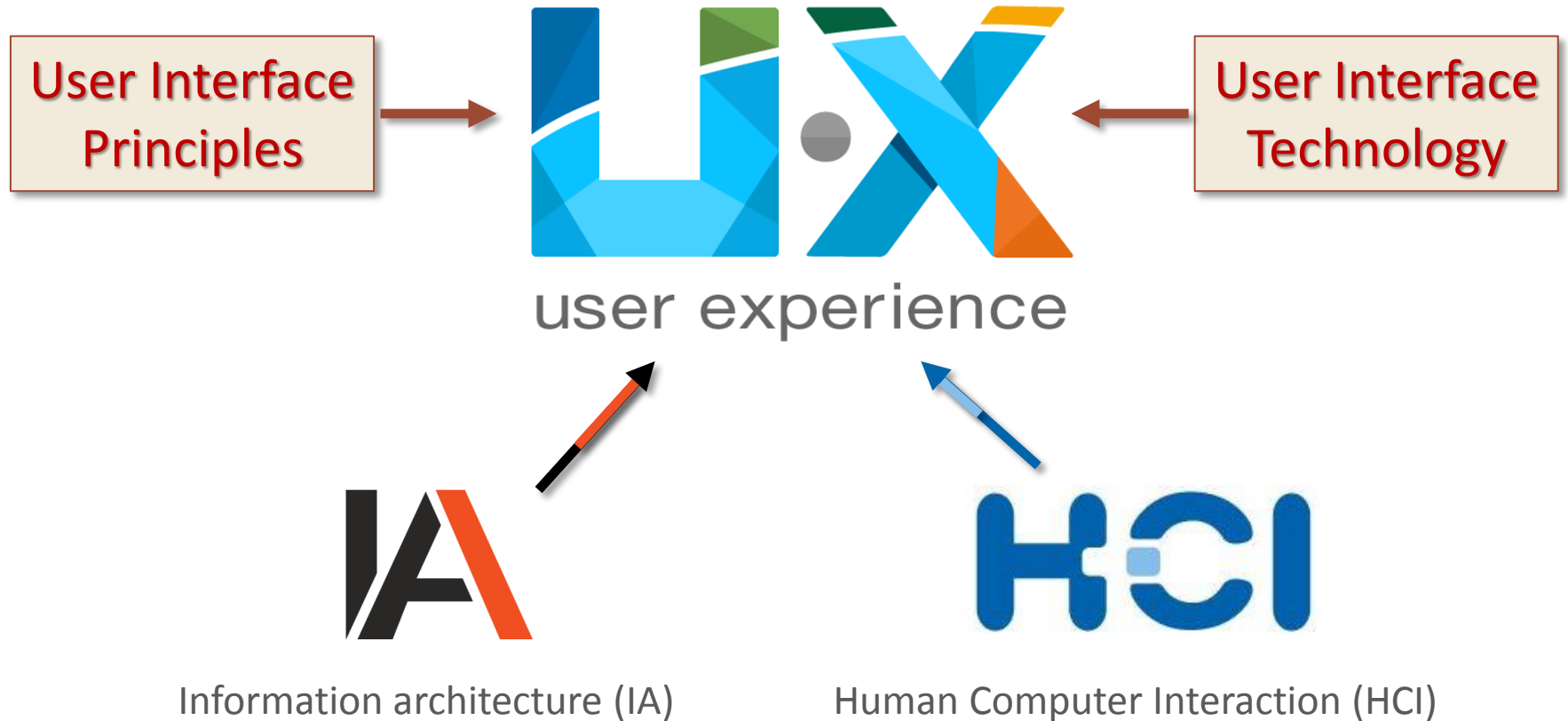


Web Design Theory

User eXperience (UX)

Your goal is to enable [create, design] a delightful and meaningful web user experience



UX MAKES SENSE WHEN CREATOR AND USER ARE DIFFERENT ENTITIES



<http://www.bible-archaeology.info/agriculture.htm>

Pre-historic tools were created and used.
The creator and the user were the same person.

UX MAKES SENSE WHEN CREATOR AND USER ARE DIFFERENT ENTITIES



1950s computers start to have software.

The creator and the user start to be different people.



The need for User Interface Usability was born!

1970s computers start to adopt client-server architectures.
Users were no longer engineers or computers scientists only.

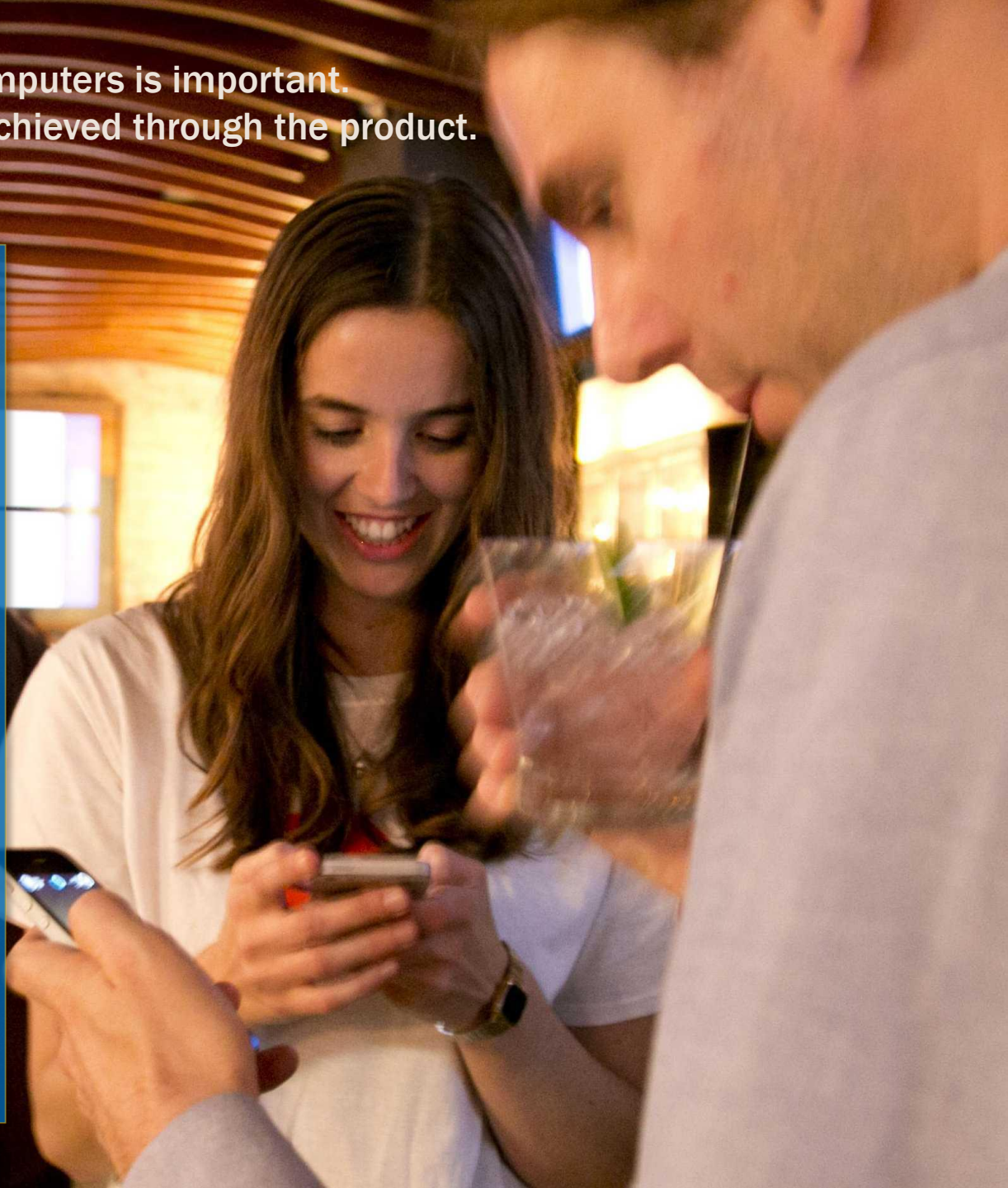


**In 1984 the GUI (Graphic User Interface) was launched.
Anyone could be a computer user.**

Source: Apple founder Steve Jobs presenting the first Macintosh computer. The Macintosh 128K (January 24, 1984)

The emotional side of using computers is important.
What matters is the outcome achieved through the product.

**User
Experience
UX**
was born
when
everyone
became a
computer user



User Experience (UX)

User Experience (UX) expresses the reaction, perception and response of users regarding a product or service. **It helps us to measure the enjoyment experienced by the user, as well as the feelings of satisfaction and success they have when using a product.** It takes into account the person's emotions and attitudes about using the service or product. It also includes the practical, experiential, affective, meaningful and valuable aspects of human–computer interaction such as usability, interactivity, reliability and efficiency. UX is chiefly concerned with the **outcome** achieved by the user by using the product or service.

This is a product

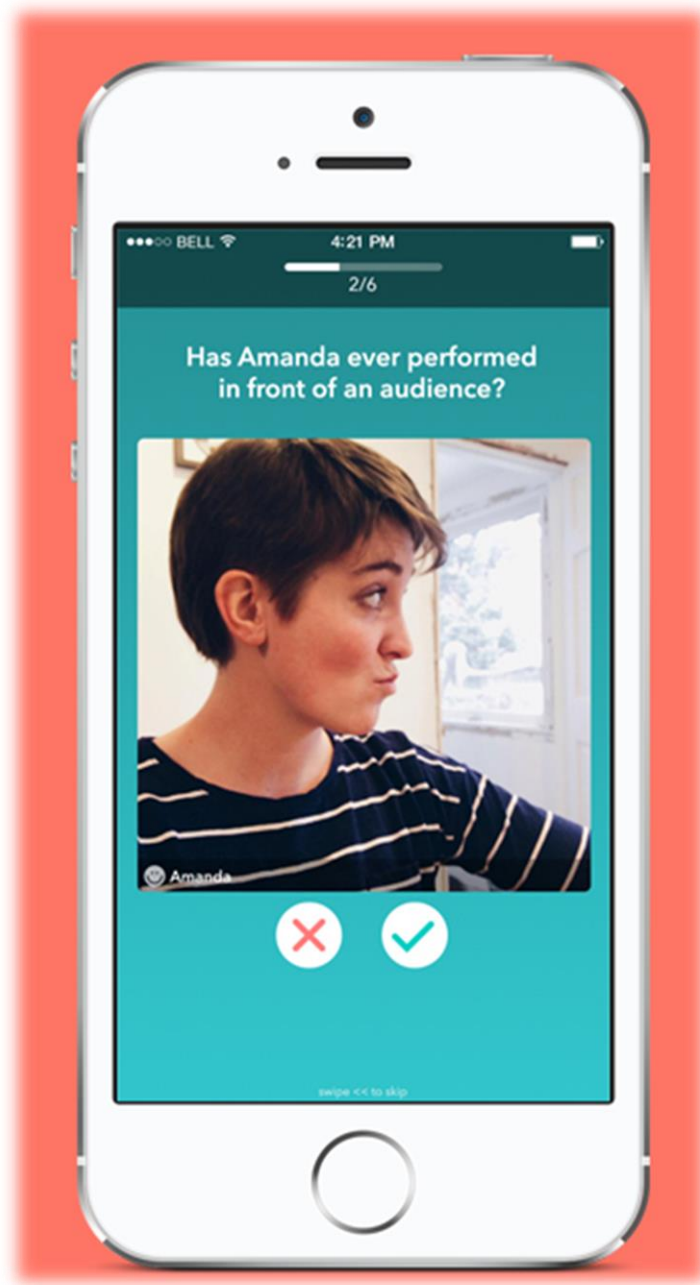


This is an outcome



"GORE-TEX® Experience Tour: All-out trail running in the Dolomites!" by GORE-TEX® Products is licensed under CCBY-NC-ND 4.0

This is a product



This is an outcome



UX HELPS US TO DESIGN FOR HAPPINESS



UX HELPS US TO DESIGN FOR HAPPINESS



UX

It is the feeling of satisfaction, **achievement**, and happiness when interacting with a product.



UX

It is the feeling of satisfaction, **achievement** and happiness when interacting with a product.

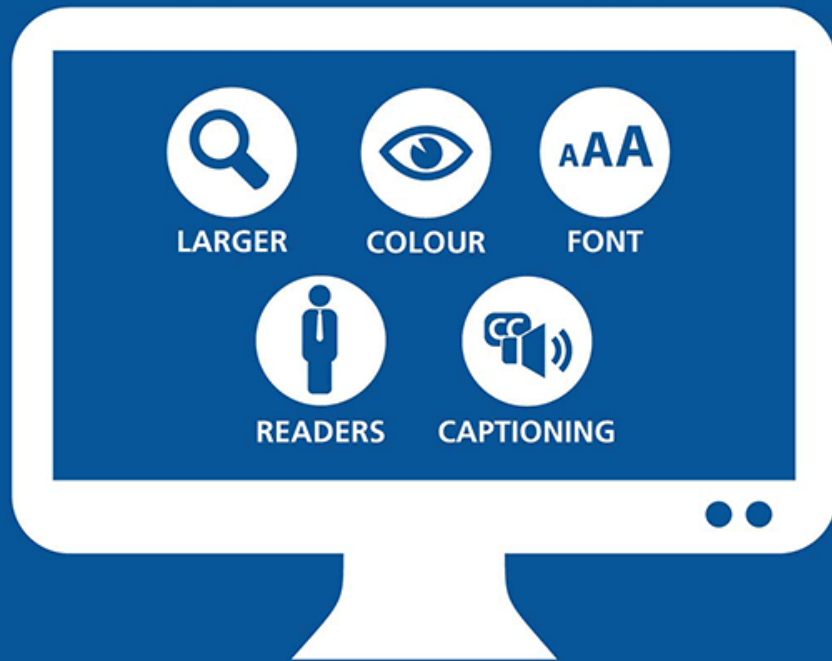


User eXperience



UX is the "How Do you feel" after using a product

Accessibility



✓ Accessibility

A website is *accessible* if all people, including disabled and elderly people, can use it. Designers have the responsibility to make sure that everyone has access to what we create regardless of ability, context, or situation. A website must bring the same rich User eXperience to everyone.

UX is the "How Do you feel" after using a product

Usability

It's the degree of ease with which a software can be used to achieve required goals effectively and efficiently.

✓ Accessibility

✓ Usability



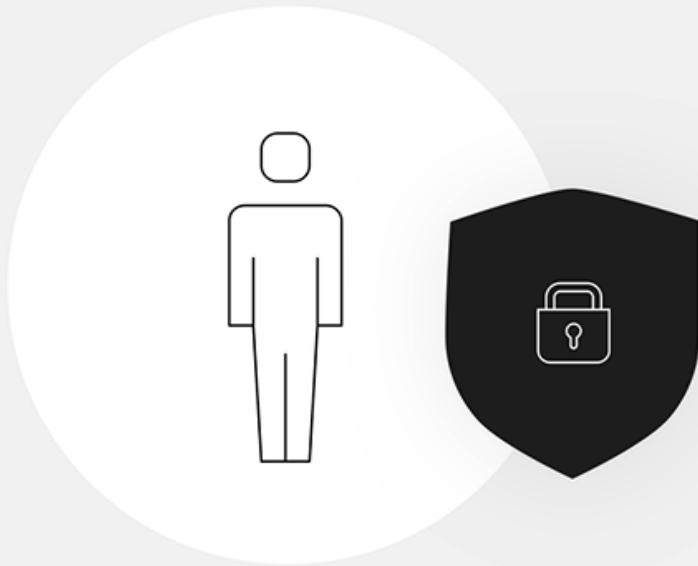
×



✓

UX is the "How Do you feel" after using a product

Reliability



✓ Accessibility

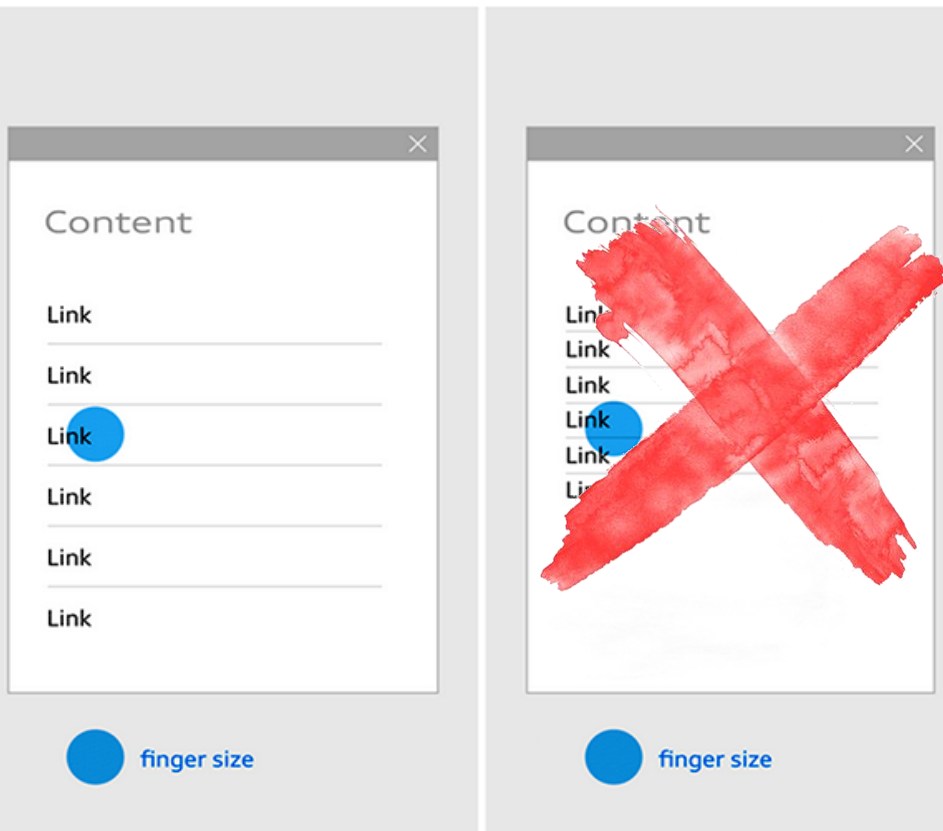
✓ Usability

✓ **Reliability**

It is the degree to which a website or a piece of software will perform a required function or produce consistent results without failure under stated conditions and risks.

UX is the "How Do you feel" after using a product

Efficiency



✓ Accessibility

✓ Usability

✓ Reliability

✓ **Efficiency**

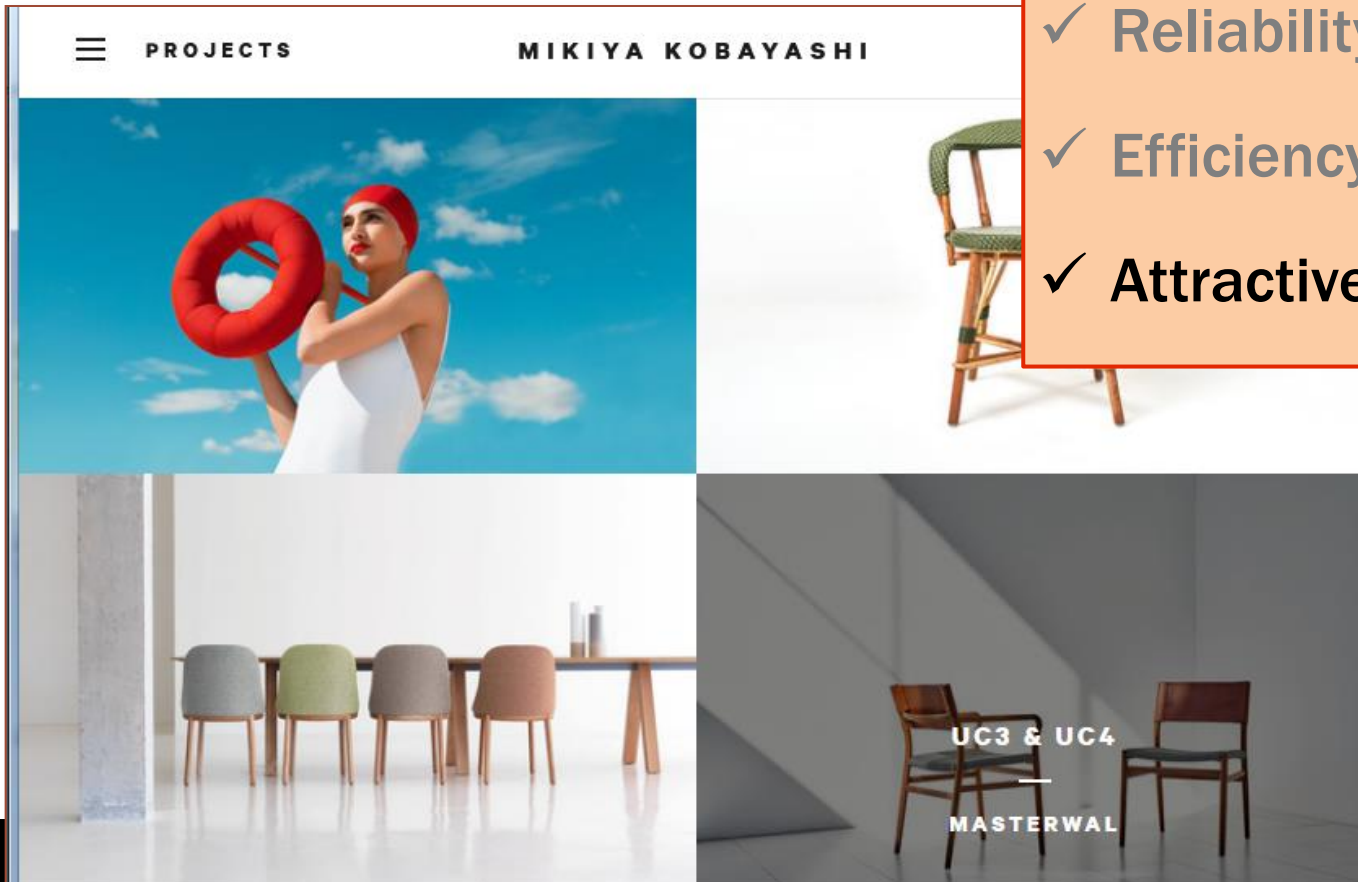
It is the quality of being able to help users to complete their tasks successfully, without wasting their time, resources or energy.

UX is the "How Do you feel" after using a product

Attractiveness

It is the quality of being pleasing or visually appealing to the senses or/and possessing qualities or features that arouse interest.

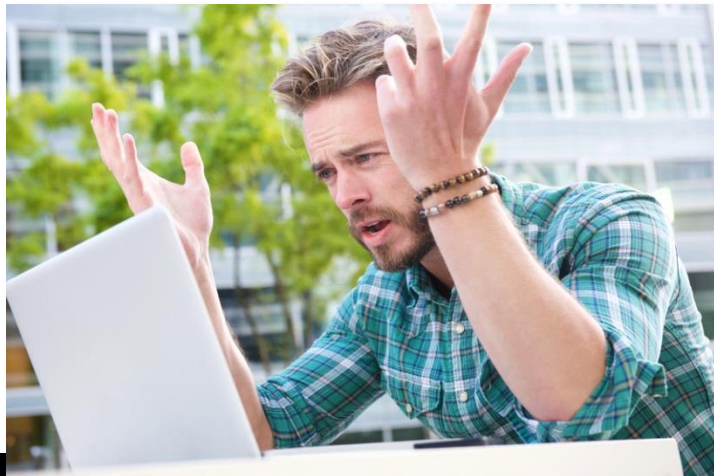
- ✓ Accessibility
- ✓ Usability
- ✓ Reliability
- ✓ Efficiency
- ✓ **Attractiveness**



UX is the "How Do you feel" after using a product

Meaningfulness

It is the human ability to convert what they see or feel into important information from which they can create a conclusion or decision. Designers use the user's Intent, Context and Relevance to direct the user's attention to the right decisions and perceptions. Don't let your design make the user get lost, make the wrong decision or fail to perceive the purpose of the website.



- ✓ Accessibility
- ✓ Usability
- ✓ Reliability
- ✓ Efficiency
- ✓ Attractiveness
- ✓ **Meaningfulness**

UX is the "How Do you feel" after using a product

UX is ALL that →

- ✓ Accessibility
- ✓ Usability
- ✓ Reliability
- ✓ Efficiency
- ✓ Attractiveness
- ✓ Meaningfulness



Bad UX



Good UX



Bad UX



Don't use Background a/v media by default

Good UX



DESIGN FOR HAPPINESS

Bad UX

What year were you born?

<input type="radio"/> 1920	<input type="radio"/> 1935	<input type="radio"/> 1950	<input type="radio"/> 1965	<input type="radio"/> 1980	<input type="radio"/> 1995	<input type="radio"/> 2010
<input type="radio"/> 1921	<input type="radio"/> 1936	<input type="radio"/> 1951	<input type="radio"/> 1966	<input type="radio"/> 1981	<input type="radio"/> 1996	<input type="radio"/> 2011
<input type="radio"/> 1922	<input type="radio"/> 1937	<input type="radio"/> 1952	<input type="radio"/> 1967	<input type="radio"/> 1982	<input type="radio"/> 1997	<input type="radio"/> 2012
<input type="radio"/> 1923	<input type="radio"/> 1938	<input type="radio"/> 1953	<input type="radio"/> 1968	<input type="radio"/> 1983	<input type="radio"/> 1998	<input type="radio"/> 2013
<input type="radio"/> 1924	<input type="radio"/> 1939	<input type="radio"/> 1954	<input type="radio"/> 1969	<input type="radio"/> 1984	<input type="radio"/> 1999	<input type="radio"/> 2014
<input type="radio"/> 1925	<input type="radio"/> 1940	<input type="radio"/> 1955	<input type="radio"/> 1970	<input type="radio"/> 1985	<input type="radio"/> 2000	<input type="radio"/> 2015
<input type="radio"/> 1926	<input type="radio"/> 1941	<input type="radio"/> 1956	<input type="radio"/> 1971	<input type="radio"/> 1986	<input type="radio"/> 2001	
<input type="radio"/> 1927	<input type="radio"/> 1942	<input type="radio"/> 1957	<input type="radio"/> 1972	<input type="radio"/> 1987	<input type="radio"/> 2002	
<input type="radio"/> 1928	<input type="radio"/> 1943	<input type="radio"/> 1958	<input type="radio"/> 1973	<input type="radio"/> 1988	<input type="radio"/> 2003	
<input type="radio"/> 1929	<input type="radio"/> 1944	<input type="radio"/> 1959	<input type="radio"/> 1974	<input type="radio"/> 1989	<input type="radio"/> 2004	
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<input type="radio"/> 1934	<input type="radio"/> 1949	<input type="radio"/> 1964	<input type="radio"/> 1979	<input type="radio"/> 1994	<input type="radio"/> 2009	

SUBMIT

Good UX

What year were you born?

1988



SUBMIT

Bad UX



Good UX

SugarSin



SUGARSIN'S
MENU

Salted Caramels • Chocolate
Organic Fudge • Salted Licorice
Handmade Marshmallows & Lollipops

YUMMY GIFTS

Osaka Da • Peachy Hearts • Ship Ahoy
Tiramisu • Sea Salted Almonds
Queen of Hearts • La Dolce Vita

FABULOUS
PICK N MIX
£1.19/100g

Red Ferrari • Bon Bons • Hot Lips
Swedish Fish • Giant Power Froyo

NATURAL COLOURS & FLAVOURS
Loads of Gummy & Gelatine Free Sweets
STAY IN TOUCH AT:

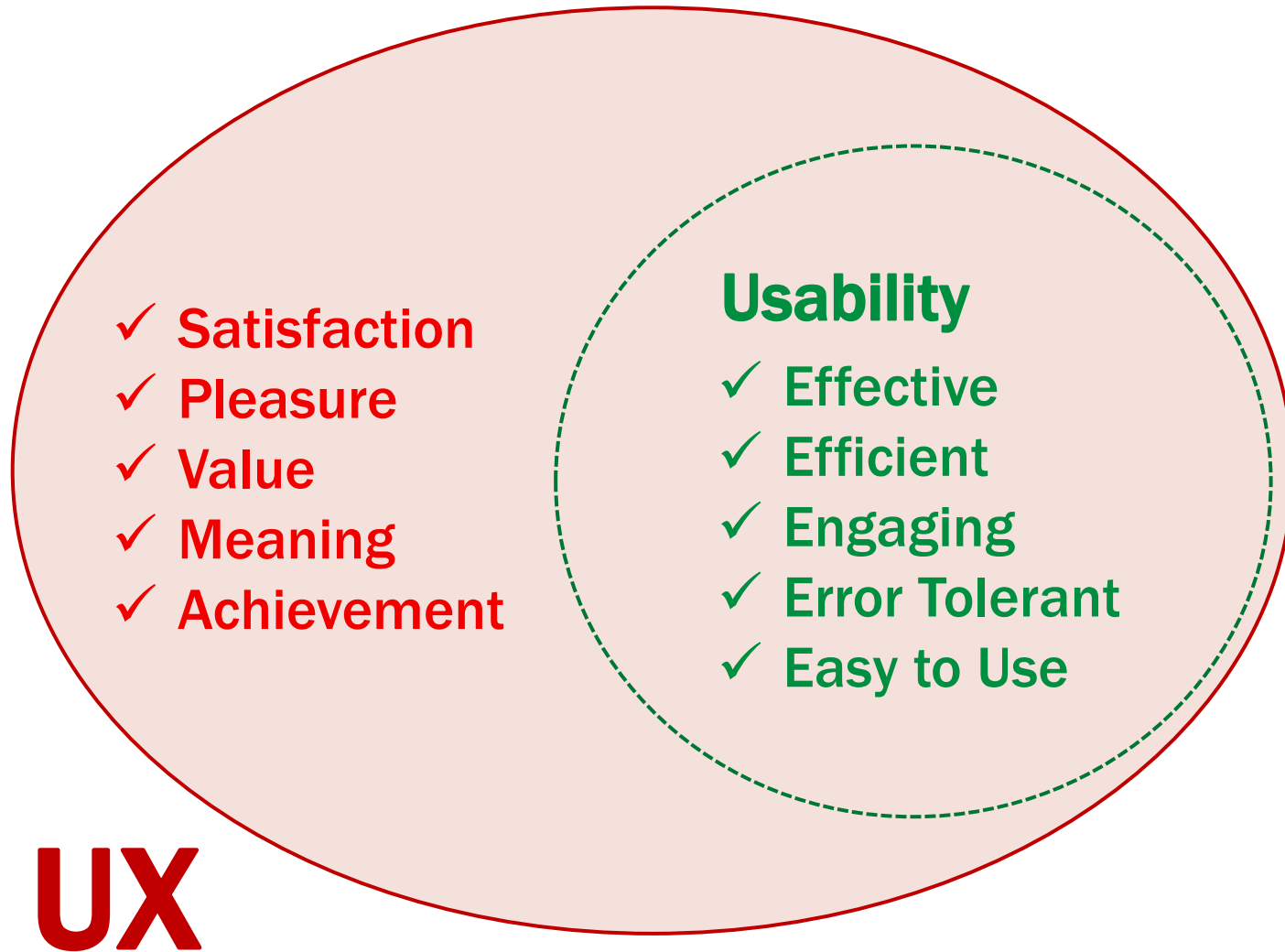
Twitter: @sugarsin Facebook: @sugarsinuk
SHOP IS ALWAYS OPEN

WWW.SUGARSIN.CO.UK

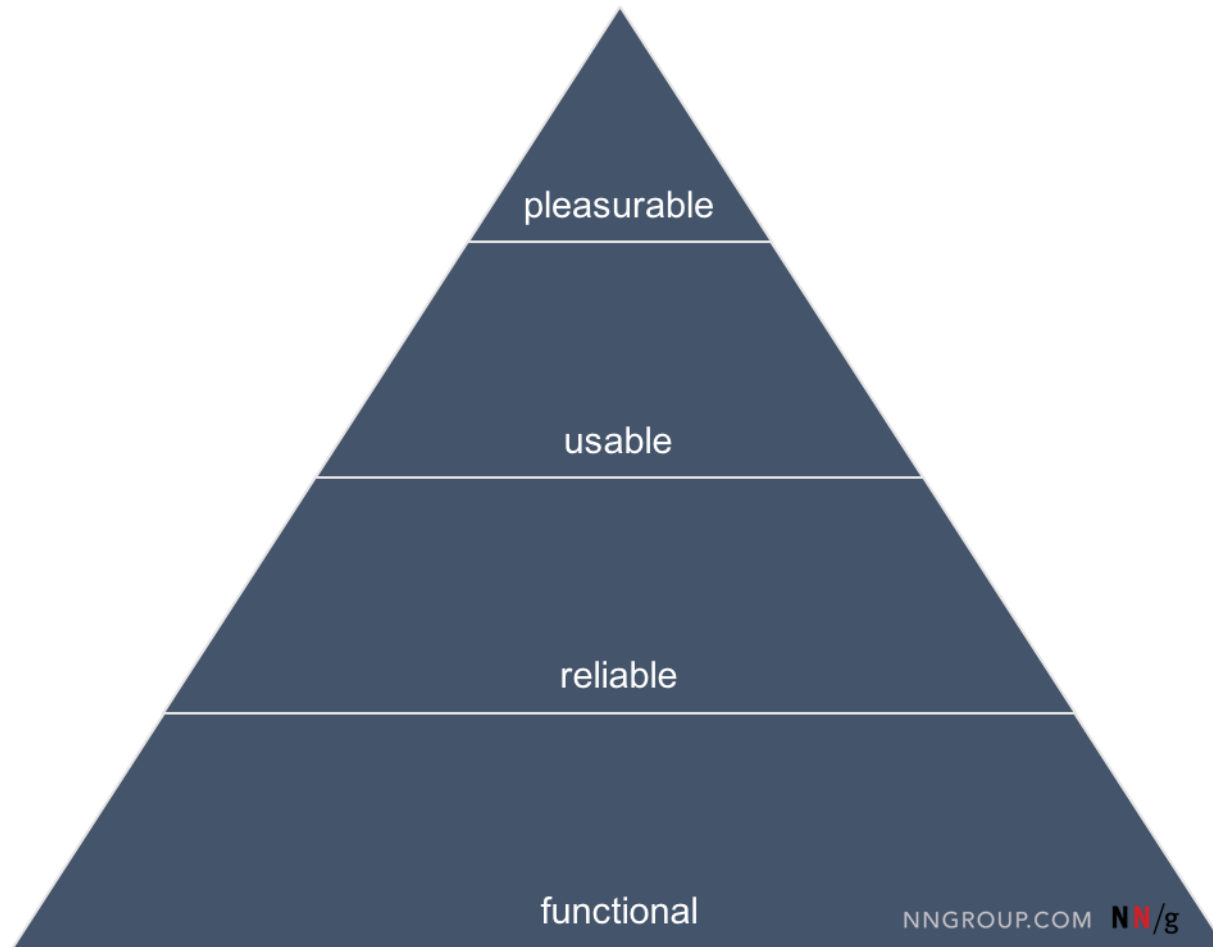
SugarSin



Usability is important but not enough



Aarron Walter's Hierarchy of User Needs



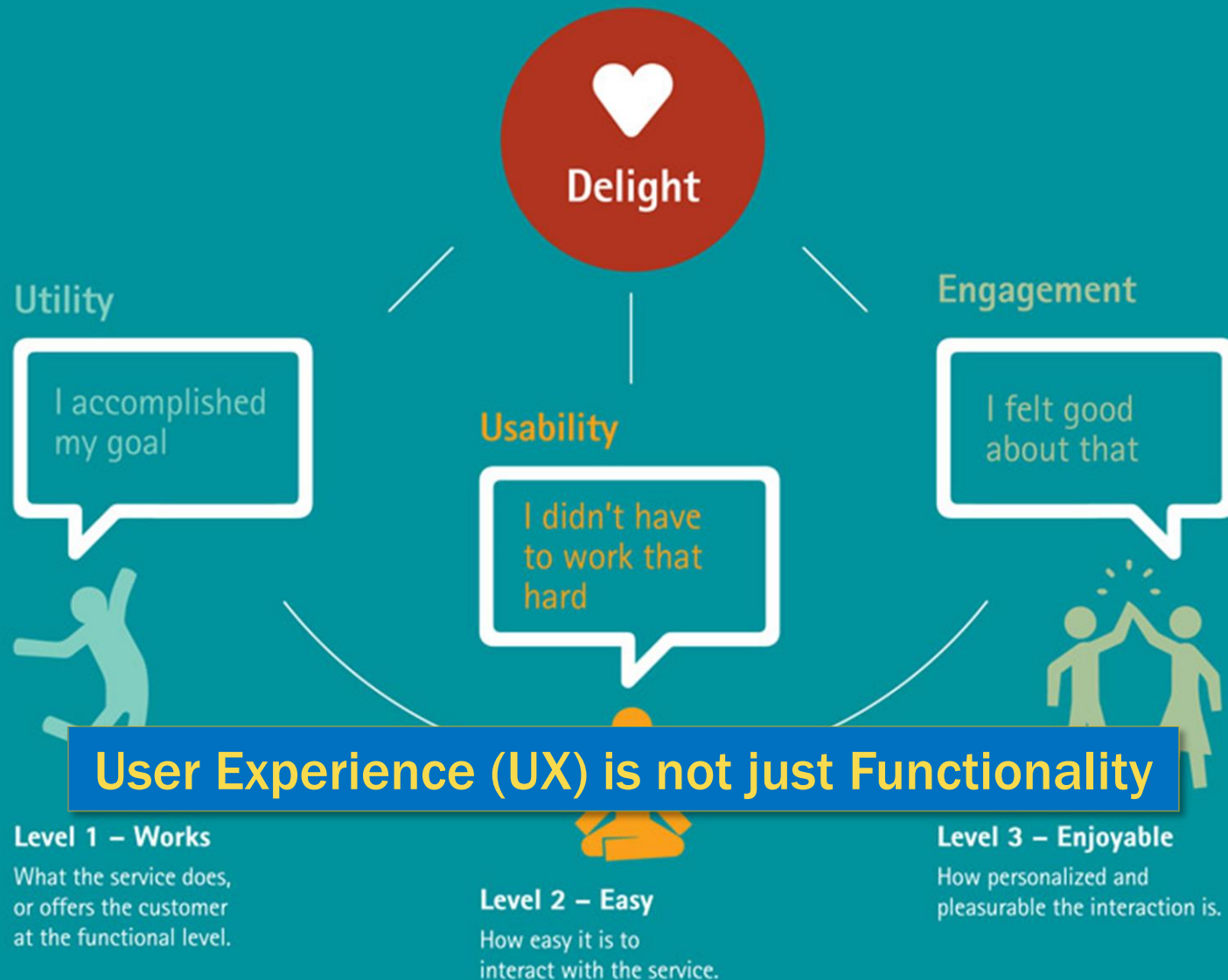
Source: image from the *"Designing for Emotion"* book by Aarron Walter

Aarron Walter's Hierarchy of User Needs

Aarron Walter's "hierarchy of user needs" defines basic user needs that interfaces must fulfill before more advanced needs can be addressed. For example, a beautiful application that is not functional, (that is, it has no useful purpose) will not satisfy users' basic needs. Because it lacks a function, its aesthetic qualities will remain unappreciated. Thus, even though it might be gorgeous in its own right, the user will probably not remember anything good about the experience. A product must first, before anything else, satisfy a need and be useful.

On the next level, a functional interface that doesn't always work as expected is unreliable and will still leave users mostly unsatisfied, no matter how beautiful it is. Finally, the interface must be usable: it should not require much effort to learn, discover, and utilise all its features. Only when a product is functional, reliable, and usable can users appreciate the delightful, pleasurable, or enjoyable aspects of the experience. What Walter's theory tells us, in short, is that a product can be delightful only if it is also usable and has a clear purpose (usefulness).

but delightfulness is important



Source: *Beyond Usability: From Good to Great* (an Accenture report)

and “usability” is not always fun

“If ease of use was the only requirement, we would all be riding tricycles.”

– Douglas Engelbart

A blue children's bicycle with a black seat and handlebars, positioned behind a blue banner. The bicycle has a blue frame, black tires, and a black seat. A blue banner with yellow text is overlaid on the middle of the image.

User Experience (UX) is not just Usability

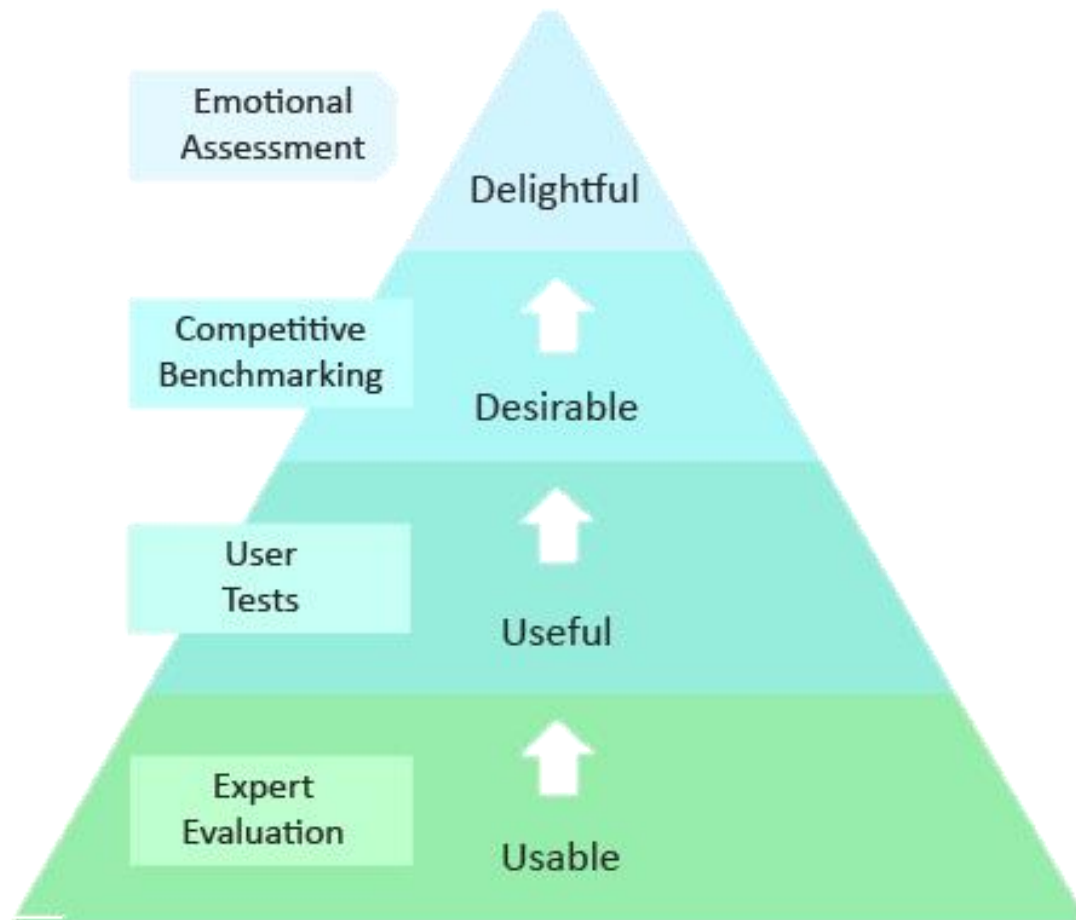
UX inspires Design

Design is devising courses of action aimed at changing existing situations into preferred ones.

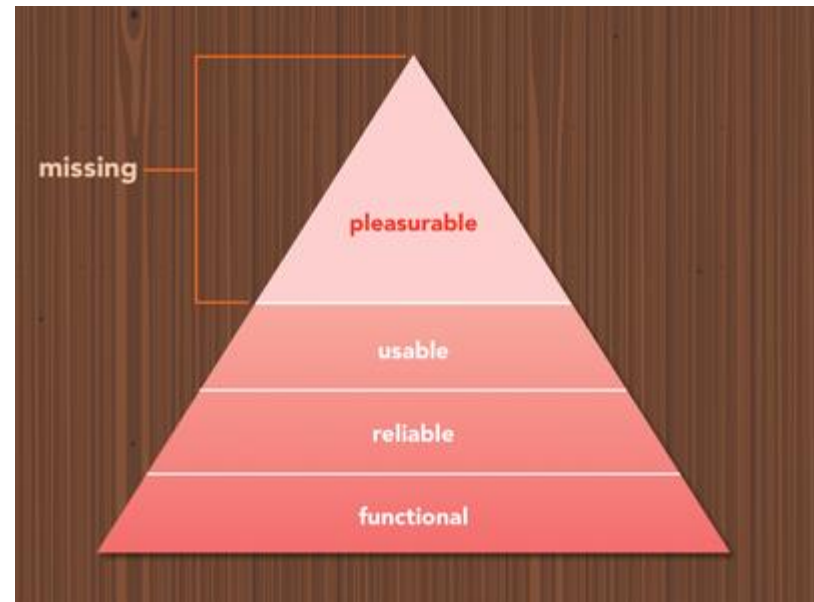
- *Herb Simon*

UX Evaluation

You evaluate UX by asking users: "How do you feel...?"



UX evaluation needs to take into account **Human Cognition (HC)**, which includes the way users process information or the way users discriminate information and it depends on their mental ability to process, learn, remember, reason and perceive information.



HC theory has demonstrated that how users are attracted depends on pattern, arrangement, colour (see lecture slides 2.1) and text (inappropriate language and typography often misleads users) as well as in their interest (usually users quickly scan pages, following certain scanning patterns like Z-Pattern, Zig-Zag Pattern and F-Pattern (see lecture slides on UI Design Principles)) and how they “solve” problems and take decisions as they visit web pages .

UI : User Interface

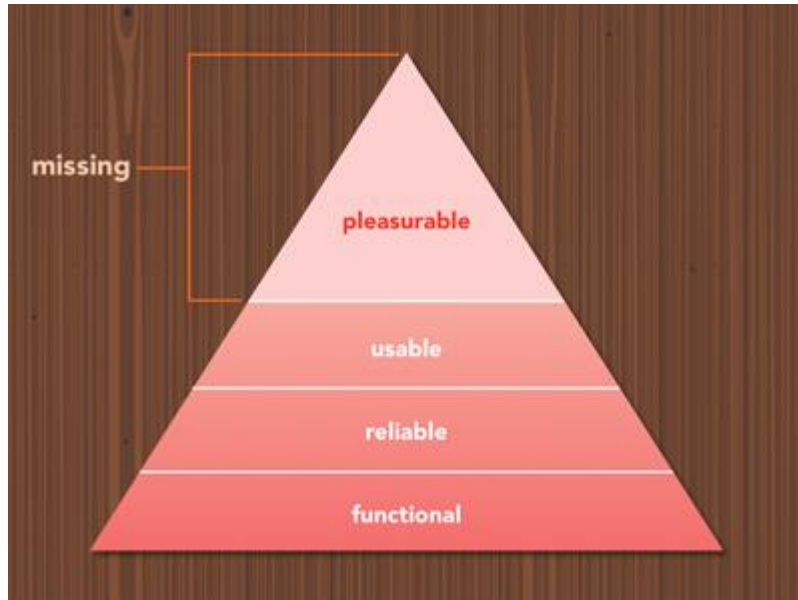
Cognitive Overload

UX is influenced by HC or the type of cognitive processing website users use to “solve” problems and take decisions as they visit web pages (e.g. visceral (make rapid decisions), behavioural (common or normal reactions) or reflective (conscious evaluation)). If the effort required to process information is too high, the user will suffer from a cognitive overload.

Common causes of Cognitive Overload

- Absence of or poor IA (e.g. user reaches goal after many unnecessary clicks).
- Absence or inappropriate use of Design Principles (e.g. the user has to deal with irrelevant text and images to reach their goal).
- Overall poor UX (e.g. when users do not get result as they anticipate; irrelevant images or inappropriate typography, etc.)

Designers can minimise cognitive overload and improve UX by taking into consideration the Human-Computer Interaction (HCI) Laws such as the Fitt's Law, the Gestalt laws, the Hick's Law as well as the Miller's Law (*sources: <https://6750hcdesigngeorgiatech.files.wordpress.com/2014/01/human-perf-models-no-kslm.pdf>, <http://ijsetr.org/wp-content/uploads/2014/12/IJSETR-VOL-3-ISSUE-12-3213-3217.pdf>*)



UX evaluation includes the evaluation of

$$IA + HCI + HC = UX$$

Human Cognition (HC):

- Motivations
- Experiences
- Emotions

Motivations

- task oriented (achievement)
- recreational (service)

Experiences

- mental representation

Emotions

- visceral
- behavioural
- reflective

They can condition the user's decision making

Analysing and Evaluating UX

What to test?

- The six UX features
- The HCI Laws
- The UI Design Principles

How?

Observing user's expressions and reactions when using the interface
Getting the user to reflect on their own feelings or thoughts
Recording and analysing the user-computer interaction
Using UX unobtrusive evaluation tools (e.g. electroencephalography)

When?

It should be done “in situ”.
Ideally UX Evaluation should be done at the same time that the user is using the website for the first time or immediately after the user testing has been completed.



UX Evaluation tools:

- Ethnography
- Biometry
- Physiology
- Big Data

UX EVALUATION: iterative user testing

1. Early focus on users

- Start with thorough understanding of your users and their needs, behaviors, contexts

2. Evaluation

- Regularly assess your design to see whether it is meeting your users' needs

3. Iteration

- Continuously update/revise the design based on evaluation results

So when is the best moment to evaluate UX?



In a nice artificial and controlled setting?

or



at the time and scene where the event is happening?

UX should be evaluated when it is happening in REAL LIFE

FURTHER READING

- ✓ *"Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability" by Steve Krug, 3rd Edition, 2013.*
- ✓ *"Smashing UX Design: Foundations for Designing Online User Experiences" by Jesmond Allen and James Chudley, 1st Edition, 2012*
- ✓ *"Lean UX: Applying Lean Principles to Improve User Experience" by Jeff Gothelf and Josh Seiden, 2013*
- ✓ *<https://www.nngroup.com/articles/ten-usability-heuristics>*