

# DESIGNING HUMAN EXPERIENCES



Applying science to the creative  
process to improve lives



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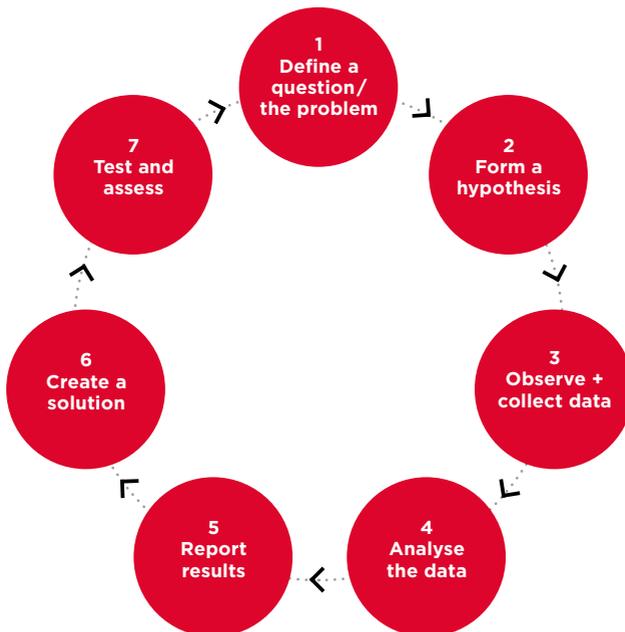
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Where science meets art

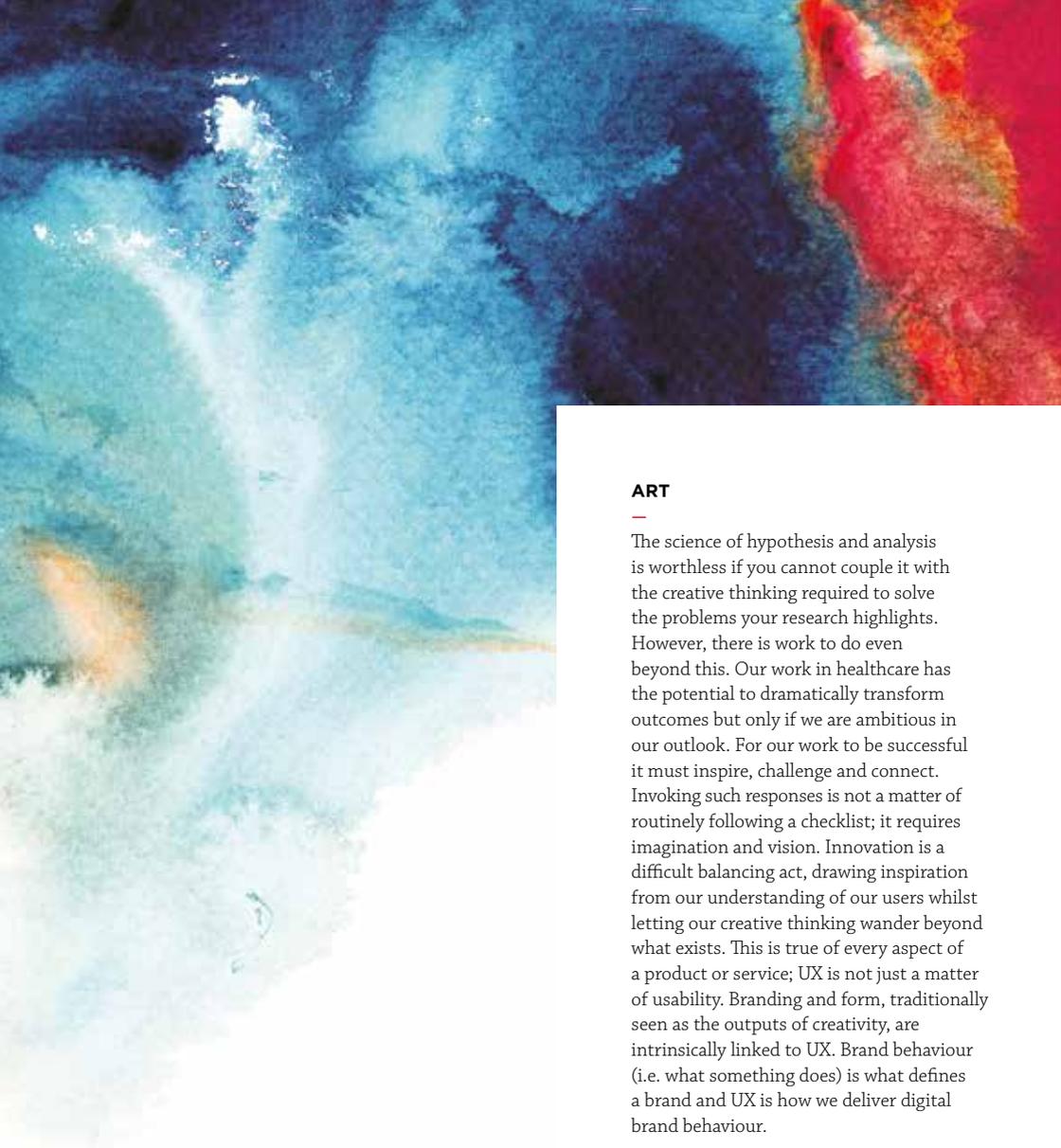
# Where science meets art

## SCIENCE

User centred design requires us to make informed design decisions. It's a process of gathering information, analysing and hypothesising, and building and testing. Ergo, the approach is scientific:



Beyond the science of interaction and ergonomics, UX (user experience) is as much concerned with the science of behaviour; the psychology and sociology of motivations and triggers.



## **ART**

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The science of hypothesis and analysis is worthless if you cannot couple it with the creative thinking required to solve the problems your research highlights. However, there is work to do even beyond this. Our work in healthcare has the potential to dramatically transform outcomes but only if we are ambitious in our outlook. For our work to be successful it must inspire, challenge and connect. Invoking such responses is not a matter of routinely following a checklist; it requires imagination and vision. Innovation is a difficult balancing act, drawing inspiration from our understanding of our users whilst letting our creative thinking wander beyond what exists. This is true of every aspect of a product or service; UX is not just a matter of usability. Branding and form, traditionally seen as the outputs of creativity, are intrinsically linked to UX. Brand behaviour (i.e. what something does) is what defines a brand and UX is how we deliver digital brand behaviour.

Compliance is not the bar

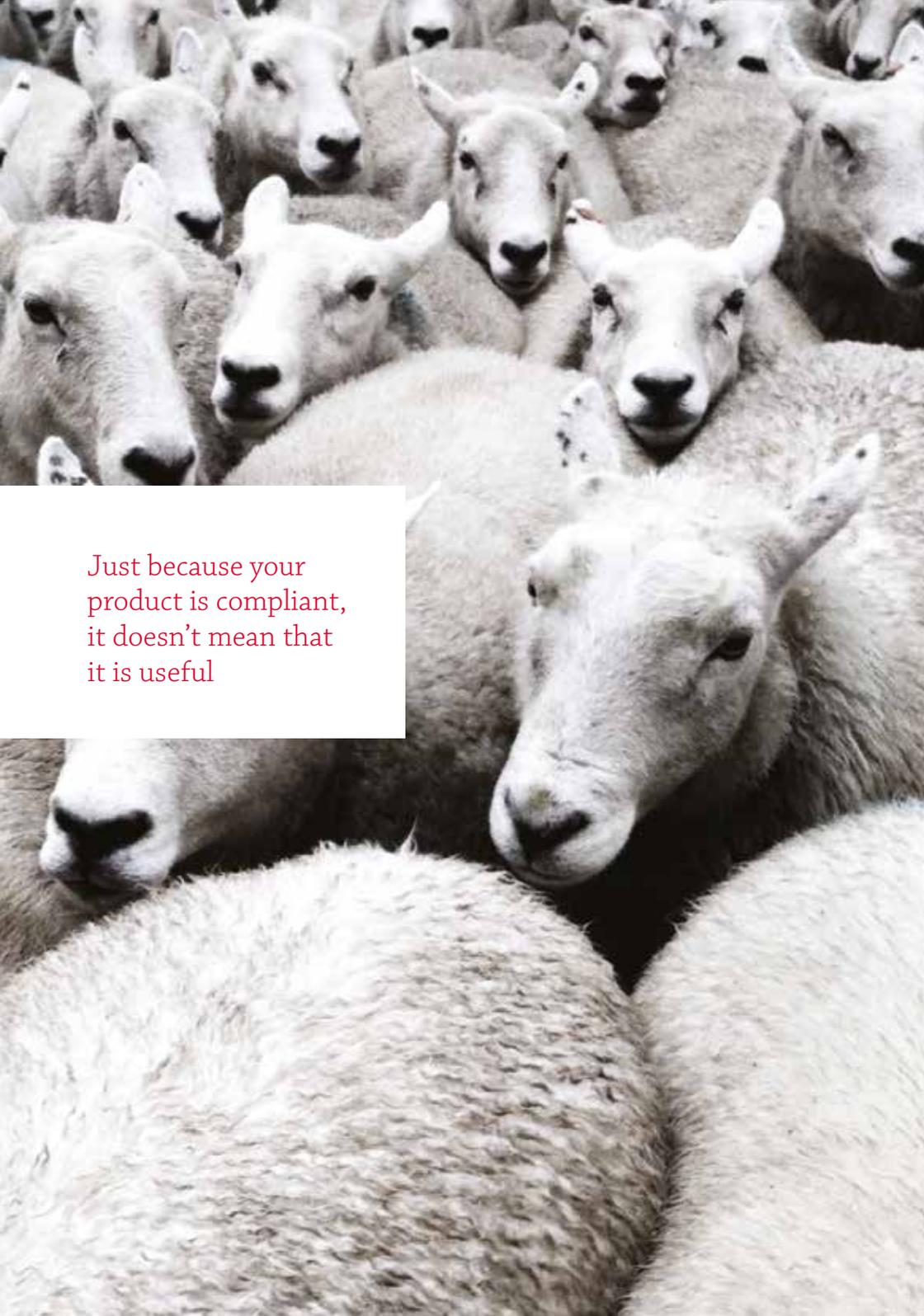
# Compliance is not the bar

Compliance regulations have come a long way in the last few years, and are now much more apace with our digital-based lifestyles than previously. Despite this, they continue to be a sticky issue and a potential obstacle to progress. This is as much a matter of mindset as it is legislation, with a preoccupation with 'the law' leading to nervousness and over-caution. Such an attitude can mar ambitious and well-intentioned projects, in most cases to the detriment of the very people we are trying to help, indeed the people that medical ethics codes are intended to protect: patients.

Just because a service or product is compliant, it doesn't mean that it is useful. Digital devices are so inherent in our lives that as a platform they offer a fantastic vehicle for healthcare interventions, but only if we harness them correctly. Twenty-first century living is rife with sophisticated and intuitive technologies and as

such we have grown used to a high standard of UX from the products we encounter. Healthcare solutions must offer the same level of experience as any consumer products if they are to be adopted and therefore effective. If they fail, they will simply be ignored or rejected. And if that happens then we fail in our most basic responsibility to improve the lives we reach out to.

Compliance alone can no longer be seen as a barometer of success. Neither can it be a shield behind which to hide when faced with difficult decisions. We must be brave and approach the opportunities and challenges of digital head-on. We should look to lead the way, rather than follow cautiously behind. The real innovations that are needed now must come in our attitudes not our technologies. 'The law' needs to be our foundation and not our limit.

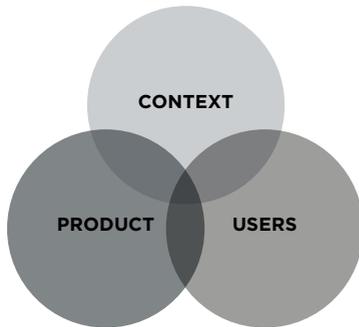


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Beyond the user

# Beyond the user

UX is about much more than just the user in isolation; there are three significant factors that make up UX, each one in need of careful analysis.



## USERS

Who is going to be using your product/system/service? What are their motivations and desires? As well as your product's functionality, a large part of the communication of your design is dependent on this information; the look and feel, the branding.

Modes of investigation: Survey, Focus groups, Preference interviews, Persona-building exercises.

## CONTEXT

The environment in which the user will be engaging with your product. Where are they? What will they be doing? What platform will they be using to access your product? How will these things affect their motivations and expectations? Context will have a significant impact on the design of your product, influencing factors such as interaction design, and navigation and flow.

Modes of investigation: Mental modelling, Ethnography, Contextual inquiry.

## PRODUCT

Product is a slightly inaccurate term to cover all kinds of disruptive interventions, whether it's an app, service or treatment system. When evaluating a product (be it your own or an existing competitor) you'll want to consider what is understood or accomplished by using the product. Information architecture and interaction functionality are amongst the many areas worthy of in-depth analysis.

Modes of investigation: Log analysis, Usability tests, Customer feedback.



Know-why is better than know-how

# Know-why is better than know-how

As young children, most of us will have taunted our parents with one incessant line of questioning: 'why?' Such persistent inquisitiveness is perhaps curbed somewhat as we grow a little older and learn a little more, but the instinct to probe for cause and reason should never be forgotten or dismissed as childish curiosity. It's the founding principle of all good design.

A client's first question is often 'what can you do?' An account manager may ask their designers 'how can you do this?' However, long before either of these questions can be answered, a thorough understanding of the end-user's underlying needs and motivations is required. You should know these users like you know your friends, appreciating their quirks, ticks and habits.

You must understand how your users behave and, of course, why. A deep empathy for the people you're designing for is the cornerstone of delivering user-centred designs that make a real difference to people's lives.

UX is a term that is sometimes misused, misunderstood and even feared, though there is no need for this to be the case. It's simply the matter of knowing who you're designing for, what their needs are and ensuring that what you're doing meets these needs. In healthcare, we should always envisage the end-user as being the patient. Whatever surrounding stakeholders we deal with, whatever the means of delivery, the output must always have a positive impact on the lives of patients.

Know your users like  
you know your friends



The hierarchy of needs

# The hierarchy of needs

Adapted from Maslow's hierarchy of human needs, the hierarchy of UX details the different requirements a product should fulfil, from the most fundamental functionality up to the nuances of emotional design.

## WILL DO - PET

The top of the UX hierarchy revolves around emotional design; elements that will stimulate a deeper connection with the user, encouraging them to engage and connect with your product. Behaviour based PET techniques (see below) are an incredibly powerful and important aspect of UX, motivating users to carry out tasks because they *want* to:

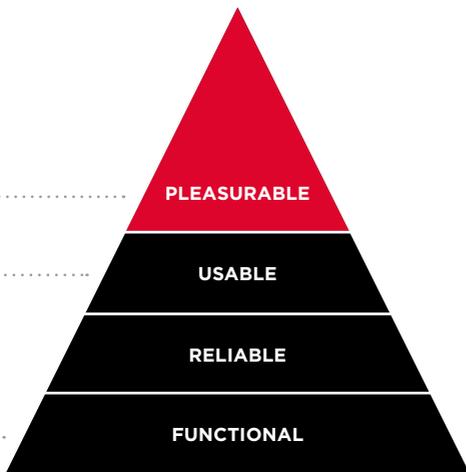
**Persuasion** techniques relate to behavioural mechanics; they are the triggers to an action.

**Emotion** techniques can elicit a desired emotional response during a process.

**Trust** techniques establish credibility, providing assurances and removing risk for the end-user.

## CAN DO - USABILITY

The first three levels of the hierarchy concern the utilitarian elements of design. The functional aspects of usability are what facilitate a user to carry out tasks, such as browse, search, perform basic interactions.



Source: Aaron Walter *Designing For Emotion*

### **PLEASURABLE**

The ideal is that users enjoy the experience of your product and consequently want to keep using it. Communication techniques are of high importance at this level, helping you to reach out to your customers and build a link between them and your product.

### **USABLE**

The ergonomics of your product are key – you want it to be easy and intuitive to use. Great user experiences construct clear narratives that allow people to self-segment themselves quickly and include subtle road signs to help them achieve their individual goals, all while trying to be as invisible as possible.

### **RELIABLE**

Reliability is crucial. When it comes to something as important as health, patients and professionals want to know that they can rely on your product to repeatedly perform without failures (crashes, glitches, performance errors).

### **FUNCTIONAL**

The most important thing a product must do is fulfil the basic functionality required in order to be of use to your user.

A hand holds a smartphone against a tree trunk. The phone's screen shows a photo of the tree bark, illustrating a recursive or self-referential concept. The background is a close-up of the rough, cracked bark of a tree.

# UX is not:

- just about testing
- expensive
- wire-framing
- one person's job
- about technology

You can get a lot, from not a lot

# You can get a lot, from not a lot

UX processes don't have to be expensive; it's not all large-scale system analysis or in-depth stakeholder persona assessments. Sometimes, there's not the budget or time to do something big. However, that doesn't mean you shouldn't do anything at all. UX methods are like a toolbox – they're not all appropriate all of the time, but there is one for every situation. The value that can be gained from implementing even the most basic UX strategies is staggering. Furthermore, sometimes it's actually better to start small. Do you really need to interview thousands of patients in researching your adherence campaign? No. One heartfelt sentiment expressed in a handful of patient discussions can unlock the truth behind a treatment rut that dominates a whole sector. So don't get bogged down in statistics and system diagrams. The end is more important than the means. However small-scale you have to do it, do something; it's always better than doing nothing.

UX methods are like tools in a toolbox; it's about picking the right one for the right job

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Form is a function

# Form is a function

The principle that form follows function is well known. It implies that aesthetics are a secondary consideration, of less importance than function. However, as a guiding doctrine it is as false as it is popular. Aesthetics play a highly important role in how we interact with products. Attractive design fosters positive attitudes in users. Our perception bias towards attractive objects leads us to adopt them more quickly, interpreting them as easier to use and even leading us to be more tolerant of functional pitfalls.

Rather than prescribing a hard and fast rule that prioritises functionality over aesthetics, or even vice-versa, we should simply ask ‘What aspects of our design are most critical to its success?’ Armed with these criteria, we should approach trade-offs in the design process individually, accepting that sometimes function will take priority and other times aesthetic will take priority.

Attractive designs  
encourage positive  
responses from users



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Build it, break it, and build it again, and they will come

# Build it, break it, and build it again, and they will come

Every new design will be broken in testing. The notion that a design is going to 'pass' testing is false and is an unhealthy stance to have towards the process of a new development. Prototyping can and should be investment heavy; you should invest enough that your design is worth testing and breaking, enough that it needs investigating to find the faults. But you should be prepared to throw everything that you've invested away and start again if testing reveals flaws in your methods. The value in prototyping and initial development stages is in what you have learned, not what you have left at the end of it.

Be prepared to throw it  
all away and start again



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