

All the U's Are Connected

The UX toolbox contains methods to:

- Understand user behaviour through research.

- Identify the users' wishes and needs.

- Define user flows that combine user needs and business requirements.

- Test existing and new features and flows in order to optimise engagement and experience.

Let us take a closer look at how all the U's above connect.

UX is Usability

Usability is a fundamental part of user experience, especially when it comes to bad user experiences. It can be very frustrating to use a product with flawed usability.

Usability is broadly speaking how easy a system or product is to use. How easy the product is to use is a key element in a good user experience.

A good example of how usability influences the user experience is when you want to log in to the so-called "free" wifi on a plane as a Plus Ticket holder.

First, you are asked for your "Frequent Flyer Number" — which nobody ever has at hand, least of all when trying to access Wifi on a plane.

If you are not a Frequent Flyer member, you can sign up to become one. So even if you **did** pay for an expensive ticket, it turns out after all that Wifi is only free if you have a Frequent Flyer Number. Even when free Wifi is part of the ticket...

The example above clearly shows that the context of use was not considered during the design of the wifi login system. The decision was probably not made by the designer, but rather someone from the sales department with little knowledge about usability.

If only they had asked for the user's email address instead, which is likely linked to the Frequent Flyer Number anyway. This would have given the user a fair chance to log in and have a great experience by being online on a flight across the Atlantic.

UX is User Centered Design

Good UX is the outcome of extensive footwork and cooperation between business, design, tech and marketing. The method apparatus to achieve this is found in one of the other U words: User centered design.

User centered design is a method to involve the user in the actual design of the product or system, instead of delaying user involvement until right before launch.

Working user centered typically implies involving the user through early user research to define the user needs. In addition, real users are involved in concept tests and usability tests in the various stages of the design process.

Developing personas and scenarios to understand the user's perspective is part of working user centered. These methods are

often mentioned in relation to UX. You cannot design experiences for people that are unfamiliar to you.

Frankfurt Airport works user centered. When you buy a pretzel – or whatever you fancy at the bakers – in Frankfurt Airport, the bread is put in a – seemingly ordinary – paper bag. But a closer look reveals three scenarios with how to use the bag:

1. You may use it to relieve hyper ventilation.

2. You may scan the QR code on the bag, become a Frankfurt Airport Reward member and receive a voucher (this was where marketing had their say).

3. The printed face on the back of the bag turns it into a hand puppet that you can use to make the waiting time fun for your child.

The bakeries at Frankfurt Airport suggest 3 ways of using their paper bags.

The scenarios above are stellar examples of an experience that exceeds expectations, made possible by a business who takes the time to familiarise themselves with their customers. Someone thought about those afraid of flying and those travelling with children. All of which has not added to the production cost of the product. And chances are it will get a positive spin-off on social media..

But why not just go with protocol and leave UX with the designers?

The short answer is: because your users, and ultimately your business, will suffer if you do.

PRIVACY ZUCKERING

B usinesses are under great strain to act with more transparency. Consumers want openness and honesty, and sustainability has even reached critical mass in the U.S.

At the same time, it has never been easier for companies to harvest, store and exploit the online behaviour and personal information of their customers.

Globalisation, the internet and especially social media has made the world smaller. 50 years ago you had 10 local stores to choose from. Today you can shop all over the world if you are not happy with your local choice.

Trade is supported by modern methods of payment and shipping, plus an incredibly low price on transport.

It has truly become the "Age of the Customer", as Forrester calls it.

Consumers are empowered to be proven right in case they are dissatisfied. A country musician's guitar was broken on a flight with United Airlines. Nobody wanted to accept a complaint, so he made a video that now has millions of views on YouTube. In

the end the case affected the airline's share price, was made into a book and even has its own article on Wikipedia.

We, the consumers, have had enough of inadequate service and bad practice. We will not accept that our personal data is being exploited.

This is why it has become perfectly normal for digital service providers to protect themselves behind a wall of justifications.

In the Age of the Customer a complaint may just result in a book as was the case with United Breaks Guitars.

The EU introduced a cookie policy in Europe. Websites now have a duty to inform users that they are being registered. However, the cookie policy offers about the same amount of user protection as you get when being greeted by a store clerk, i.e. not really protection at all. It is impossible to check if a website lives up to its promises. It is a false sense of security.

Tea Leaf from IBM is part of a growing category of tools that monitors customers across devices without using any cookies at all. It is a product in the "digital customer experience management and customer behaviour analysis solutions" category, and with it you can learn nearly everything about an individual customer's behaviour.

It is up to you whether you want to use these types of tools to enhance the user experience or to increase sales. There is usually a business case for doing the latter.

It is a complicated subject, one that is covered in numerous books.

In short, these types of tools use individual, complex surveillance to map behaviour of people who use websites and apps.

This does have a positive UX angle. You may learn, for example, that some users drop off because of bad response times, or because of phone hardware issues. In the latter case, it makes sense to do follow-up tests on the phone types that were detected as drop-offs.

The dark side of these systems is that they are generally capable of tracking individuals across devices and without using cookies. If you believe that the EU's cookie directive provides any real consumer protection, it is only because you are not aware of how much you can do without any use of cookies.

It is well known that Google reads over your shoulder. If you have a Gmail account, the obvious business case is for Google to electronically read all emails and use the processed data for targeted advertising. Google has never been a search engine, but in reality an advertising platform that utilises search and other business intelligence to optimise their sales efforts.

Is Google not a search engine? It is and it is not. Google did enter the market as a search engine, and we use Google to search. But if you look in the company's financial reports, Google is not driven by search. Their biggest income is advertising. While many people think of Google as a search engine, it is obvious that advertising income drives the company's business decisions. Search is merely an activity to drive traffic and harvest user data.

Does it get any more Black Hat?

In other words, we, the consumers, have become the product. But that is not all.

Privacy Zuckering is a term named after Mark Zuckerberg, the founder of Facebook.

The term is used in connection with systems or interfaces designed to harvest unnecessary user data with a wrongful or hidden purpose.

When you take part in a quiz on Facebook about your knowledge of the 80s, Facebook is lurking in the background and tracking your answers in order to profile you. Who knows, maybe your appreciation of Def Leppard would tempt you to respond to an ad for their greatest hits album?

Facebook is very aware or our privacy concerns, and improvements on the privacy settings are announced on a regular basis.

And for every update, Facebook scatters the improved privacy settings in a way that makes it impossible for users to find and make use of them.

Privacy Zuckering is a dark pattern. The story is "we are doing it to help the user", but the practice is the very opposite.

And it does not stop here.

Facebook has also changed their search feature, so that public searches now include results from private Facebook posts.

The many changes of the privacy policy over the years has meant that people share 21% less on Facebook than previously. This makes it important for Facebook to restore their users' confidence.

Every privacy setting change creates structural problems in terms of translating settings from "before" to "now." Alex Hern writes:

"Every profile on Facebook now shows up when users search for it by name, even those, like mine, with the tightest possible settings, no friends in common, no profile picture, and no content posted. Worse, if you then click on the profile, a large amount of information is still public: any page I've liked, any group I've joined, and, if I had any, every friend I have on the site."

Alex Hern's article on how Facebook decided to make all profiles publicly searchable.

Facebook changed their terms of service to enable the exchange of information with other services. WhatsApp did the same after initially promising to never share information with third parties, and the two services now exchange user data.

There is an abundance of critical articles about Facebook's change in their terms of service; however, Facebook is the world's biggest social network and difficult to live without for many people. Facebook is able to get away with quite a lot, and they know it.

The question remains: what is Facebook doing that we **are not aware** of?

Privacy Zuckering is a famous dark pattern. But we encounter dark patterns in numerous other ways and are often unaware when interface design is being used to deceive us.

They promised us **never** to do that. Then they did.

Mouse Tracking

There are several tools to measure cursor movement on screens. Mouseflow is one of the complete solutions.

You can, among other things, see heatmaps that show how users click on the website. You are also able to measure how much users scroll on each page.

Why is that interesting? If we want to know whether our users are "looking at a page", it is worth knowing if they read the page in its entity or only looked at the very top of the page.

A Black Hat method to earn a little extra cash from your website is to sell banner ads and let customers pay per impression, and then place the ads at the bottom of the page. In that case the ads have technically been shown - even if no one scrolls to the end of the page to view them.

Tools such as Mouseflow also work as a White Hat method to analyse how the user views each page, as the knowledge can be used to improve the user experience. And ideally this would all be followed up through qualitative UX tests with people from the target group.

BLACK HAT UX: 12 DARK PATTERNS

A dark pattern is a deliberately misleading design pattern created with the purpose of getting the user to do something unintended. Whereas anti-patterns are used because of ignorance and lack of attentiveness, dark patterns are used deliberately.

A site typically uses dark patterns because the business wants **more** of something.

"More" can include selling more insurances, getting more newsletter subscriptions, harvesting email addresses to sell to a third party or to get more app downloads.

Here is a selection of dark patterns found across sites and apps.

1. Bait and Switch

The intention of this dark pattern is to trick a user to perform another action than originally intended. Microsoft has provided a particularly nasty example with the Windows 10 update, where clicking a red X in the right corner of a window will initiate the update. The normal Windows function for a red X in a corner is "Close window."

Very few users have expressed their enthusiasm with this unexpected system behaviour.

2. Disguised Ads

When content on a website looks like an article, but is in fact an ad.

Anyone who have downloaded software from a download site will recognise this dark pattern.

3. Forced Continuity

This dark pattern involves tricking the user into paying at least one month's subscription.

The trick is to offer a free trial subscription. The subscription cannot be cancelled automatically, and the user will forget all about it before the trial period expires. After the initial month, the user is transferred to a paid subscription, because they gave up their credit card details upon signing up for the free trial.

The pattern can be combined with a cancellation process so difficult that users cannot figure out how to cancel.

4. Forced Disclosure

When a product is delivered digitally, there is no need to know the user's address. And when an app does not need camera or location access to work, it should not ask for it. If forced disclosure is used, the users are forced to give up this information regardless.

There might be other intentions behind forced disclosure, but the most common is that your information is sold on to a third party and later used for marketing purposes.

5. Friend Spam

When your Facebook friends share advertising-related content from a specific company, they are subjecting you to Friend Spam. Many people remember Farmville for that strategy.

If you use Facebook or Twitter to log in to a service, you are often handing over a certain access to your data in return. The site or the game only "forgets" to tell you that it will auto-post content on your profile. How is that for aggressive organic marketing?

6. Misdirection

This pattern can be observed on sites that offer several versions of the same product, for example flight tickets and software.

It is misdirection when a software site with Free, Individual and Pro versions of their software chooses to highlight the "Individual" or "Pro" versions. Everything is focused on pointing your attention to the paid-for solutions and avoid you noticing the free version.

7. Road Block

A road block is used to prevent users from accessing content. To remove the block, users are forced to do something they would prefer not to.

USA Today would like to show ads to their users. Therefore, all readers who have an adblocker installed are met with a message asking them to deactivate it before getting access to the content.
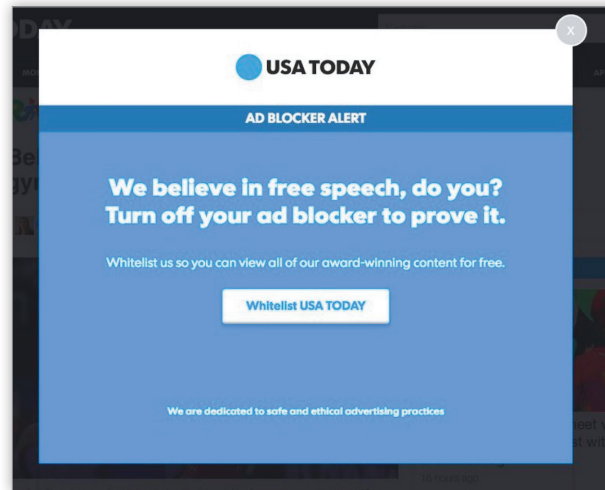
USA Today's message to online readers: "Disable your ad blocker!"

8. Roach Motel

Have you ever succeed in deleting a Skype account? If you did, we would like to hear about it!

Skype makes it incredibly difficult to delete an account, in fact so hard that you have to call customer support and endure a 30-day waiting period. If you can locate the support phone number, that is.

Roach Motel is a pattern that aims to make it easy for the user to sign up, and difficult to get out. The pattern is seen when a user wants to delete their account, and also in checkout interfaces. Here the trick is to remove the link to the front page to make it hard for the user to exit checkout before completion.

9. Door Slam

This patterns is very similar to Road Block. It is often used on websites that want users to download their app, in which case they cover the entire screen with a call-to-action.

This would be achievable in a less intrusive fashion. Not all users want your app. They might find the mobile website perfectly adequate for their needs.

10. Trick Questions

If you want to set up an account at sky.com, you are met with two check boxes. One is the mandatory accept of terms and conditions. The other seems to indicate that you have to tick the box if you would like to be contacted by Sky in relation to offers.

It is a trick. The text says: "Sky may contact you about products and services you may like unless you click to opt out." Read it carefully. It is a beautiful example of a trick question. We despise it.

11. Clickbait

This pattern can be identified by its sensational headline, or a tagline that ends with "You will never guess what happened next!"

The bait has been released and the sender is now waiting for the user to bite. Many news sites and marketing campaigns use clickbait, and the common denominator for all of them is the purpose: increase traffic and thereby the advertising income.

12. Hidden Costs

Some sites will hide the shipping costs until the very last step in the checkout process. Others will add additional transaction fees. The really nasty ones will do both.

User Efficiency

Following these two simple rules can help nudge a user in a particular direction:

1   Everything that supports your own business must be easy for the user.
2   Everything that is not beneficial for your business must be difficult.

These rules are the fundamental philosophy behind many dark patterns. It must be easy to become a customer, and difficult or impossible to leave. The keyword is user efficiency. Online consumers are impatient and expect every-thing to work with high speed. If something gets too difficult, they leave.

To be White Hat, do the following:
1   Identify your 10 most important user flows.
2   Measure the conversion rates.
3   Measure the amount of clicks and reloads it takes to complete each flow.
4   Redesign the flows to a simpler state.
5   Measure the conversion rates again.

Experience from many e-commerce projects shows that simplified flows and faster response times directly affect revenue. User efficiency is important to all of us. You decide whether to use it with the Black or White Hat.

UX GONE WRONG

A good product inside the wrong packaging is not a good product. It is a piece of junk. After all, the product is the user experience.

When UX fails, everything fails. Not only the money spent on UX is wasted. The entire investment is useless.

Take a look at what we have found on the internet. There is no shortage of things gone wrong.

Here is an example of perhaps the world's worst interface for entering a telephone number.
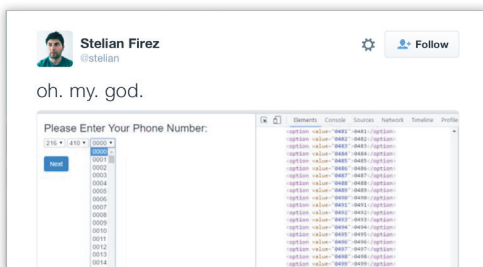
You can design the input of a telephone number in many different ways, but using a drop-down menu for this should be illegal.

This website uses the "carrot on a stick" method, but moves the carrot as soon as it is within reach.


1. Awwwards is offering a free download of "Brain Food for Digital Creatives". The only requirement to download the file is that you tweet once – or so it seems.

2. They have even written a nice text that automatically shows up in a box to make it easy to send your tweet. There is nothing wrong with a bit of promotion in return for an e-book, right?

3. Wrong. It turns out a tweet was not enough. You also have to submit your email address. If you want your e-book, you will have to pay twice.

Amazon wants in on it too.

It is possible to buy virtually anything on Amazon, pay with most credit cards and choose between a lot of different shipping options. Everything is packaged in a user experience with so many windows and options that you cannot help to think "What happened there?" afterwards. This user signed up to an Amazon Prime account without even noticing it.
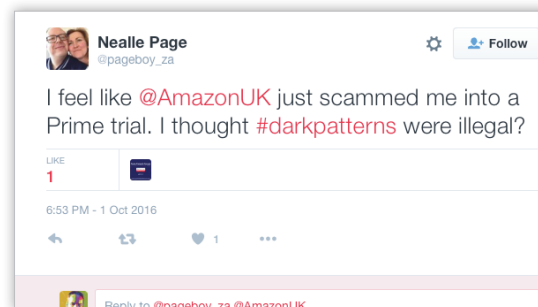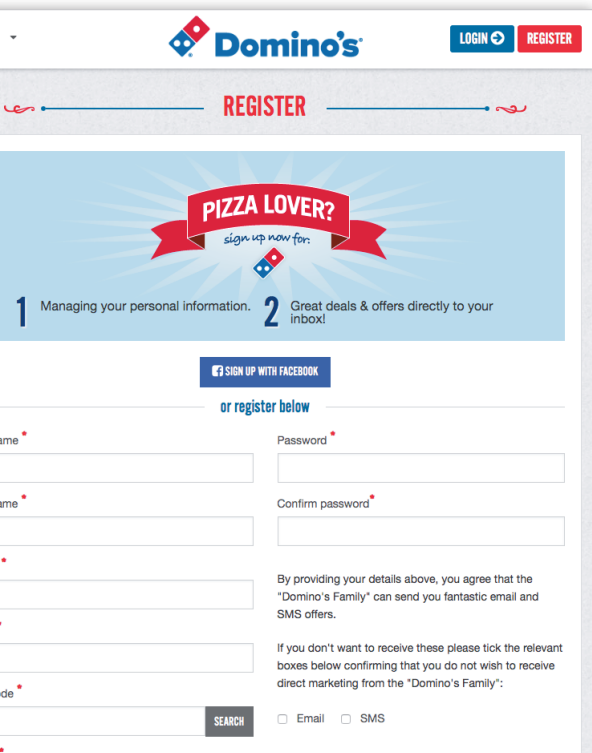
Or what about this checkbox phrasing to make the users do something against their will?

Domino's do not shy away from asking a trick question: "If you don't want to receive these (emails) please tick the relevant boxes below confirming that you do not wish to recieve", blah, blah, blah.

We hope you enjoy your pizza while we send you some spam.

Some companies express themselves in ways that no one understands.

Cheapoair. Online airline ticket providers have started to clean up when it comes to using dark patterns.

Previously, the ticket price could easily grow five times from the initial, cheap price by the time you were through choosing your seat and baggage and were finally allowed to get on the plane.

There are still some leftovers of scare tactics: at Cheapoair, for example, you have to confirm twice that you are not afraid of the plane crashing.
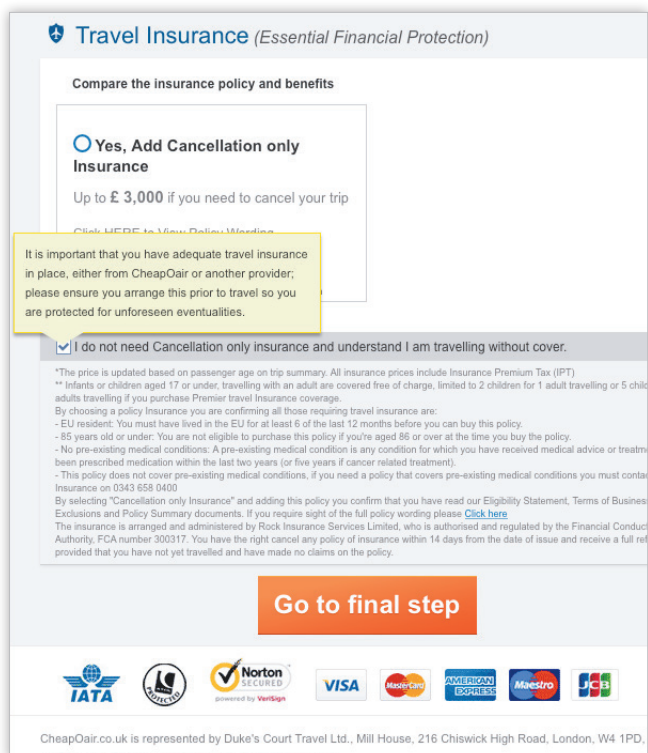
You will also experience companies who have a hard time letting go (of you).

Shopify is an e-commerce solution to increase online sales. And they know what they are talking about when it comes to selling.

They are so keen to hold on to their customers that they choose not to link to your account in the invoice email.
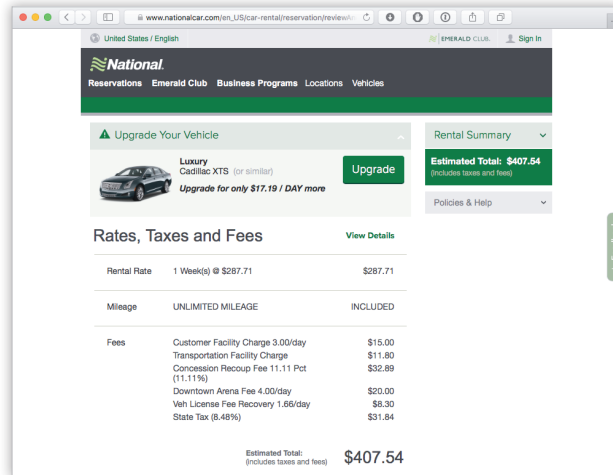
Maybe Shopify thinks it should be difficult to close your account. Instead you can see your latest invoice or "improve your sales and marketing" with "Kit". Well...
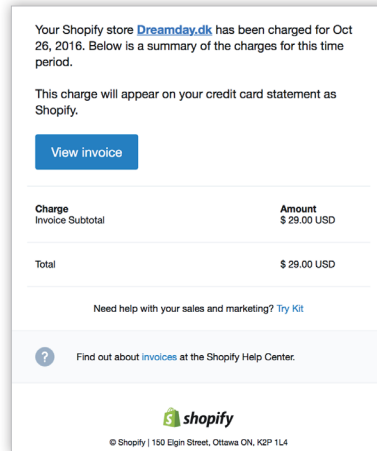
Others add fees without telling why.

National. Congratulations! Your rental car is $287.71. After paying a number of interesting - and difficult to understand - fees, you may collect it and pay $407.54. The point is to not understand what you are paying for, and there is no upper limit to the surcharges that might be added to the bill.

All the fees could of course have been calculated into the initial price, but would have made the car look far too expensive.

And there are those who just charge without delivering anything at all.

Network Solutions. Would you like to buy a domain name? We cannot help you there, but we are happy to receive 9 Euros annually to have the name on a list we keep an eye on.

Many subscription schemes charge for ongoing deliveries. Network Solutions have expanded the concept by offering a subscription of absolutely nothing.

And those who offer irrelevant additional purchases.

Sports Direct. Would you like to buy a green top? Just click on "Add to bag".

Since you have now ordered a green top, we thought you might also like a free ad and a free mug. In return, we have increased the price for shipping.

There are also those who do not want you to leave the shop.

Skype. It is so difficult to delete your account that someone made an instruction for it.

The trick is to keep the account, but change all information to nonsense.
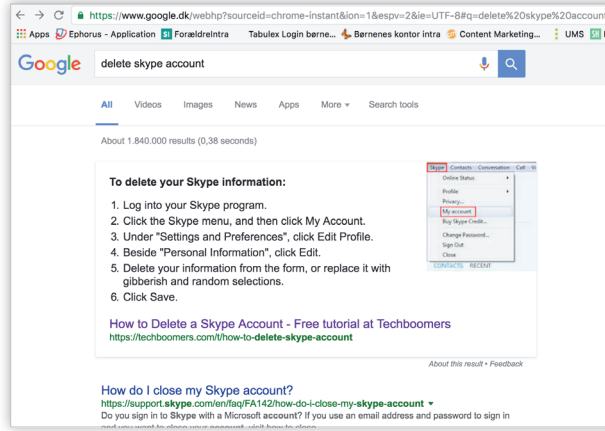
And those who are harvesting clicks.

Paradise with a view. The internet is full of sites with a fanciful mix of content and ads.

The business model is to get users to accidentally click an ad and thus generate income for the website.

It is by no means user friendly, but the site was never built to serve the users.

Service Recovery

Should you happen to take over a project marred by UX errors, there is in fact help out there.

A few rules apply to good service recovery:

• Admit unconditionally that the product is full of errors.

• Initiate action to identify and correct errors as quickly as possible.

• Get in touch with the users and tell them, openly and honestly, what is happening.

• Ask the users what you can do to compensate for their problems in the meantime.

• Keep your promises.

Sometimes problems are at a scale that makes it impossible to truly help the users. If that happens, you will have to take it from there.

Good service recovery often makes users even happier and more loyal in the aftermath than users who never experienced problems.

We, as human beings, often struggle with unusable systems. But we love when other people help us solve problems. This is by no means a call to make mistakes like those we have looked at here. The point is that system development is full of problems, and that is all right. Just make sure to know your Service Recovery A-B-C.

Background Ads

A Black Hat strategy for placing ads is to place them everywhere, not just inside the text, but everywhere. Over, under, next to and in the background.

Why? Many online media use the advertising business model of pay per click. When a user reads an article, they usually move the cursor away from the article.

If they happen to click by mistake, the miracle happens. Ka-ching! And the news site made money.

Evaluate

THE COMPETITION IS ONLY A CLICK AWAY

If you are not sure whether UX is worth investing in, remember that digital is everywhere. Everywhere. Really?

Try switching off anything digital in a larger company. You will realise we are right.

Not only are we always online; digital has entered everything:

- Referendums are increasingly being moved to electronic systems.

- The average user is looking at their smartphone 150 times a day.

- Facebook has become the world's biggest community centre and Twitter has become the biggest newspaper.

- Travels are bought online, not at a travel agency.

- Even clothing and shoes have become huge product groups online.

- Amazon market value has outgrown Walmart.

- Customer membership cards are going mobile.

- Streaming is killing off traditional TV.

This is what we are going to see in the years to come:

- The first robotic pharmacist will arrive in the US 2021.

- The first 3D printed car will be in production by 2022.

- The first implantable mobile phone will become commercially available in 2025.

- 10% of reading glasses will be connected to the internet by 2023.

- The first transplant of a 3D printed liver will take place in 2024.

- The first city with more than 50,000 people and no traffic lights will come into existence by 2026.

Are we making this up? No, those are predictions from the World Economic Forum.

It is by no means boring to be part of the digital revolution, but every single week brings up something new to learn or take in.

What is the single biggest common denominator for digital projects that succeed?

The Product is the User Experience

Behind the user experience you find concepts, design, microchips, code, integration and tests. Consumers care less.

How a gadget is made is irrelevant. The experience when you use it, is not.

This is the challenge for everyone working with communications, design, marketing and sales in today's world.

The competitors are only a click away, and the entire world has become one big marketplace. If someone does not like a product or a service, an alternative is easy to find.

Adding to that, social media has spread to become truly global. It is easier than ever to complain. Sometimes with good reason, sometimes without.

That is why a world class user experience creates good results.

Marketing and Communication is About Numbers

There is a peculiar consequence of everything becoming digital. Many people are drawn to a career in communications or marketing, because they like the creative aspects and want to avoid working with metrics and figures.

But everything digital can be measured, and communications and marketing have changed over the last decade. They are now mostly about metrics.

Day-to-day business is about traffic measurements, conversion rates, cost per click, page views, uptimes, media convergence and all the three-letter acronyms of IT business.

What has become of style, tone, good language, identity, branding and positioning? They are still there, but are struggling to keep a float among the flurry of new technologies all driven by metrics.

If you want to remain proficient in communication and marketing, you must know how to measure the effect of digital experiences. You can read more about this in the next chapters.

TEST METHODS IN UX

UX is a soft discipline, and tesing is crucial to succeed.

There is no shortcut. If the users are not involved in the development process, the project is at risk of making an expensive derail.

There is a wide range of tests to choose from depending on their relevance to the project. Here are some selected examples.

Impression Test

It is relevant to test a concept early, especially in new projects. This can be done through an impression test.

An impression test works like this:

- A user looks at the front page of the new website for 10 seconds.

- The user is then asked about their general impressions and what they specifically remember from the design.

This is a surprisingly precise indicator whether the page design works according to plan.

The test also helps to understand whether the communication is targeted accurately.

The test is recommended not just for websites, but for newsletters, ads, signs, roll-ups and all other types of communication that requires quick decoding by the target group.

Paper Prototype Test

A system can be tested as soon as it can be sketched on a piece of paper.

One way to test a paper prototype is to have two facilitators conduct the test with one test participant.

Every screenshot is sketched separately, and one facilitator is in charge of asking the test participant a set of questions. The

other facilitator acts as the "computer" and changes the screen-shot whenever the user "clicks" on the paper.

The test can be structured through a set of missions, such as "Find a contact person" or "Buy an item." The actions and behaviour of the test participant will help inform design improvements in the iterations that follow.

Spotting issues before they turn into code is incredibly cost-effective.

Usability Test

Systems can be made clickable on a screen before they are coded. Both clickable and functional prototypes are feasible to test, and the methods are roughly the same.

A usability test is performed with a number of users who represent the target group. The users are asked to perform different tasks on the website while observation and discussions are happening.

Testing with 5 users makes it possible to detect 75% of all errors. The method is surprisingly effective.

Heuristic Evaluation

It can be helpful to pre-test a system before conducting tests with real users.

This is known as heuristic evaluation, and Jakob Nielsen's 10 rules for good usability is one of the useful guidelines out there that can be used for this purpose.

Jakob Nielsen's 10 rules

Visibility of system status. The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

Match between system and the real world. The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

User control and freedom. Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

Consistency and standards. Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

Error prevention. Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

Recognition rather than recall. Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

Flexibility and efficiency of use. Accelerators - unseen by the novice user – may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

Aesthetic and minimalist design. Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

Help users recognize, diagnose, and recover from errors. Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

Help and documentation. Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

When the test has been conducted, all issues are categorised according to how serious they are. They are then prioritised, and the top priority issues are resolved.

Inherent Value Test

This type of test is used to surface the features and elements that users are particularly fond of.

Examples are "clear indication of opening hours", "what does the item cost?" or "how often will I receive a newsletter if I subscribe?"

An inherent value test looks very similar to a usability test. There are, however, a few differences.

It is a good idea to test with existing, loyal users as well as prospective customers who match the target group. Testing both types of users gives a good indication of what the loyal customers like about the website, while also identifying elements that will be particularly helpful to new users.

The test is conducted in two parts: first, the loyal users are asked to give the test facilitator a tour of the website, whilst describing which features and areas of the website they use and appreciate.

In the next test, the prospective customers (who are new users on the website) are asked to perform a number of tasks that are designed from the information gathered in the first test.

If the loyal users agree that the price calculator is an essential part of a website, a task is designed for prospective customers to make them try the price calculator.

An inherent test helps identify which features to keep in a redesign, and which to adjust to make them user-friendly for new users.

A/B Split Test

A split test establishes whether variant A works better than variant B, or vice versa. Examples include cross-testing the colours on two buttons, two different images or two paragraphs of text.

E-commerce solutions often use split tests as even tiny design changes can help increase sales.

It is crucial to stay patient when using A/B split tests. If traffic is low on a website, it takes a while to reach a trustworthy result in a split test. Too many variations are often tested at the same time, resulting in confusion as to which variation delivered the better result. Making a sum of several test results is not the right approach. Some variations improve conversion, while others make it drop.

TEST REPORTS AND RELEASE NOTES

A good test is not complete without a good test report that evaluates the test results.

Evaluate the results? Yes, absolutely. Working with tests gives you a good overview, which means that you are excellent at understanding the emerged issues. Not only individual issues, but more importantly how they are connected.

You often look for a root cause in tests. An issue is not a problem on its own. A group of related issues, however, are often caused by a visible or invisible root cause.

If the root cause is not found and addressed, the issues will reappear in new variations.

This is the case for technical as well as user-related issues, and a reason to consider UX tests to be just as important as functional tests. A test report must therefore include UX test results and accompanying suggested solutions.

In much the same way, release notes have to show how the team solved UX problems in each release. This may sound terribly troublesome, but it is not that complicated.

The Good Test Report

What does a good test report look like? It is a good idea to determine the reporting format **before** executing a test.

We were once part of a project where a ministry had asked for a website usability test. An external company conducted a big survey that resulted in a 80-page test report.

What happened next? The report was inspected closely at numerous meetings, but since everyone read something different into it, it all ended without any decisions being made, and no improvements were implemented.

A smaller test followed by a summary of the five most critical issues would have been a better approach. By doing so it would have been possible to make and test the redesign before coding the changes, and the usability of the site would have improved significantly.

The money would have been better spent on 10 small tests than that big report.

A good test report is short - no more than one or two pages. It must contain:

- Date.

- Participants, both the team and users.

- What was tested.

- Where the test took place.

- Which devices the test was performed on.

- Other conditions that could be important to understand the test results.

- Positive insights.

- Negative insights.

- Prioritised suggested improvements.

That is all.

Naturally, the test report should be discussed with everyone relevant to the project. In a development project this group counts not just the product owner and the test team, but also the developers, as they bring important technical insight.

In development projects it is also worth having a set of good release notes included in every new delivery. Release notes are normally produced by the team that executes a functional test.

Release notes should, as a minimum, include:

- Date.

- Version.

- New features in this release, preferably written in an accessible language.

- Issues that have been corrected in this release, preferably with a link to further information.

- Known issues that are still not corrected, also with a link.

- Other conditions, such as the result of a cross-system test. It may also include test results from performance and security tests.

Release notes are connected to UX because technical conditions, like a poorly performing system, have a severe impact on the user experience.

If the system starts performing worse in a new version, the users' experience will be significantly worse, even though no changes were made to a single button or colour. This is easy to forget when things move fast, but it is a fact.

Sorry to interrupt, but this is important.
Windows 10 free upgrade offer ends July 29.

Microsoft recommends upgrading to Windows 10—the most secure Windows ever built. The upgrade is free and you can easily roll-back to your current operating system within 31 days if you decide Windows 10 is not right for you. We'll check for compatibility before starting the upgrade. Over 300 million people have upgraded. Upgrade your PC before the offer ends!

Notify me three more times
Do not notify me again

Upgrade now   Remind me later

WITH WINDOWS 10, MICROSOFT BLATANTLY DISREGARDS USER CHOICE AND PRIVACY

A deep dive

Amul Kalia, San Francisco

Microsoft had an ambitious goal with the launch of Windows 10: a billion devices running the software by the end of 2018. In its quest to reach that goal, the company aggressively pushed Windows 10 on its users and went so far as to offer free upgrades for a whole year. However, the company's strategy for user adoption has trampled on essential aspects of modern computing: user choice and privacy. We think that's wrong.

You don't need to search long to come across stories of people who are horrified and amazed at just how far Microsoft has gone in order to increase Windows 10's install base. Sure, there is some misinformation and hyperbole, but there are also some real concerns that current and future users of Windows 10 should be aware of. As the company is currently rolling out its "Anniversary Update" to Windows 10, we think it's an appropriate time to focus on and examine the company's strategy behind deploying Windows 10.

Disregarding User Choice

The tactics Microsoft employed to get users of earlier versions of Windows to upgrade to Windows 10 went from annoying to downright malicious. Some highlights: Microsoft installed an app in users' system trays advertising the free upgrade to Windows 10. The app couldn't be easily hidden or removed, but some enterprising users figured out a way. Then, the company kept changing the app and bundling it into various security patches, creating a cat-and-mouse game to uninstall it.

Eventually, Microsoft started pushing Windows 10 via its Windows Update system. It started off by pre-selecting the download for users and downloading it on their machines. Not satisfied, the company eventually made Windows 10 a recommended update so users receiving critical security updates were now also downloading an entirely new operating system onto their machines without

their knowledge. Microsoft even rolled in the Windows 10 ad as part of an Internet Explorer security patch. Suffice to say, this is not the standard when it comes to security updates, and isn't how most users expect them to work. When installing security updates, users expect to patch their existing operating system, and not see an advertisement or find out that they have downloaded an entirely new operating system in the process.

In May 2016, in an action designed in a way we think was highly deceptive, Microsoft actually changed the expected behavior of a dialog window, a user interface element that's been around and acted the same way since the birth of the modern desktop. Specifically, when prompted with a Windows 10 update, if the user chose to decline it by hitting the 'X' in the upper right hand corner, Microsoft interpreted that as consent to download Windows 10.

Time after time, with each update, Microsoft chose to employ questionable tactics to cause users to download a piece of software that many didn't want. What users actually wanted didn't seem to matter. In an extreme case, members of a wildlife conservation group in the African jungle felt that the automatic download of Windows 10 on a limited bandwidth connection could have endangered their lives if a forced upgrade had begun during a mission.

Disregarding User Privacy

The trouble with Windows 10 doesn't end with forcing users to download the operating system. Windows 10 sends an unprecedented amount of usage data back to Microsoft, particularly if users opt in to "personalize" the software using the OS assistant called Cortana. Here's a non-exhaustive list of data sent back: location data, text input, voice input, touch input, webpages you visit, and telemetry data regarding your general usage of your computer, including which programs you run and for how long.

While we understand that many users find features like Cortana useful, and that such features would be difficult (though not necessarily impossible) to implement in a way that doesn't send data back to the cloud, the fact remains that many users would much prefer not to use these features in exchange for maintaining their privacy.

And while users can disable some of these settings, it is not a guarantee that your computer will stop talking to Microsoft's servers. A significant issue is the telemetry data the company receives. While Microsoft insists that it aggregates and anonymizes this data, it hasn't explained just how it does so. Microsoft also won't say how long this data is retained, instead providing only general timeframes. Worse yet, unless you're an enterprise user, no matter what, you have to share at least some of this telemetry data with Microsoft and there's no way to opt-out of it.

Microsoft has tried to explain this lack of choice by saying that Windows Update won't function properly on copies of the operating system with telemetry reporting turned to its lowest level. In other words, Microsoft is claiming that giving ordinary users more privacy by letting them turn telemetry reporting down to its lowest level would risk their security since they would no longer get security updates1. (Notably, this is not something many articles about Windows 10 have touched on.)

But this is a false choice that is entirely of Microsoft's own creation. There's no good reason why the types of data Microsoft collects at each telemetry level couldn't be adjusted so that even at the lowest level of telemetry collection, users could still benefit from Windows Update and secure their machines from vulnerabilities, without having to send back things like app usage data or unique IDs like an IMEI number.

And if this wasn't bad enough, Microsoft's questionable upgrade tactics of bundling Windows 10 into various levels of security updates have also managed to lower users' trust in the necessity of security updates. Sadly, this has led some people to forgo security updates entirely, meaning that there are users whose machines are at risk of being attacked.

There's no doubt that Windows 10 has some great security improvements over previous versions of the operating system. But it's a shame that Microsoft made users choose between having privacy and security.

The Way Forward

Microsoft should come clean with its user community. The company needs to acknowledge its missteps and offer real, meaningful opt-outs to the users who want them, preferably in a single unified screen. It also needs to be straightforward in separating security updates from operating system upgrades going forward, and not try to bypass user choice and privacy expectations.

Otherwise it will face backlash in the form of individual lawsuits, state attorney general investigations, and government investigations.

We at EFF have heard from many users who have asked us to take action, and we urge Microsoft to listen to these concerns and incorporate this feedback into the next release of its operating system. Otherwise, Microsoft may find that it has inadvertently discovered just how far it can push its users before they abandon a once-trusted company for a better, more privacy-protective solution.

163064
50 km/h

VOLVO
Safety Centre

QUALITY ASSURANCE AND QUALITY CONTROL

Quality Assurance is the act of testing the quality of a product or service during the development process, and importantly, before release.

Quality Control is the opposite: this approach tests the quality of the finished product.

Many QA professionals say that quality has to be built into the product from the outset, as opposed to pasting quality onto the finished product.

The same goes for UX. Some say that UX should never be treated as the icing that covers a mediocre cake – also referred to as "putting lipstick on a pig."

We wish that more UX experts would become good at putting forward the case for the economic value of good UX. It is quite simple. Since we agree that the user experience is the product, we can also agree that a UX issue in a product is just as problematic as a functional error.

An QA expert will not hesitate in stating that the cost of finding an error after a product has been shipped can be 100 times higher – or more – than if the same error had been found in the first proof read of a specification.

In other words, it makes sense to measure the number of UX issues in each phase of product development and systematically find and correct issues as early as possible in the process. A simple spreadsheet showing the effect looks something like this:

Number of UX issues found and fixed						
	Specs	Design	Code	Test	Release	Total
Sprint 1	22	11	0	32	12	77
Sprint 2	21	13	3	37	11	85
Sprint 3	57	21	1	3	3	85
Sprint 4	55	24	3	0	0	82

The spreadsheet shows the number of issues, but not their value. So we have to estimate a unit price for each issue type, which will allow us to calculate the actual cost of identifying and correcting an issue. The values may vary from project to project, but it is relatively straightforward to estimate salary expenses and time registration.

Here is the same spreadsheet with a cost per issue calculation:

Number of UX issues found and fixed						
	Specs	Design	Code	Test	Release	Total
Cost/issue	$ 1	$ 5	$ 25	$ 100	$ 300	
Sprint 1	22	11	0	32	12	77
	$ 22	$ 55	$ 0	$ 3,200	$ 3,600	$ 6,877
Sprint 2	21	13	3	37	11	85
	$ 21	$ 65	$ 75	$ 3,700	$ 3,300	$ 7,161
Sprint 3	57	21	1	3	3	85
	$ 57	$ 105	$ 25	$ 300	$ 900	$ 1,387
Sprint 4	55	24	3	0	0	82
	$ 55	$ 120	$ 75	$ 0	$ 0	$ 250

This spreadsheet shows that roughly the same amount of is-
sues have been found within each sprint (77, 85, 85 and 82 errors,
respectively). Nevertheless, there is a huge difference in costs
related to fixing the issues in each sprint – the cost drops from
$6,877 to $250.

This is because issues are cheap to fix if they are discovered early
in the process.

If an issue is found and corrected during the writing of the spec-
ification, the only thing that needs fixing is text. If an issue is
discovered towards the end (se the column "Release"), it becomes
a very expensive issue indeed.

When issues are discovered in release, it is back to the drawing
board: write a new specification, create a new design and write
entirely new code. All the while, customer service is answering
queries that could have been avoided.

12 issues were found in release in sprint 1, where the costs are highest. In the cheapest sprint, sprint 4, most issues were found in the specification phase.

The sooner an issue is detected, the cheaper it is to fix.

Interesting, right?

This is the best argument for increasing the focus on UX.

A Good Business Case

In the concept phase it is sensible to begin with creating low fidelity prototypes or sketches. Reviewing the prototype allows for the discovery of issues that would be very expensive to correct later.

The next step is to do a high fidelity prototype and user test it. These can be clickable prototypes with a high degree of interactivity, and the test sessions can be recorded and used for iterative improvements until the project is ready for implementation.

This method has been described in other books, and it works well for both new features and completely new projects.

The main take away is that a lot of money can be saved by prioritising UX work – which includes testing – as it enables you to identify and solve issues at the earliest stage possible in the development process.

It even turns out to be a good business case.

At the same time, UX tests will enable users to catch any Black or Grey Hat methods that were accidentally used in the project. Just imagine the potential cost of missing a Black Hat problem, delivering the project to the customers (via code, tests and release) and subsequently be hit by a shitstorm.

The costs of crisis management, development of a new version and additional tests and release are high. Not to mention the damage done on the brand image. A bad image does not disappear by itself.

UX must be prioritised. And not just because it is feel-good (even though it is), but because the alternative is very expensive.

BASELINE

t is worth spending some time establishing a baseline measurement before a design is changed on the basis of test results. This can be used later to show how well you are doing.

Imagine that you want to convince your CEO that UX is a great idea. You explain that "users really appreciate good user experiences."

The CEO holds a five-year degree in sales and marketing and dreams of Excel, growth curves and EBITDA at night.

Our guess is that you will have more success if your arguments are based on data.

The right data to use as the baseline depends on the nature of the project. All we can do in this book is to provide a good example. And we certainly will.

E-commerce is easily measured, but a baseline can be set for other types of projects as well. Once the current status of the project has been established, the ongoing project development can be measured and hopefully prove that the metrics are improving.

A good baseline in a UX project is a mix between e-commerce – and user experience related metrics. Here is a fairly typical framework.

	Current month		Year to date	
	Realised	Expected	Realised	Expected
Turnover	23,132,312	21,500,000		
Turnover growth	8.1%	7.7%		
Turnover e-commerce	11,938,493	9,000,000		
Turnover e-commerce %	51.6%	41.9%		
Basket size	157	120		
Conversion rate	1.4%	1%		
Drop-off in checkout	31.4%	20		
Customer satisfaction	9.1	9.0		
Number of support resquest/1,000 orders	172	200		
Average support response time in seconds	42	40		
Timely deliveries %	94%	95%		
Average shipping costs	57.2	50		
Social media mentions, positive	1,111	1,000		
Social media mentions, negative	91	100		
User activation after registration	66.3%	60%		
Returning customer rate	43.3%	40%		
Core task completion	39.7%	40%		
Uptime %	98.57%	99.9%		
W3C validation, number of errors	2,121	4		
Number of unknown system errors	19	25		
Number of errors found after release	3	4		

Fields marked with blue are good measuring points for the quality of user experience in an e-commerce solution. Every organisation has its own key metrics – how are you going to measure your own projects?

Build

THE PRINCIPLE OF LEAST ASTONISHMENT

magine you just picked up your car from the mechanics. The mechanic explains that he made a small "improvement" to "enhance your driving experience."

You get in the car, only to find out he has in fact switched the break and the gas pedal. Would you be astonished? We most certainly would be.

According to the principle of least astonishment (POLA) that particular "improvement" to your car would need to be rethought, as it caused great astonishment in you, the user.

The goal is to cause as little astonishment as possible as this means that the feature in question has been designed in line with user expectations.

One way to get to understand user expectations in software is to know the genres in which you operate.

Genres exist in literature, film, theatre, music and countless other areas. A genre establishes a certain set of expectations, like the notion that the bad guy always gets caught in a crime novel.

A genre sets a specific context and frame of mind for the user and provides a shortcut to understand the system at hand.

The same applies to software. A game, a website, an e-commerce solution and an app are all designed differently, because they belong to different genres. Software designers must understand these various genres for their design to succeed visually and feature wise.

Each genre carries a unique set of metaphors, connotations and design patterns that, if used correctly, will help you in your path to create a White Hat UX product. We strongly advise you to spend a little time investigating what software genre you work within.

If the "genre" label is hard to relate to, think of it as "purpose." What is the purpose of your website? Information, entertainment or sales? When you know the purpose, you can also identify the genre.
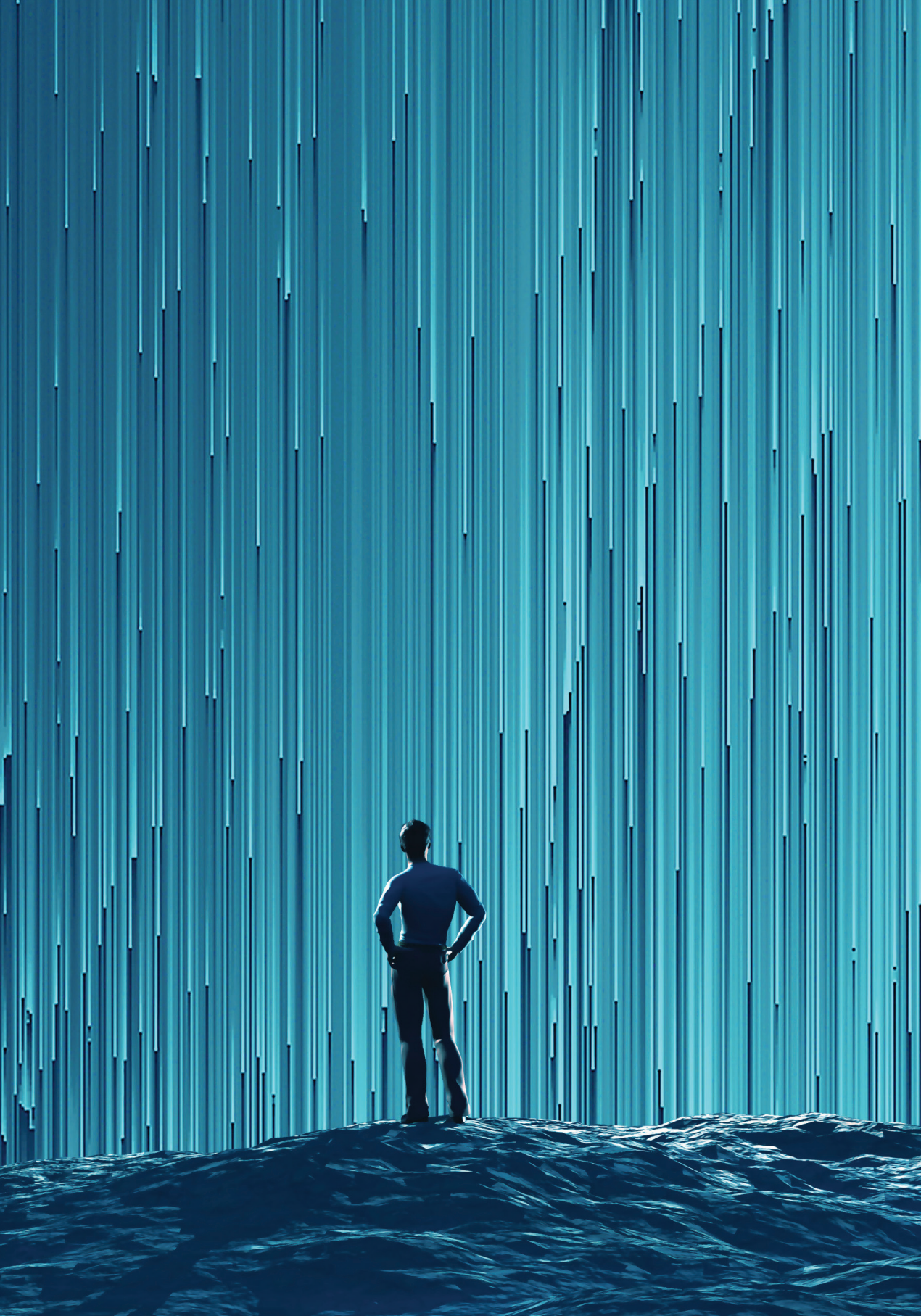
UX AND SCRUM

Change is the only stable element
in a development project.

This is why design work and UX tests must be part of the change proces that takes place in any development project.

The agile methods, such as scrum, have the highest number of deliveries in a year. This makes it interesting to understand how UX work can be integrated in a scrum process.

Other project models work just as fine, but what makes UX within scrum exciting is the short time span between test, re-design, new version and new test.

This is one way of handling it:

Sprint	Design	Test
1	A feature is designed in sprint 1	Testing the new featured before coding it
2	The approved feature is coded	Functionality test of the new feature
3		UX test of the new coded feature

A feature test usually results in a series of outcomes that can be added as potential enhancements and prioritised in the project backlog.

A feature can be implemented without any improvements, even if improvements are suggested in the backlog. The necessity of the improvement is evaluated case-by-case.

Looking across many sprints, it will look like this:

Sprint 1	Sprint 2	Sprint 3	Sprint 4	Sprint 5
New features	UX test of sprint 1	Corrections after UX test of sprint 1		
	New features	UX test of sprint 2	Corrections after UX test of sprint 2	
		New features	UX test of sprint 3	Corrections after UX test of sprint 3

It is beneficial to test individual features and across all features within every sprint. An individual feature might work in isolation, but may serve as an anti- or dark pattern when combined with other features. This may not be noticed unless a cross-feature test is run.

Waterfall Model and Agile Development

There are two ways to work with development projects and some variations in between. They are known as the waterfall and the agile model.

A project run with the waterfall model progresses in a step by step fashion with a sign-off after each step. It is similar to standing under a waterfall looking up. The water can only run one way – down. The challenge is any learning during development is pushed to a later stage, and waterfall does not guarantee that projects are delivered on time, despite of what some people think.

Agile system development comes in many flavours, and one of them is called scrum. The term comes from rugby where the game plan changes constantly depending on the current obstacles in the opponent's defence. The general idea behind agile is to create a project framework that includes all processes known from the waterfall model. Instead of relying on a complete and detailed project plan, a project is divided into smaller deliverables called "sprints", and a detailed plan is made before the next sprint begins.

There are several good reasons why the project model influences UX:

- In the waterfall model all designs must be approved before the system
   is coded, because changes after that point in time are not acceptable.
- User feedback collected post launch cannot be addressed until a
   new phase of the project starts.
- The agile methods require that user tests are performed early and in
   each sprint, and that changes are prioritised in the upcoming sprint.
   Simply collecting improvement suggestions on a list is not iterative,
   it is an agile delusion.

Grey Hat UX is often the end result when the quality in an otherwise good project starts to slide. Regardless of development method.

SHITSTORMS AND CANDYSTORMS

Shitstorm

Using Black Hat UX increases the risk of a shitstorm. It is similar to being a criminal. The police are likely to knock on the door at some point.

It takes more than just one bad interface to create a shitstorm. An interface might not even be involved. A dubious business model or an unethical handling of personal information might also cause a shitstorm.

The speed with which information spreads via social media can make shitstorms spin out of control. Some companies still think they control their own reputation and can intervene in media stories. They are currently learning that the only intervention possible in modern society is to participate in the conversation.

The recipe for the perfect shitstorm is to do something dubious and stay silent when the online conversation begins. At some point down the line, which will be too late, come up with something that looks like an apology, while placing the blame on others.

Donald Trump is not the only example. Granted, Trump is able to start a shitstorm about himself merely by writing 140 characters on Twitter. But he is not alone.

There are several other candidates around the world in the race for creating the biggest shitstorm. None mentioned, none forgotten.
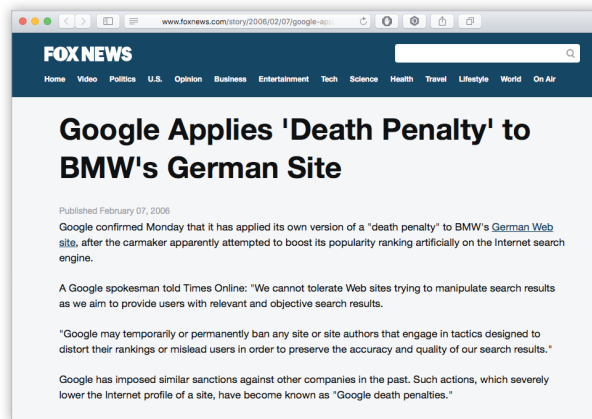
Since the term White Hat and Black Hat originate from search engine optimisation, it makes sense to look at SEO to understand the consequences for using black hat methods.

In 2006, BMW tried to improve their Google search rank by creating two versions of the same website.

One version was an ordinary website with images and text from second-hand BMWs for sale.

The site could be found by searching for "second-hand BMW" and similar terms.

Google removed bmw.de from the search index when they learnt that BMW used Black Hat SEO.

But when a Google robot read the page, it was automatically referred to another version of the page. On this page, all the images were gone, and the text had been changed to include the term "second-hand" at a frequency that made the page rank rocket to the top of Google's search results.

When the fraud was uncovered, the story went around the world, and Google removed bmw.de altogether from the search index. All organic search traffic to BMW's German website disappeared, and BMW had to compensate by buying advertising instead.

For Google to once again include a website in their search index after having banned it, the offender has to fill in a "reinclusion form", including a statement about who helped with the fraud. Google will then process the case on their own terms, and in their own pace. And that can take quite a while.

Shitstorm

Shitstorm is a vulgar dysphemism for a chaotic and unpleasant situation.

Wikipedia

A course of action that would appear to lead to a good outcome, but when undertaken, leads to a situation that is utterly out of control beyond human comprehension.

Urban Dictionary

The word shitstorm has been chosen as Anglicism of the year 2011 in Germany and word of the year 2012 in Switzerland.

Candystorm

The opposite of a shitstorm is a candystorm or a lovestorm. A shitstorm often appears by itself in the stream of really bad behaviour. A candystorm requires more things to fall into place, including luck.

Good candystorm ingredients include:

• Genuinely good intentions.

• A situation brought up by others.

• Good timing that keeps the story alive.

You cannot create a candystorm by yourself, but it is beautiful when one happens. The only thing you can do is to position yourself ideally, lean back and hope for the best.
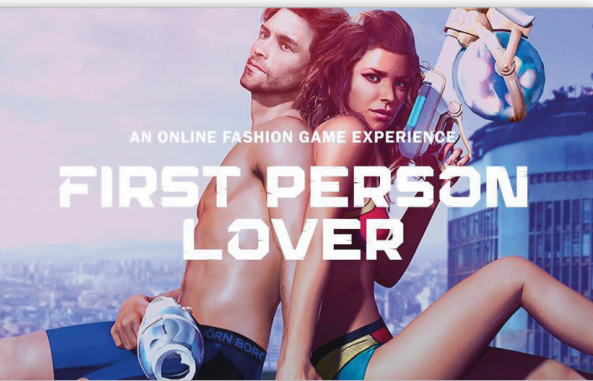
Bjørn Borg's popular advergame became a massive hit after it was picked up by Youtube celeb Pewdiepie.

It happened to Bjørn Borg's advergame First Person Lover, a spoof on the popular First Person Shooter game genre.

The purpose of the game is to sell clothes, but it became famous over night when YouTube celeb Pewdiepie reviewed the game as "The Most Fabulous Game in the Universe!" in a video that reached 5.6 million views on Youtube.

First Person Lover's candystorm would not have happened if the

game was not well crafted. Any brand can produce an advergame, but to create a game that technically is on par with "real" games, requires both knowledge and UX focus.

The people behind First Person Lover spent a lot of time on research, concept development, user involvement and tests to create the best possible game experience for the users.
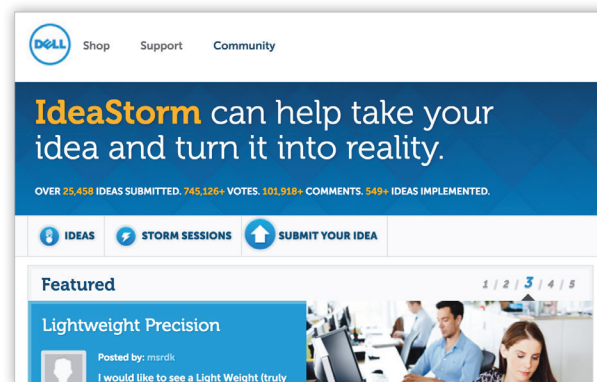
In 2007, Dell launched a website where customers could contribute requests and ideas for future products. The platform was called Ideastorm.

Every website visitor was able to contribute their ideas for future products, and they could also vote for other users' ideas.

One, perhaps surprising, entry on the wishlist was a laptop without pre-installed Windows. At the time, no one sold PC laptops without the Windows operating system. Linux users were understandably annoyed that they had to pay for Windows. Not only because of the cost and the fact that it was a worthless investment, but also because...Windows!

Dell's IdeaStorm was a place for customers to suggest new product ideas.

Dell listened and shipped a laptop without Windows.

The new Dell laptop was a great success, and Dell later decided to sell a laptop that came pre-installed with Ubuntu Linux. That is truly a candystorm: a positive community audible enough for the manufacturer to listen and react.

GREY HAT UX: 7 ANTI-PATTERNS

Sometimes a design pattern does not have the right effect. Anti-patterns are patterns that are often used, and work equally bad every time.

Anti-patterns are everywhere. They carry no evil intentions, unlike dark patterns. Anti-patterns are simply bad design in the specific situation.

"The specific situation" is highlighted on purpose. Some sites and apps borrow design ideas from others. Sometimes these borrowed patterns work, and other times they do not. You can put car tires on a bike, but the driving experience suffers in most cases.

How to find your own anti-pattern

It is easier to find functional errors than identifying anti-patterns.

If you use analytics to monitor traffic, you can use the statistics to identify issues. If a page has a huge drop-off, a form is left unused or a PDF gets zero downloads, the issue is likely something else than lack of interest for the content.

The conversion rate on e-commerce sites (the percentage of customers who buy something) can be increased considerably by identifying and improving anti-patterns. It is expensive when the customers leave without buying because they are unable to complete a checkout.

Analysis tools will help identify how users scroll and click on a site. These tools can spot random clicks, so if users are clicking on images, and the images on your site have no links attached to them, you have an anti-pattern on your hands.

We have listed some of the most frequently found anti-patterns.

Missing Click

Apart from images without links, it might be:

- Buttons that are too small.

- Buttons that do not look like buttons.

- Links that do not stand out from the surrounding text.

Lack of Efficiency

Some interfaces take too long to use because:

- Too many windows have to be opened to complete simple processes. Just think of Microsoft Word.

- The user has to wait far too long for the next window to open.

- Elements on a list have to be deleted one element at the time because complex operations are not possible.

- There is no response to actions that require waiting time, so the user subjectively feels stuck in limbo while the system seems dead.

Information Overload

Too much content in one place can scare anyone off to the competitor:

- Content is cramped up and all elements are shouting for attention. We call this "shouting aesthetics".

- Text is written in CAPITAL LETTERS, which causes the reading speed to drop, as capitals are difficult to distinguish from each other.

- There is way too much text. Users do not read online, they scan.

- Images are placed in carousels, despite user research that proves their inefficiency. They are only loved by the sales department.

Forms that Forget

If you really hate your users, this anti-pattern might come in handy:

1 Create a form with non-optional fields.

2 Make it hard to single out the required fields. When the user submits the form, make sure to delete all form data and mark all fields with errors in red.

3 Collect all error messages in a single dialogue to make it impossible to identify where the error happened.

If you really want to add the "coup de grâce", avoid modifying the keyboard for mobile devices. The user is then left to change the keyboard to find "@" when inputting an email address.

Poor form usability makes for a painful user experience.

CAPTCHA

Is a small image of very hard to read letters, characters and numbers that the user has to input correctly in the form to be able to submit it. CAPTCHA is used to make sure the user is not a spambot.

The challenge with CAPTCHA is that today's spambots are so intelligent that they are able to decode most CAPTCHAs.

Hence they become more and more intelligible to make it harder for spambots to decode them. The problem is, that neither can humans.

Wrong Destination

This method involves sending the user to a different destination than expected:

· If a flow on a site requires login, the user is sent to the front page after login instead of continuing in the existing flow.

· A user may also be sent to a completely different site without any previous warning.

The general rule is that a user should be able to predict what will happen before a link is clicked. If you sell holidays to the Greek islands, you can write the number of destinations in brackets after each island. If the list says Rhodes (7), the user will understand that the link points to a page with seven destinations in Rhodes.

Anti-patterns are usually easy to correct. They are a result of lack of attentiveness and not deliberately evil.
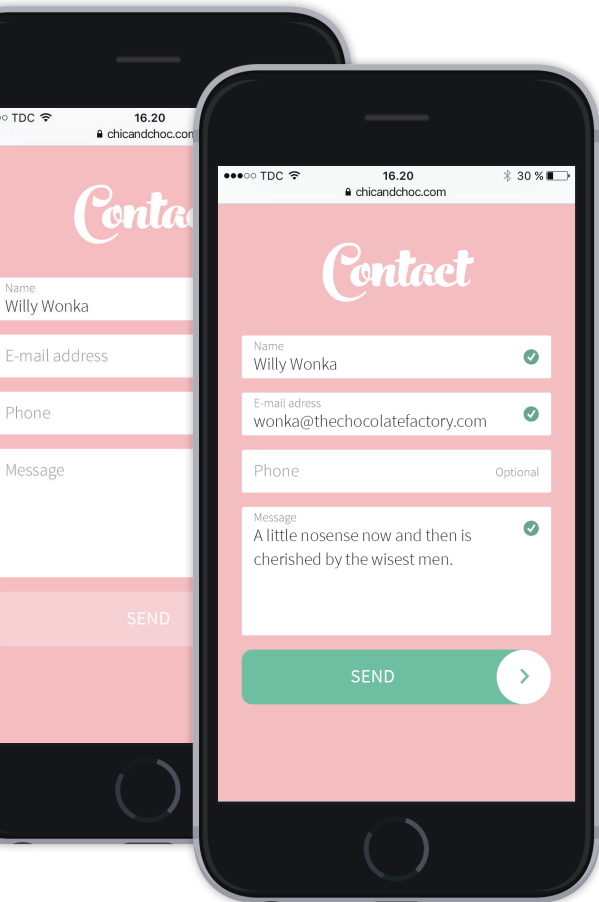
The consequence for the business, however, is usually serious. If you are going to invest in digital, it is best to remove all anti-patterns before building anything new on top of the existing platform. It also gives you good karma with the users.
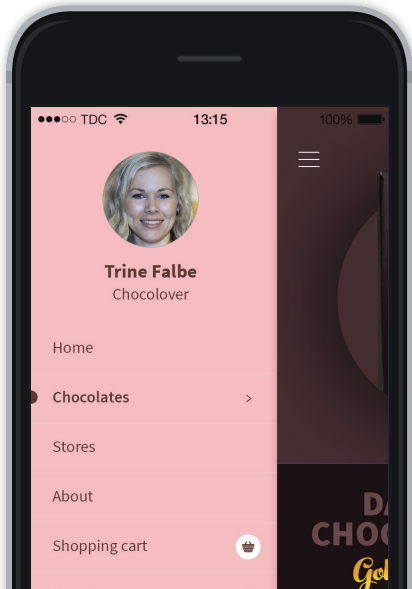
WHITE HAT UX: DESIGN PATTERNS

A design pattern is a conventional way of solving a specific problem. It is tested to work, and therefore a design pattern is a good starting point for a user friendly interface.

In this chapter we go through a number of design patterns that are good to know, whether you design or review interfaces.

It is helpful to use an **input prompt** in a form. An input prompt is an example text. Use it in every form field to help the user understand what kind of data to input.

It is also good practice to offer **timely help,** for example as a small clickable question mark next to the form field.

A **continuous validation** confirms to the user when data has been entered correctly. It is a way to make users happy, because it minimises the risk of having to start over.

The **hamburger icon** is a well-known navigation icon on mobile platforms. **Slide-in navigation** is good for usability as it allows the user to return to the content at any time by tapping the visible content. A drop-down will often hide the content and cause frustration for the user.

Form fields with example text make it easy to understand what to type in.

Slide-in navigation increases usability on mobile platforms.

A **breadcrumb trail** will help users find their way on websites with a deep structure.

A breadcrumb trail helps users to not get lost on your website.
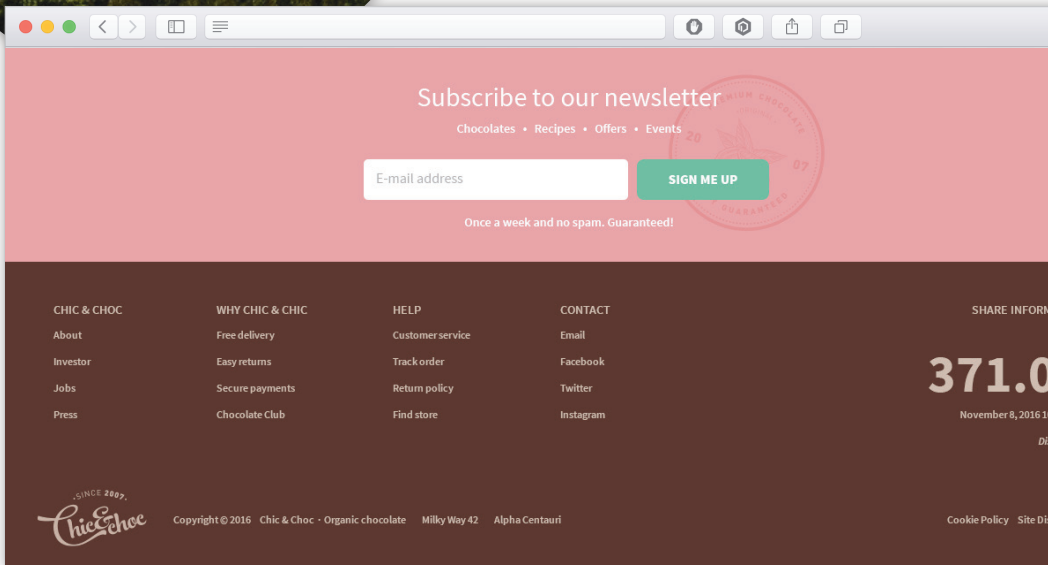
On complex sites it helps to have a clickable sitemap in the footer, from which the user is able to find all pages. This is called a **"fat footer"** and is equally helpful on desktop and mobile platforms.

A "fat footer" can serve as helpful navigation.

Most checkouts are done over several pages with pagination, but it is worth considering if the flow could be shown on one page.

There are three typical patterns for a checkout flow:

1 **Horizontal checkout.** Consists of three to five screens. The user goes through checkout by approving the shopping list, adding address details and completing the payment. The progress is often shown in the top, while buttons on the bottom of the screen serve to approve the entered data and proceed.

2 **The Accordion Method.** This process is similar to the horizontal checkout, but displayed on one long page with elements that can be unfolded. A step is folded back in after completion, and the following step is then unfolded.

3 **Single page.** You can also design a checkout with everything on a single page. This pattern removes any uncertainty about the amount of steps in the checkout flow.

Remember to offer a safe exit in checkout flows with several steps. Any step of the flow must include a link to the front page, and the user should be allowed to remove products from the shopping basket until the point of payment.
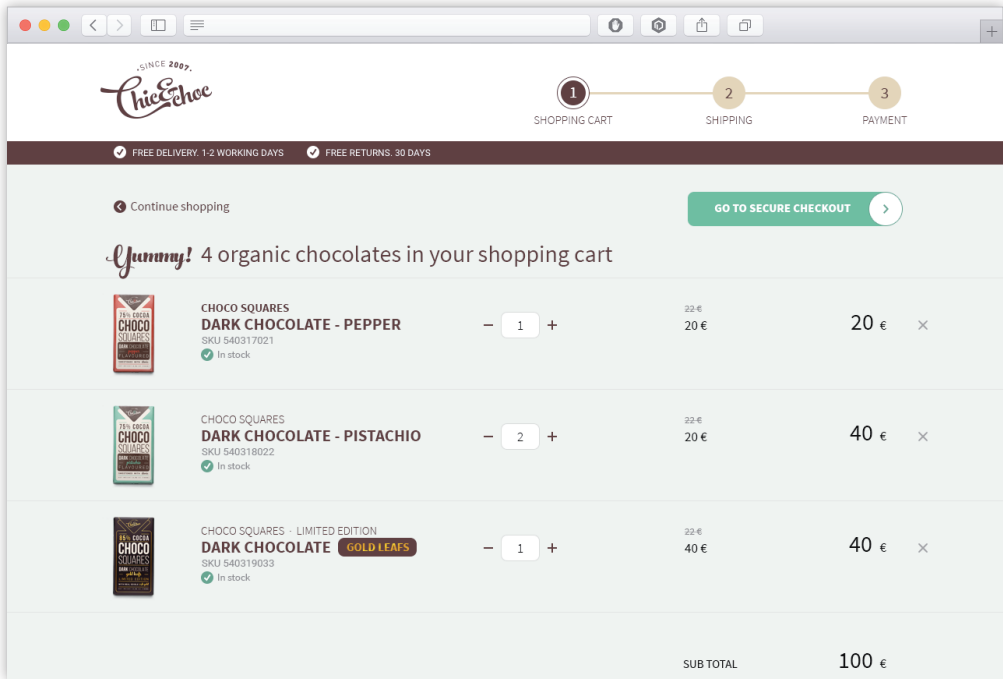
A horizontal checkout exposes one screen at a time.

An accordian checkout consists of steps that can be unfolded.
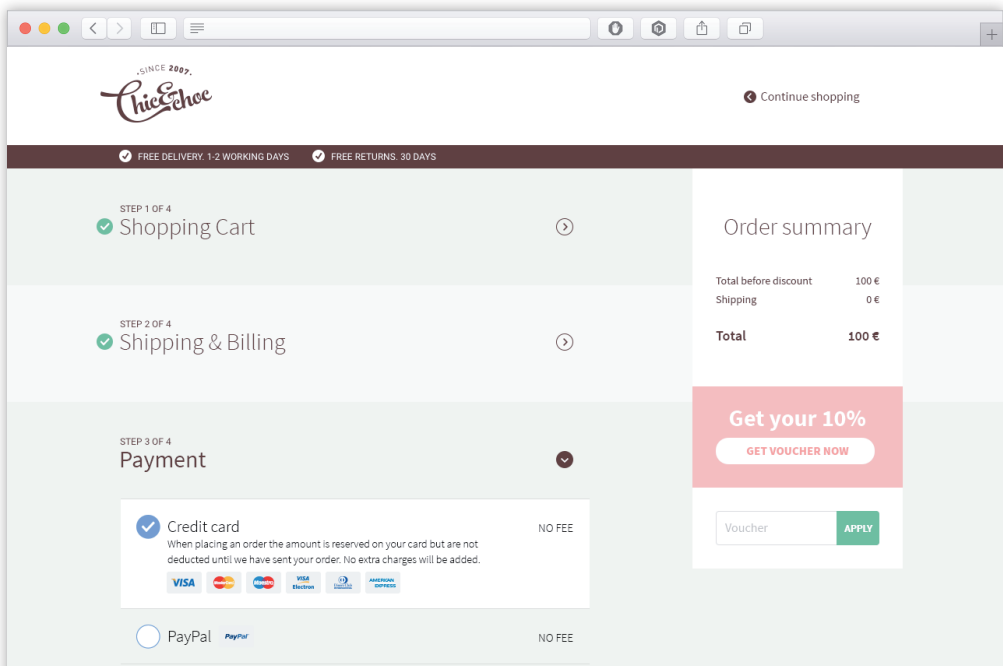
A single page checkout exposes all steps in one go.

Continue shopping

1 ✓ FREE DELIVERY. 1-2 WORKING DAYS   ✓ FREE RETURNS. 30 DAYS

Step 1 of 4 - Shopping cart

CHOCO SQUARES
DARK CHOCOLATE - PEPPER   − 1 +   20 €   ✕
20 € · 22 €
✓ In stock

CHOCO SQUARES
DARK CHOCOLATE - PISTACHIO   − 2 + **3**   40 €   ✕
20 €
✓ In stock

CHOCO SQUARES · LIMITED EDITION
DARK CHOCOLATE **GOLD LEAFS**   − 1 +   40 €   ✕
40 €
✓ In stock

SUB TOTAL   100 €
4 SHIPPING   0 €

TOTAL   **100** €

Order summary

Total before discount   100 €
Shipping   0 €

Total   100 €

Get your 10%
GET VOUCHER NOW

Voucher   APPLY

Step 2 of 4 - Shipping & Billing information

Name

Address

Post/Zip   City

Shipping country
Denmark

E-mail address

☑ Shipping and billing address are the same

Step 3 of 4 - Payment method

✓ Credit card   NO FEE
When placing an order the amount is reserved on your card but are not
deducted until we have sent your order. No extra charges will be added.
VISA   mastercard   VISA Electron   Diners Club   AMERICAN EXPRESS   **5**

○ PayPal *PayPal*   NO FEE

Step 4 of 4 - Confirm payment

☐ I agree to Chic&Chocs terms and conditions **6**

GO TO SECURE PAYMENT ⟩

1 Shipping

A typical trick is to not reveal the shipping costs until very late in the checkout process. It makes no one happy, and increases user dissatisfaction and drop-off.

White Hat UX: Surface the shipping costs at the earliest stage possible. It is not that hard to do.

2 Remove item

Some sites make it difficult or even impossible to remove items from the shopping cart.

White Hat UX: Allow for the removal of items in the shopping cart up until the point of payment.

3 Updating the price

Some sites allow you to update the number of items in the shopping cart, but you have to look for a secret button to calculate the new price. Moving onwards in the checkout without updating the price might cause you to pay more than what you bargained for.

White Hat UX: Auto-update the price as the number of items change.

4 International shipping

Buying from a different country adds the risk of increased shipping costs, as many sites calculate shipping based on domestic prices. Some sites will wait until the very last moment to tell you about the actual, international shipping costs.

White Hat UX: Surface the actual shipping costs up front. It is not that hard to do.

5 Credit card fees

It is easy to inform users of the various credit card fees, and in many countries it is a legal requirement. Some sites will hold back this information or camouflage it somewhere on the page.

White Hat UX: Surface the credit card fees up front. It is not that hard to do.

6 Newsletter

Most e-commerce sites attempt to sign up customers to the newsletter at the first purchase. Sometimes it will happen through a trick question. At other times the customer is simply signed up once they have purchased – whether they accept it or not. Signup acceptance can be conveniently hidden in the Terms of Sale (that no one reads).

White Hat UX: Do not force people to sign up to your newsletter.
Also, make a newsletter that your customers actually benefit from, and you will see the signups increase.

Online search has changed rapidly throughout internet history. The first search engines offered both search and a directory. Search has improved since then, with better presentation of search results, type ahead, location-based searches, personalised search results, categories, etc.

It has been an evolution rather than a revolution. The small, continuous improvements are easy to learn because you only need to learn a trick or two each year.
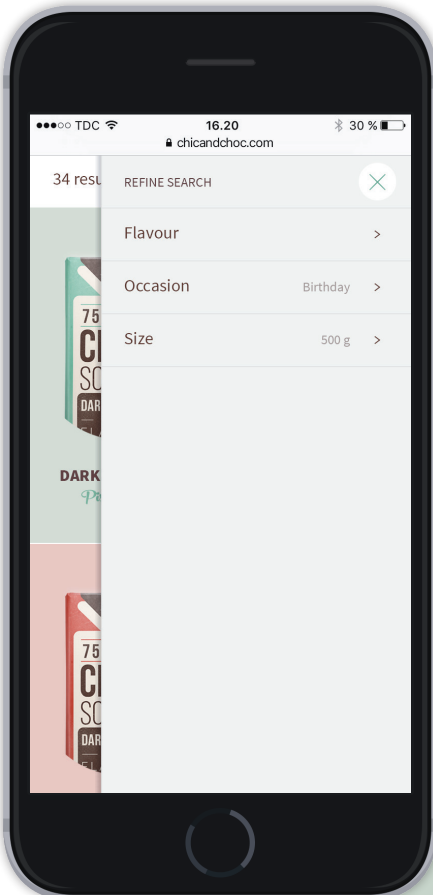
The search feature on your website must follow up-to-date standards. A good list view and filtering are not just nice-to-have, but rather need-to-have.
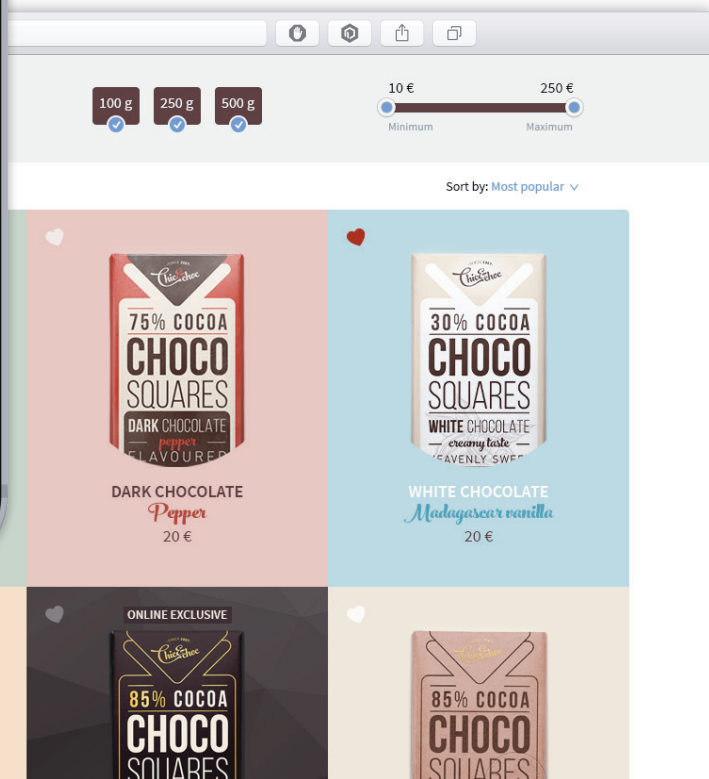
Users expect a similar search experience on websites as with the big search engines. When Google or others improve their search experience, other sites are quickly left behind, looking a bit old-fashioned.

Good patterns in search include:

- Type ahead. The search function finds relevant results and the user does not have to write the entire search string.

- Well formatted search result lists.

- Categorised search results.

- Numbered results.

- Related searches.

- E-commerce sites may also utilise complex search methods such as faceted search. This method allows for filtering of the initial search result to help narrow the search result without having to start over. A search for "men's shoes" may be filtered by "brown", "size 42" and "leather shoes".

Even though search is one of the most fundamental tasks online, it is also the area with the most design patterns.

It is essential to use conventional design patterns to stay White Hat. It is very easy to slide over into the Grey Hat category if you are not careful.

FROM DARK PATTERNS TO WHITE HAT UX

There are still many challenges, even after discovering that your own platforms are infected with grey or black hat methods.

There are several reasons for that:

- Platforms may be delivered by external providers who are not willing to change their design principles.

- Some platforms may be "software as a service", so the only way to solve problems is to replace the entire system.

- Some systems may be hard to change because of a bad codebase, or because everyone from the original team moved on to other jobs.

That's just how it is. And as if that was not enough, other issues may be caused by opposition from sales, marketing, management, product strategy or other departments. There will always be someone thinking "if it ain't broken, don't fix it."

But here is the problem:

Black hat UX is broken by definition.

It is not easy to predict exactly when a shitstorm will hit, but the forecast is very clear. It will happen at some point.

It takes three ingredients to move from dark patterns to a more sustainable approach:

1 Use benchmarks from the outset of the project
    to document improvements.

2 Use White Hat UX in better ways than the competitors.

**3** Be patient and wait for the results to happen.

The last point is the hardest one. We are digital natives and we want it now..!

A good place to get started with White hat UX is to replace all dark patterns with white hat design patterns. We have a list of examples for your inspiration.

Conventional Labels
instead of Bait and Switch

Make sure to communicate clearly what will happen when a user performs an action. The user must be able to predict what will happen before something is triggered.

Do not write "Book now" on a button if what really happens is a search, a request or a link to further information. Write "start my search" if that is what the user is doing.
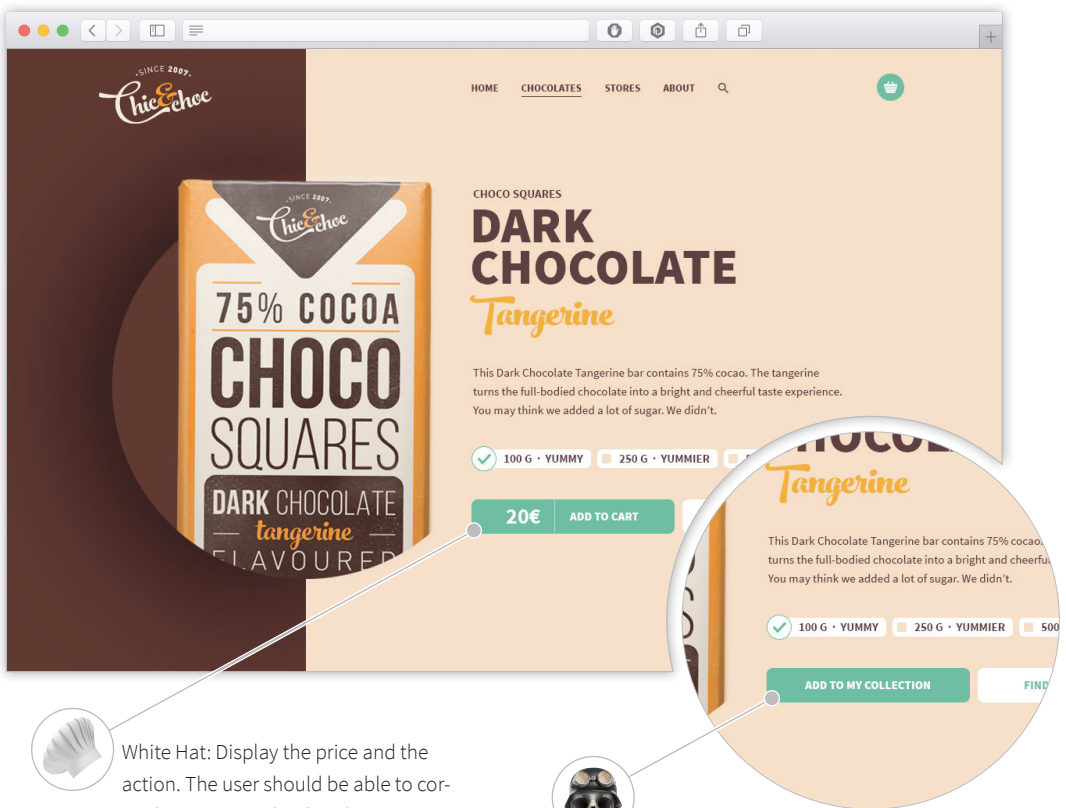
White Hat: Display the price and the action. The user should be able to correctly guess exactly what the system will do when pressing the button.

Black Hat: "Add to my collection" is a sneaky way to add items to the cart. What is a collection? Is it a list of favourites? If you want to know you have to try it out.

Law of Similarity
instead of Disguised Ads

A number of design and usability principles are rooted in Gestalt psychology.

One of these principles is the law of similarity. When two objects look the same, they are perceived as identical or as having the same function.

A user will expect a green object with rounded corners on a web-site to be a button. Therefore, another green object with rounded corners is also perceived to be a button. It leads to confusion if the two objects turn out to have different functions.

This could also be a yellow price tag with a reduced price in a store. When the customers see the same type of yellow sign on another item, the assumption is that this is also a reduced price, because the two signs look the same.

White Hat: Using the same color, shape and font on buttons helps the user understand that the buttons serve a similar purpose.

Black Hat: Making a sponsored ad look like a button will confuse the user and trick them into clicking it.

yummy! 2 organic chocolates in your shopping cart

CHOCO SQUARES
DARK CHOCOLATE - PEPPER
SKU 540317021
In stock

− 2 +

22 €
20 €

40 €   ×

SUB TOTAL   40 €
SHIPPING   0 €
TOTAL   **40 €**

GO TO SECURE CHECKOUT

Continue shopping

SUB TOTAL   40 €
SHIPPING   0 €
TOTAL   **40 €**

BROWSE MORE OFFERS

No Strings Attached
instead of Forced Continuity and Forced Disclosure

If tricking the users backfires, why do it in the first place?

If a service comes with a free trial period, there is no need to demand credit card information until the time where a payment has to be made.

It is easier to subscribe, if the only field in the signup form is the user's email address.

White Hat: To deliver a delightful signup experience, only ask the absolute minimum from users. If you don't need their name, don't ask for it!

Black Hat: Make the user hand over a ton of personal data when they sign up. They will hate you for it.

Sign up
to a wonderful world
of organic chocolate!

E-mail address

SIGN ME UP!

LOG ME IN INSTEAD

Sign up
to a wonderful world
of organic chocolate!

Name

Birthday

Phone

E-mail address

SIGN ME UP!

Most Sensible Default
instead of Misdirection

If a user can select different versions of a product or subscription, it is considered White Hat to highlight the version that is the most sensible to the most people.

When someone needs a car for their 7 mile daily commute, good UX is to not offer them the most expensive sports model.

White Hat: Do not try to force the most expensive product upon the users. Go with the most sensible and let them make up their own mind.
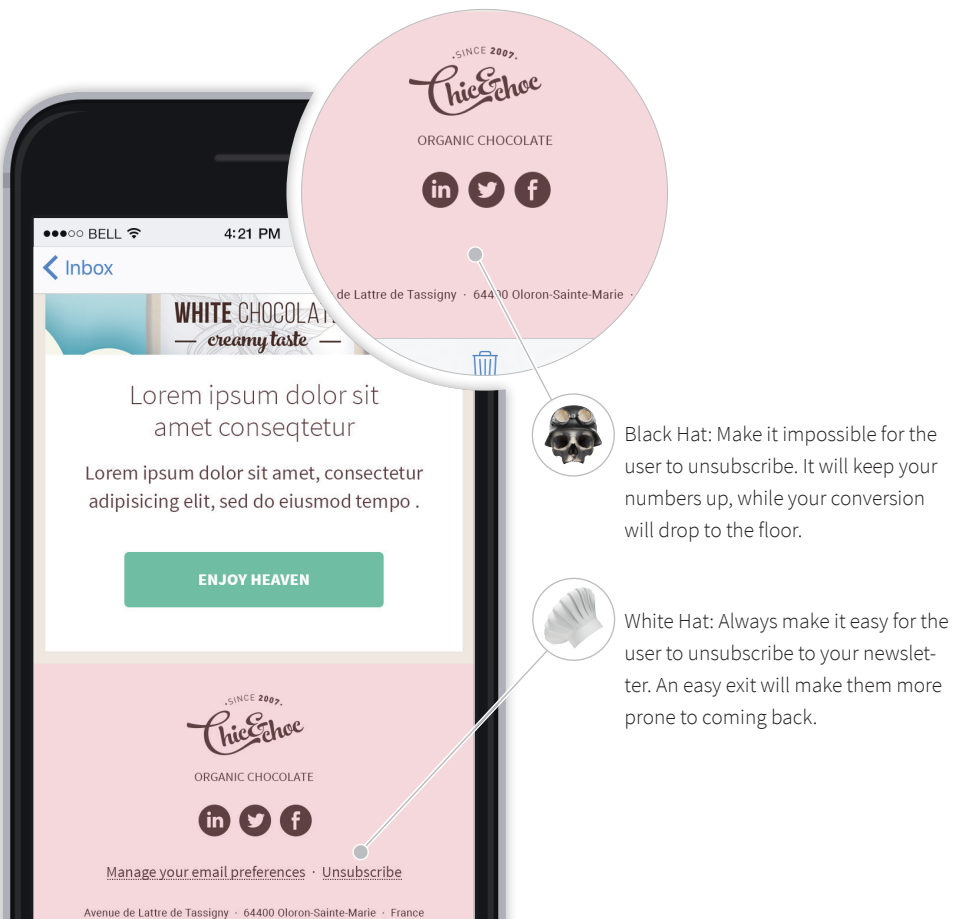
Black Hat: Trick the user into buying the sports model by pre-selecting it and hoping they will not notice.

Always Provide an Exit
instead of Roach Motel

The user must always have a safe exit in case they get lost or choose to leave. Do not lock them inside a checkout flow or burry them down a complex path on the site. Offer a link to the front page at all times.

This is not just important for navigation. It should always be easy to cancel a subscription or a newsletter.

Make it easier for the users to choose their own way, and many of them will return.

Black Hat: Make it impossible for the user to unsubscribe. It will keep your numbers up, while your conversion will drop to the floor.

White Hat: Always make it easy for the user to unsubscribe to your newsletter. An easy exit will make them more prone to coming back.

Inform Respectfully
instead of Door Slam

Informing users about an available app can be done discretely and efficiently. It does not require a full screen pop-up window.

The message can be placed in the text, in a footer and with a nice and simple Call to Action button.

Communicating the benefits to the users in a clear manner is likely to increase downloads, as users tend to choose the best solution for themselves.

White Hat: Offer contextual call to action as a respectful way of informing about your app.

Black Hat: Close off the user's ability to interact with your mobile website and force them to download your app. They will surely love you for it…

●●○○ BELL 🔗 4:21 PM 📶 100% 🔋
🔒 chicandchoc.com

75% COCOA
CHOCO
SQUARES
DARK CHOCOLATE
pistachio
FLAVOURED

PAY WITH YOUR PHONE
and do so much more!

DOWNLOAD OUR APP

🔒 chicandchoc.com ↻ ⬆ + ⧉

75% COCOA
CHOCO
SQUARES
DARK CHOCOLATE
pistachio
FLAVOURED

DOWNLOAD OUR APP TO CONTINUE

Don't Make Me Think
instead of Trick Questions

Steve Krug wrote the UX classic Don't Make Me Think. This is a universal idea that can be applied to most areas, not just software. In a way cars are designed according to this principle too.

Some digital designers like to invent a "new approach" for every project. Imagine if cars were produced with the same amount of creativity. We would all have trouble staying on the road in a car with the break on the steering wheel and the accelerator in the glove compartment.

Bad design makes users stop and wonder "What happened?", "How do I proceed from here?" or "I wonder what might happen if I click this button?" Good design does not. Users must be able to navigate without having to think.

White Hat: Make the user comfortable by reassuring that nothing dodgy will take place after payment.

Black Hat: "Additional charges may apply" is a big, red flag that will scare the user and make them not want to complete the payment. It is forcing them to think, and not in a good way.

STEP 1 OF 4
Shopping Cart

Order summary

STEP 2 OF 4
Shipping & Billing

STEP 3 OF 4
Payment

Additional charges may apply

Credit card
When placing an order the amount is reserved on your card but are not deducted until we have sent your order. No extra charges will be added.

NO FEE

NO FEE

PayPal

NO FEE

Standard Templates

While it is not always a good short-cut, the notion of using designs made by others should not be dismissed.

There are lots of templates to choose from for newsletters, websites, e-commerce solutions and other systems.
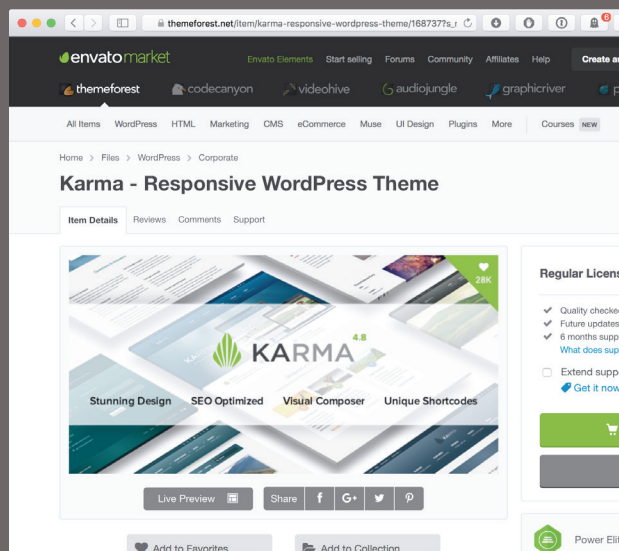
It has advantages and disadvantages.

Advantages: It is easy to get started, it is cheaper than building it all from scratch and if you look closely, there are original and slick designs out there to build on.

Disadvantages: You get what you pay for. If you buy a $9 template, it was probably created quickly and cheaply. Many cheap templates are more expensive to modify than to build your own from scratch.

The key is to choose according to your needs. If you buy a finished template and use it as is, you can get off to a great start by simply replacing the logo and changing the content.

This is neither White nor Black Hat, it is just buying well-functioning templates and possibly saving some money, that can then be spent on designing a good user experience.

Our best advice is: Be alert and do not shy away from being critical. A lot of standard templates are exactly that: "standard." 90% of them look the same. Find the ones that stand out from the crowd.

BECOMING PROFICIENT

f your goal is to become the best gourmet chef in the world, you are up against tough opposition. It is virtually impossible to reach the top.

But it is manageable to become proficient.

Simillarly, UX succes is not about becoming the best in the world. Being proficient is enough to get you up at the front and set a good example for others.

To be proficient, you should:

- Use White Hat methods everywhere.

- Be in constant dialogue with your users.

- Improve existing features instead of developing new ones.

- Focus on efficiency of use.

Make sure that every type of user is able to find what they are looking for and accomplish their tasks – and in a way they regard as easy and straightforward.

It may be politically incorrect to say that UX is rarely prioritised in digital projects, but it is the truth. That is why being proficient makes a difference.

A user's experience is closely related to the customer journey.

In some cases it is possible to create a visual customer journey and make sure that all touchpoints, from physical to digital, work as intended. In other cases you have to make an educated guess of the journey and be ready to react and adjust. People sometimes do the exact opposite of what was hypothesised in the design phase.

Customer journey mapping is the act of graphically portraying your customer's experiences with your organisation across major and minor touch points (times when your customer interacts with your organisation or product).

Do not expect above average results, unless a detailed plan on how to incorporate UX in the project has been laid out. And it is a difficult task.

Perhaps you have encountered challenges such as:

• Decisions about new features are made by business people with a limited understanding of development projects.

- Projects start too late and, as a consequence, get unrealistically short deadlines.

- Building the ship while sailing is seen as a positive value, which means that new projects are developed in a rush and with focus on writing code that works.

- The focus is on low hanging fruits, and any shortcut to the goal is seen as a good idea. That is exactly where Black Hat UX thrives.

- A business case that describes the value of good user experience has never been created.

- Everyone thinks that shitstorms only hit the competition.

To become proficient (or to become a gourmet chef) requires a good mentor. You have to work hard every day, never give up, even when things do not go your way, and take the time necessary to succeed.

This is where impatience can be your worst enemy.

THINGS TAKE TIME

mpatience is a good personal characteristic in many ways, as change does not happen automatically. The will to change is not only driven by impatience, but it can affect the speed.

That being said, it is not always a good idea to be impatient.

Most people who work with e-commerce learn along the way that conversion rates do not change over night. The work is like walking up a long, steep hill, and for every step you take, the view gets a little better.

There are many ways to improve conversion rates, and if we leave out the most obvious and easiest way (dumping your prices), the list includes:

• The front page is easy to decode.

• The site navigation is easy to understand and use.

• Good product data, images and video.

• It is easy to identify call to actions.

• It is easy to add items to your purchase.

• The shopping basket is easy to identify and contains complete information about items, pricing, and extras.

• Related items are meticulously selected and well-presented.

• The website has the right trust certificates and offers a safe purchase.

• The checkout interface works well.

Each area must be carefully tested and improved. If several areas are tested at the same time, it is virtually impossible to know the effect of each test. That is exactly the reason why things take time.

It rarely, if ever, happens that the conversion rate is improved by changing everything at the same time. In this respect, this works exactly like changing the interior in a supermarket.

Small, thoroughly considered changes and experiments are easy to take in, implement and measure.

This is where impatience can be a problem. If you want to create better experiences for your users, we of course think the necessary steps are:

1 Test the current systems yourself and find all instances of Black Hat and Grey Hat UX.

2 Correct all errors, if possible - which it might not always be, but it is a good thing to aspire to.

3 Test all systems again, this time with relevant users. It is often advantageous to mix qualitative tests with quantitative methods, which provide both concrete observations and a certain amount of data to work with afterwards.

4 Correct all errors.

Afterwards, work systematically to ensure that future changes will not negatively affect the user experience.

One way to do this is to include UX design and UX tests every time a concept is developed. Similarly, the UX work should be a mandatory activity in development projects. The nature of concepts is that they tend to change over time. If you work with agile such as scrum, UX tests and improvements should be part of every sprint.

Bare in mind that results emerge slowly. The impatient person is hoping to see improvements quickly, but there is no way to ensure that.

When it comes to e-commerce, the improved user experience does not happen until the next purchase. The positive experience

means that users want return on their next purchase. Some users will also review the website positively or share their experience on social media. Those kinds of messages spread slowly.

The only things that spread like wild fire are bad experiences. If you are very impatient and insist on seeing improvements here and now, you can try to trick the customers. It will produce quick results, but we would not advise you to do it.

If you work in the same office for several years and see the same identity programme over and over, it is easy to think of it as outdated and boring. But your users see the identity as recognisable and safe.

We are not speaking against visual identity updates, but in most cases the strategy with minor and frequent UX improvements wins over two annual, radical updates.

The trust between us and the users is best maintained through systematic delivery of White Hat UX features. This relationship can suffer greatly from just a single update full of Black Hat features.

STRATEGIC WHITE HAT UX

The world has become transparent
and fraud is being uncovered.

I f Black Hat methods did not work, no one would consider using it, but of course there are circumstances where Black Hat produces economic results. The world is full of credulous people, such as the authors of this book, and as a rule we use digital platforms believing that they are built to serve a worthwhile goal.

It is within that context that people will misunderstand a text or the purpose of a button. Or, even worse, not realise that the button has an invisible button on top of it that behaves unexpected.

We are in the grey area when UX is legally legitimate, but ethically wrong. As a user, it does not matter whether this is caused by incompetence or an increased greed within the team that designed the experience.

In this context, it does not matter whether we are talking about Black or Grey Hat. Whatever you may gain from it is short-term and will never be sustainable.

In the near future we will see that the limits for what is allowed will move towards White Hat. It will become a growing area.

Global mega trends are pointing towards digital detox, a wish for more privacy online, shared economy and sustainability. Additionally there is a growing number of websites, plug-ins and apps that help consumers control which information they share with others.

Similarly, the interest for cyber security is on the rise, and that means better tools and more international cooperation. The internet is growing up, and it gets increasingly harder to manipulate without being detected.

In this crossroads it is obvious that UX will become a competitive advantage. Overall, it will become increasingly easy to use browsers, apps, phones and gadgets. This is a positive development that yields success for the companies and organisations that understand what young people want.

Besides all the logical reasons to embrace White Hat UX, it also feels good. Get started before your competitors!

THE DARK SET

Andreas Ramos, Palo Alto

Silicon Valley is a great place. People love companies where dogs can play, the furniture is soft, delicious lunch is free, and the walls are painted like a kindergarten. Larry Page, Sergey Brin, Mark Zuckerberg, and other boy kings are the sons everyone wants to have: bright, charming, and full of best wishes for everyone. They created websites that you must have and best of all, it's all free.

Computers collect data. Every few months, we laugh as yet another clueless politician gets caught at sending pixs by text message. The silly fellow didn't realize computers track everything: his location, time of day, from who, to who, the message, the photo, the device, and so on. It's all sent back to those nice people with their playful dogs.

And we don't mind the tracking. We get all this good stuff for free because of advertising, but we just ignore the ads.

But people don't realize what tracking really does.

I live in Palo Alto, the center of Silicon Valley. A few months ago, at dinner with friends, I was talking with the person next to me. He works in security at a Very Large Company, where he led a team of five people and their job was to hack into their own company. Test the defenses, find the holes, and fix them. He worked for ten years in Washington DC and ran a small consulting team of ten people, where they did security testing. They hacked into computers. Their clients were the US government, Congress, the courts, the US military, nuclear power plants, major banks, insurance companies, and so on. How successful were they? 100%. Every single time, they got in. So I said, this means the Russians can hack everything in the US? Yes, of course. The Chinese? Certainly. And the US hacks every computer in Russia and China? Yes.

Think about that. The US, Russians, and Chinese have hacked everything. They have all the data, including everything about you. But what can they do with that? You don't have anything to hide, do you? You do?

Here's what people don't understand about data. Sit down and read the next few paragraphs carefully. Here's the Red Pill.

Everyone thinks there are three or four social classes. Rich, middle class, working class, and so on. Actually, society has about seventy-two social clusters. These are both vertical (top to bottom) in terms of money, but they're also horizontal. A fireman and a school teacher earn the same income, but they're different in behavior.

These clusters exist in all industrialized countries: Europe, the Americas, most of Asia, and the Arab world. These clusters were identified in the 1950s and have been tracked for sixty years now.

The clusters are numbered, such as #37, and they have amusing names. #37 is "Cartoons and Carpools", so these are young families with kids. We know what cluster 37 watches on TV, listens to on the radio, what magazines and newspapers they read (and which sections they read), what they buy, their street address, the kind of car they own, even the color of the car. The number of children, church attendance, age, education, job, income, how many years they've been in their house, size of house, and value of the house. We know how much they have in savings. What they eat for dinner and do on weekends. We know about 1,500 pieces of data for each person.

So you're thinking, so what? Who cares I had meat loaf and a potato for dinner last week?

Nobody cares about your past. Nobody cares John looked at Playboy last week. His wife, maybe, but nobody else cares about John's past because you can't make any money on the past. It's the future that matters. If you know the kind of car (even the color) that John and other 24-year old men in Cluster 37 are going to buy two years from now, well, there's a great deal of money to be made. And you know because you have sixty years of data on all men in Cluster 37 when they were 26 years old.

This is how large companies do marketing. They have a very good understanding of what people will do for the next ten to twenty years, based on what their cluster has done.

So you're thinking, okay, so they can predict what you're going to buy, even if you don't know. And I know in fifteen minutes, you'll be looking at funny cat videos and forget all about this.

So far, it's been nice guys in Silicon Valley who ran these companies. But what if the USSR had total social power? They would have never collapsed.

What if somehow, somewhere someone comes to power who is authoritarian, ignores laws, creates fake enemies, and likes to destroy whoever is against him? What will happen when such a person has all of the tracking that goes on in Google, Facebook, Pinterest, Instagram, and one hundred million websites worldwide? Remember, the US, the Russians, and the Chinese government hackers can enter any computer system.

We've built a powerful system and all of us use it because it's useful, easy, and fun. But as Obi-Wan Kenobi said to Luke Skywalker, "This sword cuts both ways."

ABOUT THE AUTHORS

Trine Falbe · trinefalbe.com
Trine has a passion for UX and has been involved in projects, teaching and research within UX. UX is a key issue for her and not to be taken lightly. Trine's knack for organising and structure is combined with the joy of developing new systems that make users happy. She is working on international UX projects and specialises in design for children. She is also a keynote speaker at conferences and UX advisor in strategic projects.

Kim Andersen · onkelkim.dk
After training at an international advertising agency, Kim quickly left print media for digital design. Due to his amazing memory he always leaves design meetings with an empty notebook, only to attend the following meeting armed with drawings where nothing has been forgotten and everything is drawn to great detail. He has been a partner in the digital design agency Mindlab for years, where he can be hired to do design tasks, preferably the most difficult and complex ones where the brain is working overtime.

Martin Michael Frederiksen · martinmichael.io
As a serial entrepreneur since the very first browser, Martin was born with a practical appreciation for the crossroads between business and digital development. He has published the books Cross Channel and the CEO's Guide to IT Projects That Cannot Fail. He works as an independent consultant for businesses that need a devil's advocate when trying out new strategies and ideas.

HOW THE BOOK WAS TESTED

Of course we would not write a book about UX without putting it through extensive tests during the process.

We want to share our test process with you, our readers, as it might serve as inspiration. Also, you might have better ideas than ours. If so, please send us your feedback via email to feedback@whitehatux.com – it will all be read and replied to.

During the initial phase of the book we worked to define the framework, target group and the angle to UX, and we tested the concept with representatives of the target group. We pitched the concept – and found out that our concept was wrong.

So we changed the concept several times until we succeed in telling the right story. We were on the right track.

What followed was a long phase of brainstorming and defining the actual contents, calibrating the target group description and removing irrelevant elements.

In this phase, we often asked ourselves: "How will the readers react to this section?" and "Is this relevant for the readers?"

Then we wrote the first version of the book. We found 10 test readers who read the entire draft and submitted feedback. We learnt that our purpose with the story was not clear.

It dawned on us that we had the correct sequence in terms of chapters, at least in our heads. But the problem was that we knew the subject matter inside and out, and that we had forgotten rule number one: write the book to fit the target group. So we iterated once more, reorganised a lot of copy and grouped the existing content into four main sections.

The book's front and back pages have been tested with impression tests.

Testing does have an unfortunate effect: you will discover issues. It is not easy to admit that your work can be improved, but it does feel better after the improvements have been made.

It would have been a great Grey Hat story to tell how well the book was coming along and that everything was just fine. But that was not how it happened. Our idea was to write an honest and informative book, that was easy to read, entertaining and still meaningful. We hope you think it was worthwhile to read it.

A special thanks to the book's test readers:
Brian Kalleshave, Frederikke Lyshøj Hansen, Gertrud Knudsen, Karina Nøhr, Kasper Kristensen, Kirstine Klitgaard, Lars Haahr, Lykke Dahlén, Martin Autzen, Martin Kølkjær, Mathias Vorret, Morten Jul Petersen, Niels Lassen, Thomas Alexander Frederiksen, Thomas Jeppesen and Thomas Qvist.

WHITE HAT UX .COM

The book also has a website:
whitehatux.com

Other relevant websites:
Aral Balkan · ind.ie

Dark Patterns · darkpattern.org

Electronic Frontier Foundation · eff.org

Andreas Ramos · andreas.com

White Hat

UX

Most things in life come with a dark side. For years, the online space has acted as a playground for thieves, bandits and murky types who will use every trick in the book to make you do the opposite of what you set out to do.
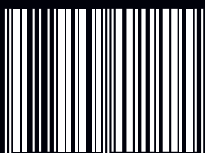
But there is hope. The next generation in user experience is coming.

Small websites are not the only ones tempted by the dark forces. Many of the world's largest brands make use of dark patterns - some do so because of ignorance, while others lack the courage to admit their wrong doings.

White Hat UX focuses on creating unique user experiences without a dark side.

Leave the dark side and read the book. It is full of dark patterns and inspiration to free yourself from the dark forces and join the next generation in user experience - White Hat UX.