## Do You Need a Bigger UX Boat?

**Building Your UX Capacity,** From Product to Process to Culture

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Is your organization doing "User Experience" right now?

#### What you probably think I'm asking...

Do you do any usability testing of your website and other digital interfaces?

Do you survey your users on a regular basis?

Do you collect data on your website users and examine it through Google Analytics or a similar platform?

Do you have any colleagues with "User Experience" in their job title?

#### What I'm actually asking...

### Does your organization exist?

Your organization is delivering a user experience regardless of how much time, energy, and resources you're putting into shaping it.

Is your organization doing "User Experience" right now?

## YES.

Today, all organizations are "doing UX" in some form.

Is your organization doing good "User Experience" right now?

#### That's a harder question to answer!

What does a good User Experience look like for your users?

→ PRODUCT

How do you create a good User Experience for your users?

→ PROCESS

What does good User Experience look like for your organization?

→ CULTURE

## What does a good User Experience look like for your users? (product)

## "UX" is a property of an interface...

"This app has great UX!"

"The UX of this website is terrible."

"We really need to improve the UX of this interface."



#### ...or is it?

For a long time, **usability** was the defining property of an interface: it was either usable or it wasn't.

You reached this conclusion through a rigorous (sometimes!) process of **usability evaluation**.

- → Are users able to complete tasks with effectiveness, efficiency, and satisfaction?
- → Is the interface sufficiently easy to learn and use?
- → Are there minimal errors and are these errors easy to recover from?

#### UX is not usability

As the world shifted away from "usability" and toward "UX" as the primary focus of design efforts, some believed UX was just the new terminology.

But it is not and never has been just a buzzword: **UX represents an entirely new paradigm.** 

#### Usability vs. UX

#### The Usability Paradigm

find and fix problems that prevent people from doing what they want to do

#### The UX Paradigm

design interfaces that are pleasurable and engaging to use

# UX is "designing for pleasure rather than absence of pain."

(Hassenzahl & Tractinsky, 2006)

"Your customers aren't won over by features. They're won over by the product experience...If you don't focus on the core experience, and instead create a wide but shallow product, you'll find your users lost, confused, or bored, and, more than likely ready to walk away."

Lee Dale
UX Magazine





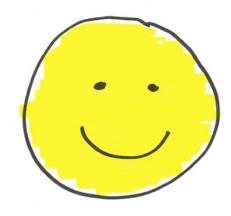
"User Experience Design somehow suggests that a designer has direct control over how every user experiences the product. A massive exaggeration... Design defines experience, it doesn't control it. Used like this, 'User Experience Design' is a big promise that cannot be kept."

Oliver Reichenstein Information Architects Inc.

#### UX is an outcome.







You can't design an experience.

You can only design for an experience.

## We design products.

We shape experiences, which are the outcomes of an interaction.





## Experiences are time-specific

"You can't experience the experience until you experience it."

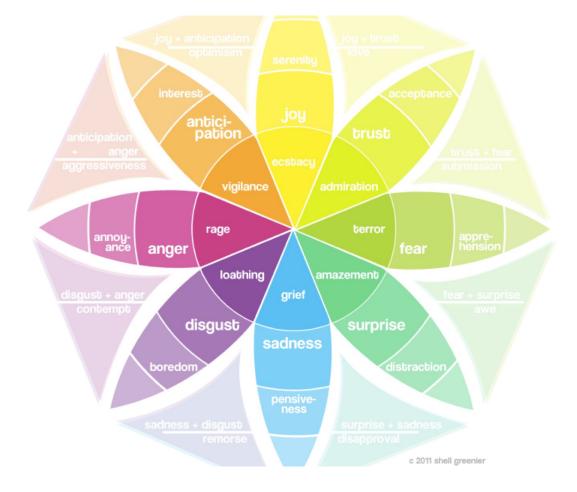
Bill Moggridge IDEO



## Experiences are emotional

"Humans are not thinking machines. We're feeling machines who also think. We feel first, and then we think."

António R. Damásio University of Southern California



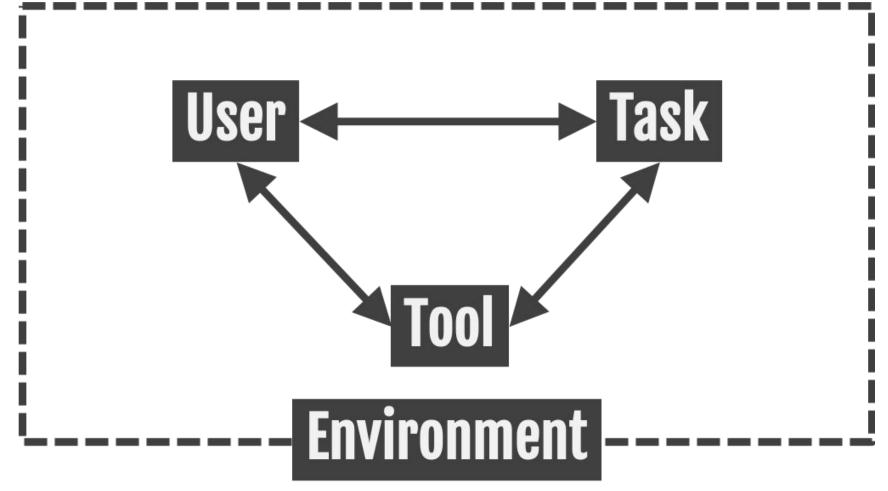
## Experiences are multi-faceted

"[UX is]...the way it feels in their hands, how well they understand how it works, how they feel about it while they're using it, how well it serves their purposes, and how well it fits into the entire context in which they are using it."

Lauralee Alben Sea Change Design Institute



A user experience is a time-specific, emotional, and multi-faceted, outcome resulting from an interaction with a product.



"We can design the product...[but] we can shape neither our users' expectations nor the situation in which they use what we have designed."

Helge Fredheim Smashing Magazine

#### The perpetual challenge of UX

#### The user(s)

their needs, behaviors, backgrounds, expectations, etc.

#### Their task(s)

what users are trying to do

#### Their environment

where, why, and how users are trying to complete their task

#### The tool

what users need to use to complete the task(s)

Can't be designed



#### Users are demanding

"I bet a lot of people worked really hard on this, so I'll cut them some slack if it doesn't work exactly the way I want it to work."

- Nobody, ever



#### Users are unforgiving

"This interface doesn't provide a good user experience, but that's OK – I'll still keep coming back to it because there's nowhere else I can get what I need."

- Nobody, ever



If UX is inherently contextual... and context is unpredictable... and users are demanding... and users are unforgiving...

What do we do?

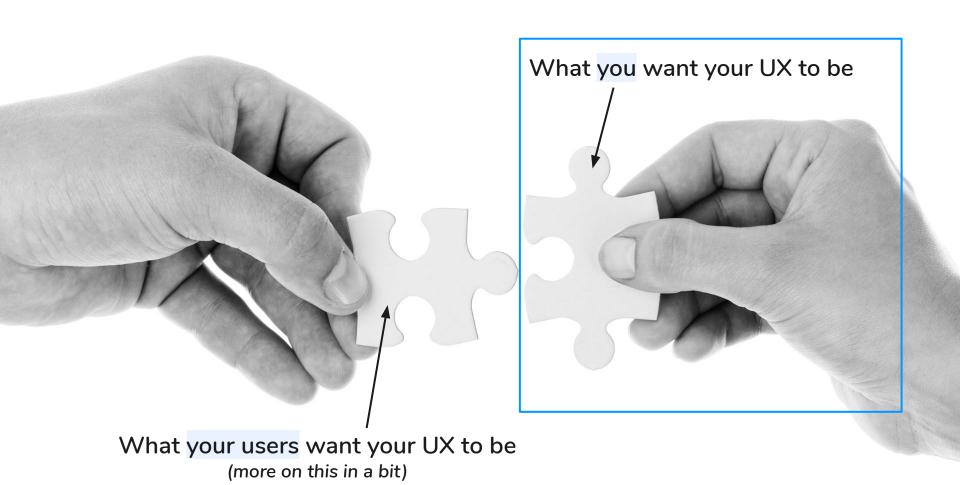




While defining good UX may seem daunting (it is!), it's not impossible.

You\* get to decide what type of experience you want your users to have.

<sup>\*</sup>Not just you!



## What do you want your UX to be?



#### Visceral

Responses are fast and completely subconscious.
Immediate attraction or repulsion.



#### **Behavioral**

Home of learned skills.

Based on expectations;

feelings of control

(when met) or

frustration (when not).



#### Reflective

Home of conscious cognition. Deep understanding, reasoning, and decision-making.

#### So, what is good UX?

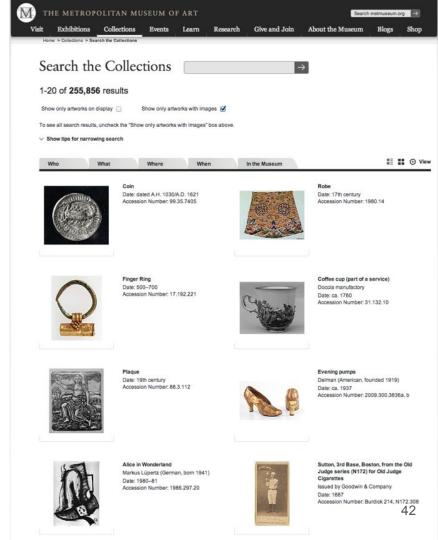
"All three levels of processing work together...The behavioral level, which is the home of interaction, is also the home of all expectation-based emotions, of hope and joy, frustration and anger. Understanding arises at a combination of the behavioral and reflective levels.

Enjoyment requires all three."

Don Norman The Design of Everyday Things



## What factors determine the UX of an online collection?



#### Background

Substantial time and effort has been invested in developing online museum collections, but they were among the least visited sections of the website.

→ Are people deterred from viewing digital museum objects due to the poor experiences offered by existing online collection interfaces?

#### **UX Rubric for Online Museum Collections**

Searched literature for UX criteria for online museums.

Reviewed 39 online museum collections with respect to 9 identified dimensions.

Developed a new set of dimensions that were more observable and explicit.

- → Improved vocabulary to make it accessible;
- → Evaluated the ability of each dimension to capture an aspect of UX.

Iteratively tested the rubric with various museum collections to further refine and clarify the dimensions.

#### **Visceral Factors**

Factors influencing immediate impact/impressions (e.g., will people want to use the collection?)

	Incomplete (1)	Beginning (2)	Developing (3)	Emerged (4)	Score
Strength of Visual Content	Artwork is a peripheral component of the collection, with text the dominant visual element. Images, when present, are too small and low quality. Text is a major distraction from the visual content.	Artwork is not emphasized throughout the collection and images are rarely the dominant visual element. Some images are too small and/or low quality. At times, text is too dense and distracts from the visual content.	Artwork is featured throughout the collection but images are not always the dominant visual element. Most images are large and high quality. Text is used purposefully but some is superfluous.	Artwork is presented as the primary focus of the collection, with images as the dominant visual element. All images are large and high quality. Text is used purposefully but sparingly to enhance the visual content.	
Visual Aesthetics	Color, graphics, typography, and other non-interactive interface elements are used inharmoniously and inconsistently. Elicits negative affective reactions.	Color, graphics, typography, and other non-interactive interface elements are moderately harmonious or consistent. Elicits neutral or moderately positive affective reactions.	Color, graphics, typography, and other non-interactive interface elements are mostly harmonious with only minor inconsistencies. Elicits affective reactions that are generally positive.	Color, graphics, typography, and other non-interactive interface elements are harmonious and used consistently. Elicits affective reactions that are universally positive.	

#### **Behavioral Factors**

Factors influencing immediate interaction/usage (e.g., will people be able to use the collection?)

	Incomplete (1)	Beginning (2)	Developing (3)	Emerged (4)	Score
System Reliability and Performance	The interface has several serious technical errors that prevent users from completing important tasks. There may be significant delays when loading many pages and/or interface elements.	The interface has some major technical errors that detract from the overall experience, but still allow users to complete tasks. There may be some delays when loading some pages and/or interface elements.	The interface has some minor technical errors that don't detract from the overall experience. There may be a slight delay when loading some pages and/or interface elements.	The interface is fully functional and completely free of technical errors. The pages consistently load quickly and all aspects of the interface respond immediately to user actions.	
Usefulness of Metadata	Metadata structure is both too broad and too deep, which prevents users from finding and learning about artworks. Excludes some standard metadata facets and provides limited options to browse, search, or filter artworks.	Metadata structure is either far too broad or far too deep, which limits users' ability to find and/or learn about artworks. Includes only standard metadata facets and traditional ways to browse, search, and filter artworks.	Metadata structure aids users in finding and learning about artworks. Includes all standard metadata facet(s) and some non-standard facets that offer a different way to browse, search, or filter artworks.	Metadata structure is purposefully designed to enhance users' ability to find and learn about artworks. Includes novel metadata facets that offer innovative ways to browse, search, and filter artworks.	
Interface Usability	Interface is not intuitive and requires substantial effort to learn. Several major interface elements are hidden and/or unnecessarily complex, which causes major usability issues.	Interface is somewhat intuitive but a distinct learning curve is apparent. Some interface elements are in unexpected places or are overly complex, causing minor usability issues.	Interface is mostly intuitive but has a slight learning curve. Interface elements require some memorization and/or trial-and-error but are generally easy to use and locate.	Interface is intuitive and accessible. Interface elements are easy to locate and easy to use, creating a seamless and immersive interaction between the user and the collection.	
Support for Casual and Expert Users	Primarily provides advanced content and functionality for expert users, but implementation is poor. Use of advanced features is required but pose a substantial obstacle for both expert and casual users. Both advanced research and casual browsing are difficult or impossible.	Strong appeal to expert users through advanced content and functionality. Many advanced features are included by default, which supports expert users but may confuse casual users.  Advanced research is emphasized, but casual browsing is difficult or impossible.	Strong appeal to casual users through basic content and functionality. Some advanced features are included by default, creating a minor obstacle for casual users but effective tools for expert users. Both advanced research and casual browsing are encouraged, with a slight learning curve for the latter.	Primarily provides basic content and functionality for casual users. Advanced features are visible but unobtrusive, which effectively supports expert users and encourages learnability for casual users. Allows for a seamless transition between casual browsing and advanced research.	

#### **Reflective Factors**

Factors influencing long-term interaction/usage (e.g., will users want to come back to use the collection?)

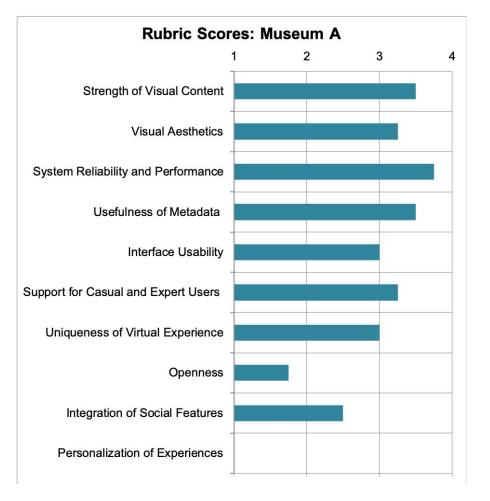
	Incomplete (1)	Beginning (2)	Developing (3)	Emerged (4)	Score
Uniqueness of Virtual Experience	Virtual museum experience is limited compared to the physical museum experience. Finding and viewing virtual artworks has distinct disadvantages or limitations that would not be present in the physical museum.	Virtual museum experience is directly analogous to the physical museum experience. Finding and viewing virtual artworks offers nothing new or unique compared to being in the physical museum.	Virtual museum experience is different but still borrows from the physical museum experience. Finding and viewing virtual artworks offers something new and/or different that would be uncommon or unlikely in the physical museum.	Virtual museum experience is entirely different from the physical museum experience. Finding and viewing virtual artworks allows for new and insightful perspectives that would not be possible in the physical museum.	
Openness	Users are not given any control over the content. Options for downloading, printing, and/or saving high-quality images are not provided.	Users are given minimal control over the content. Options for downloading, printing, and/or saving high-quality images are limited.	Users are given a moderate degree of control over the content. Options for downloading, printing, and/or saving high-quality images are present but may not be universal.	Users are given complete control over the content, with clearly marked options to download, print, and/or save high-quality images.	
Integration of Social Features	Does not allow users to participate in a virtual community, with no involvement or contribution from the museum. Social tools are not integrated into the collection. No options for sharing or communicating with others.	Allows limited participation in a virtual community, which includes minimal or insubstantial contributions from the museum. Social tools are barely visible and/or poorly integrated into the collection. Provides few options for sharing and communicating.	Allows for varying levels of participation within a virtual community, of which the museum is a passive participant. Social tools are present but not prominent. Provides some options for sharing and communicating with others.	Encourages varying levels of participation within a virtual community, of which the museum is an active participant. Social tools are prominently integrated into the collection. Provides multiple options for sharing and communicating with others.	
Personalization of Experiences	Does not allow users to create personalized experiences. Options for customization, gaming, or personalization are non-existent. Users are entirely passive consumers with no meaningful control over their virtual museum experience.	Allows users to create semi- personalized experiences. Customization, gaming, or personalization features are limited and/or hidden. Users are mostly passive consumers with little control over their virtual museum experience.	Allows users to create personalized experiences with some limitations. Provides some customization, gaming, or other personalization features. Encourages users to actively influence their virtual museum experience.	Allows users to craft dynamic personal experiences with few, if any, limitations. Integrates robust customization, gaming, and/or other innovative personalization features. Inspires users to be active cocreators of their virtual museum experience.	

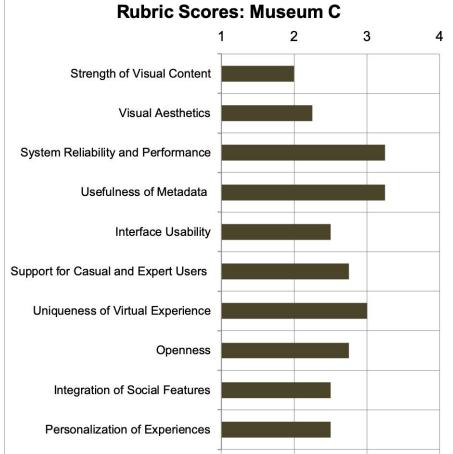
#### Study

Tested the rubric with 4 expert evaluators (2 UX experts, 2 museum experts) assessing 3 online museum collections.

#### Results:

- → Adequate reliability, but disagreements between UX and museum experts.
- → Strong content validity, but reflective elements could be more refined.
- → Strong construct validity, but language could be more accessible to non-museum experts.
- → Affirmed utility of the rubric to aid decision-making and prioritization.





#### For more information

MacDonald, C. M. (2015). Assessing the User Experience (UX) of Online Museum Collections: Perspectives from Design and Museum Professionals. *Museums and the Web 2015 (M&W 2015)*. Published Feb 1, 2015. Available at <a href="https://mw2015.museumsandtheweb.com/paper/assessing-the-user-experience-ux-ofonline-museum-collections-perspectives-from-design-and-museum-professionals/">https://mw2015.museumsandtheweb.com/paper/assessing-the-user-experience-ux-ofonline-museum-collections-perspectives-from-design-and-museum-professionals/</a>

### OK, so what is "good UX" then?

## OK, so what is "good UX" then?

It depends.

#### It depends on...

What type of interface are you designing?

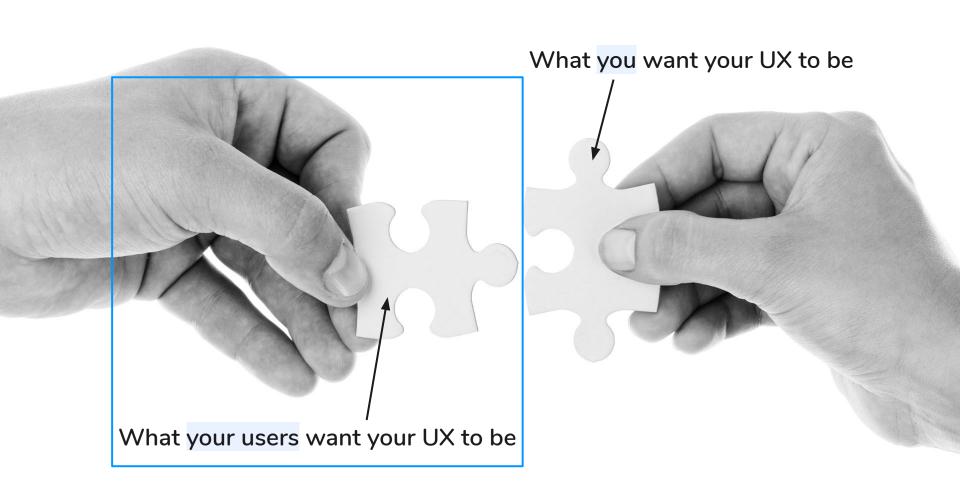
How will it help you achieve your organizational goals?

What kind of experience do you want your users to have with it?

#### Experience-centered vs. technology-centered

What functionality or features should we include... ...to deliver that desired experience?

What new, exciting technology can we use... ...to make that experience better?



#### Should you ask them?

"If I had asked people what they wanted, they would have said faster horses."

Fake quote usually attributed to Henry Ford



#### Listen to your users

What are their pain points and frustrations?

What are their goals and aspirations?

What kinds of things do they enjoy?

What are their constraints and limitations?



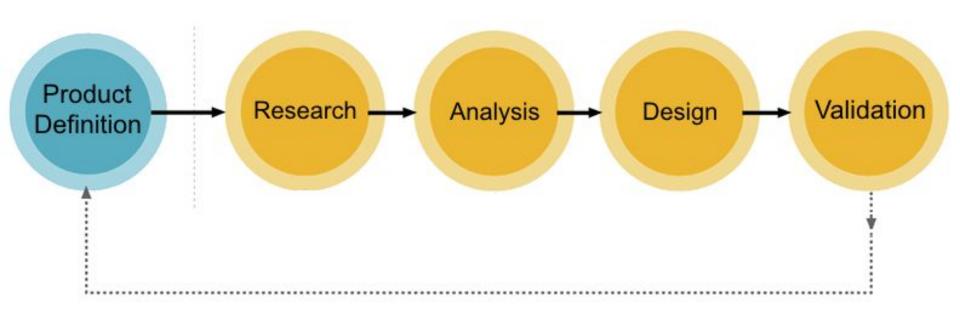
## How do you create a good User Experience for your users? (process)

#### The UX Process

"The UX design process can be divided into four key phases: user research, design, testing, and implementation."

Rosie Allabarton Career Foundry

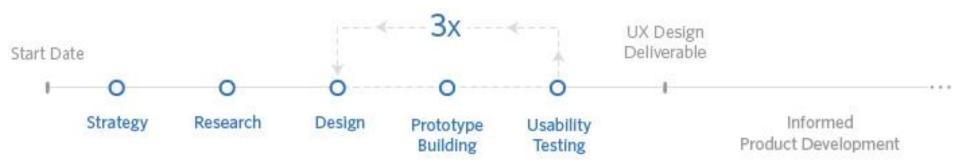




#### **UX Design Process**



#### **UX Process**



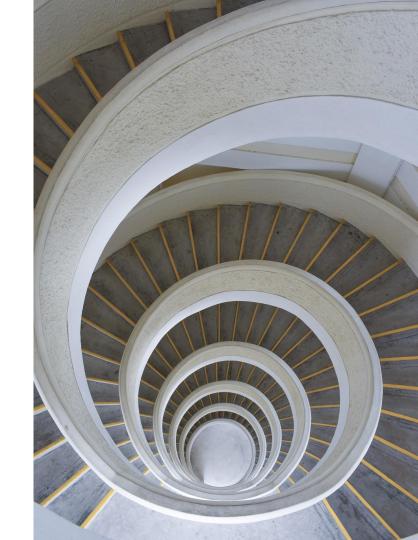
"Typically, it takes **three rounds** of usability testing to fully validate solution concepts."

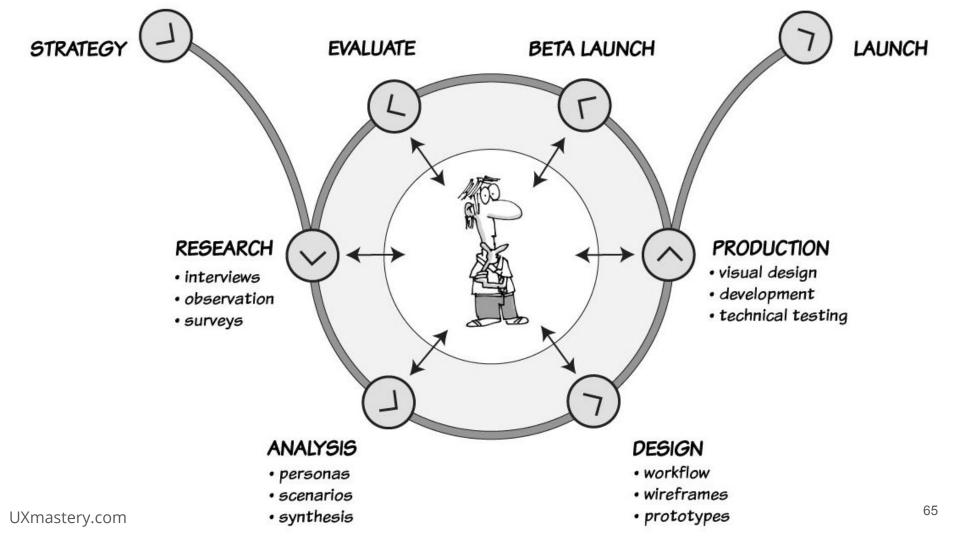
# Unfortunately, UX doesn't actually work this way.

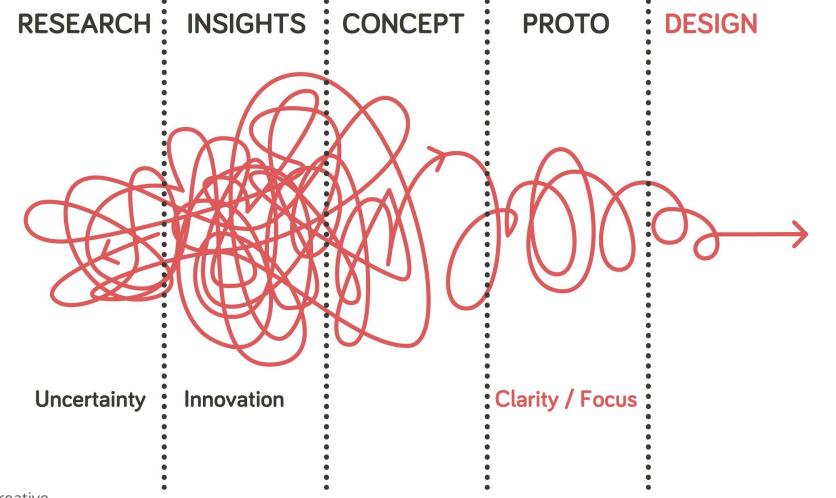
#### The UX Process?

"UX is an iterative process...Expect to revisit and repeat certain steps...as you continuously optimize and improve your designs."

Rosie Allabarton Career Foundry







UX is way too messy to be thought of as just "a process."

"What's more important than process is mindset...having empathy for and understanding your users, and creating something great for them. If you and your colleagues have the right mindset, you'll likely do the right thing, because you won't be satisfied until your users are pleased."

Peter Merholz
Adaptive Path

### So, what is a good UX mindset?

#### Be grounded

Make decisions based on evidence and/or sound reasoning.

Always strive to meet the *real* needs of your users.

Test your assumptions.



#### Be deliberate

Use your time wisely.

Don't rush things just to check it off the list, and don't waste time trying to be perfect.

Move forward only if you're sure it's the right direction.



#### Be persistent

Acknowledge that UX work is never really "done."

Keep asking why. There's always more you can know and more you can do.





"I think the overt message of 'fail fast' is actually better framed as 'experiment fast.' The most effective innovators succeed through experimentation...by stepping out of the lab and interacting directly with customers, running thoughtful experiments, and executing them quickly to learn quickly what works and what doesn't."

> Victor Lombardi Author, Why We Fail

UX is a mindset of planned experimentation that enables quick, safe, and smart failure.

### Why? To de-risk

"[UX] is a practice that, when done empirically, provides a much better chance of a successful digital product than just crossing your fingers, designing some wireframes, then writing a bunch of code."

Jaime Levy Author, *User Experience Strategy* 



### Why? To save

"The involvement of UX designers can reduce time spent by developers on remaking the software by up to **50%**. What is more, overall development time can be reduced by **33–50%** through clear prioritization of development tasks and improved decision-making (thanks to UX)."

Lina Danilchik SumatoSoft



## If UX is just a mindset, can anybody do it?

## If UX is just a mindset, can anybody do it?

...maybe?

"When someone influences the experience of the user, they, in that moment, become a user experience designer. Their influence may not be positive. Their knowledge of UX design principles may be small, even non-existent. Yet, because they affect the experience of the user, they are a designer, albeit an unofficial one."

Jared Spool
<sub>UIE</sub>

"If everyone who designs is a designer, then everyone who counts change is an mathematician."

Mike Atwood
Drexel University

Making decisions that impact the user experience



Doing
"User
Experience"

## Doing "User Experience" means...

User Research Understanding the people who use a product or system through observations.

Content Strategy Planning for the creation, delivery, and governance of useful, usable content.

Information Architecture Identifying and organizing information within a product or system in a purposeful & meaningful way.

Interaction Design

Designing the interactive behaviors of a product or system with a specific focus on their use.

Visual Design Designing the visual qualities of a product or system in an aesthetically pleasing way.

Usability Evaluation Measuring the quality of a user's experience when interacting with a product or system.

## Step 1: Choose the right method(s)

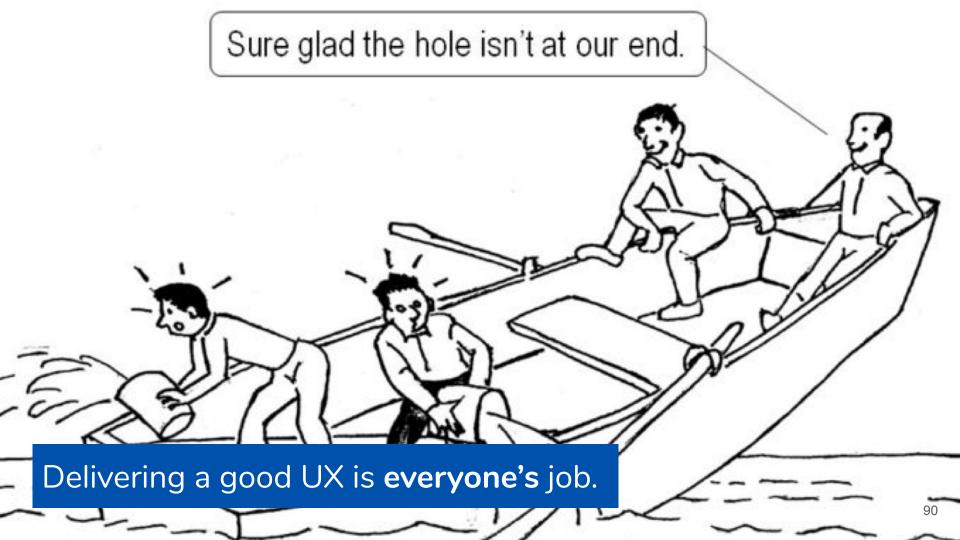
# Step 2: Do the method(s) right

## (unspecified UX magic happens)

## Step 3: Profit!\*

\*Improve the design of your interfaces, which increases user satisfaction and engagement by providing better experiences

## What does good User Experience look like for your organization? (culture)



Is everyone focused on delivering the same, high-quality experience for your users?

(Hint: Probably not.)

## Most organizations are not UX-centered

They don't understand UX.

or

They don't devote enough resources to UX.

or

Both.



#### Common UX challenges include:

Too much emphasis on persuasion and compromise.

Ineffective communication between departments/teams.

Lack of budget/resources for UX work.

Lack of support or buy-in from executives.

Organizational inefficiencies.

Resistance or hostility towards UX.

Organizational culture is difficult to navigate.

All aspects of UX capacity

## What is UX capacity?

## And how can you build it?

#### **UX Capacity-Building (UXCB)**

The intentional work to continuously create and sustain overall organizational processes that make quality UX work routine.

#### Capacity & Capacity-Building

There is a distinction between:

- → the activities that **define** an organization's UX capacity; and
- → the activities used to **strengthen or sustain** that capacity.

This distinction implies that:

- → UX capacity is not a static construct, and
- → there are techniques specifically designed to build UX capacity.

Therefore: UXCB is a practice and field of study with its own structural elements, themes, knowledge, and competencies.

#### **UXCB Conceptual Model**

### I. Conditions (Why)

**Buy-in and Support** 

**Organizational Needs** 

Goals

### II. Strategies (What & How)

#### **Activities**

- Training workshops
- Technical assistance
- Hiring
- Team building/structuring
- Events
- Broadcasting
- Guides, tools, frameworks

#### Content

#### **Implementation**

#### Resources

- Time
- Infrastructure
- Materials
- Budget

#### **III. Outcomes** (Results) Individual - Attitudes - Knowledge, skills, behaviors **Organizational** - UX practices/processes - UX culture - Non-UX measures **Product**

#### **UXCB Case Study: Academic Library**

#### **Conditions**

Library director saw value of having UX librarian (buy-in)

Library wasn't doing enough usability testing or gathering enough user feedback (needs)

Wanted to make UX work more impactful throughout the library (goals)

#### **Strategies**

Created a new department, combined assessment with UX (team structuring)

UX team met with each department individually and presented regularly at staff-wide meetings to showcase examples of successful UX projects (broadcasting)

#### **Outcomes**

Co-workers understand UX (attitudes)

UX team is involved in projects earlier in the process (practices)

Better relations with stakeholders (non-UX measure)

Website and signage is more usable (product)

#### For more information

MacDonald, C. M. (2019). User Experience (UX) Capacity-Building: A Conceptual Model and Research Agenda. In *Proceedings of the 2019 on Designing Interactive Systems Conference (DIS '19)*. ACM, New York, NY, USA, 187-200. DOI: https://doi.org/10.1145/3322276.3322346

## What is your UX capacity?

#### **Current Research**

Conducted a literature review to identify organizational components of an effective UX practice.

→ Looked for similar frameworks and identified common components.

Synthesized into comprehensive assessment framework.

Conducted interviews with 13 experienced UX professionals to evaluate the validity, accuracy, and completeness of the framework.

### Capacity to Do UX

The competencies and structures required to employ UX processes, methods, and tools.

### Capacity to Do UX

#### **People**

Staffing

Team Structures

Team Management

Skills

**Professional Growth** 

#### Resources

Budget

Infrastructure

Guidelines & Standards

## Practices & Processes

Organizational Linkages

**Planning** 

Methodology

### Capacity to Use UX

The ability to integrate UX knowledge into organizational decision-making processes and create quality products.

### Capacity to Use UX

#### **Org. Literacy**

Leadership

User-Centered Focus

Communication & Visibility

Participation & Collaboration

## Org. Decision-Making

**Decision Support** 

Management

Advocacy

#### **Benefits**

**Product Quality** 

Process Improvement

**User Satisfaction** 

• Who does UX in your organization? How are they recruited and/or retained?

• What is the funding model for UX work? How stable is it?

• How well is UX understood by organizational leaders?

• How satisfied are the organization's user/customers?

• Are UX staff given opportunities for professional growth and/or career advancement?

What physical resources - space, software, hardware, etc. - are dedicated to UX work?

How are UX activities scheduled and organized across and within the organization?

To what extent is there an organizational desire to understand and meet users' needs?

• How widely are UX results shared throughout the organization? How visible is UX work?

• How much input or involvement do non-UX staff have in UX activities?

• Is there an effective and influential "UX Champion" who advocates for UX?

• Are UX recommendations and insights used to shape the design of products?

• To what extent is there an effort to iteratively improve UX methods and/or processes?

• What is the composition of UX teams? How are UX staff assigned to product teams? Are there well-defined roles?

• How is UX work supervised? What is the reporting structure? How well does the UX team work together?

• What other resources are used to support UX work? (e.g., UX goals, style guides, design system(s), personas, metrics, etc.)

• To what extent are UX processes integrated with other organizational processes? (e.g., software development)

When, how often, and what type of UX activities are used as part of the product design lifecycle?

How often are UX insights used to inform organizational decision-making and strategic prioritization?

• How often is UX included in day-to-day administration and management processes across the organization?

• What UX competencies does your UX staff possess? (includes both hard/technical and soft/non-technical skills)

User Experience Capacity Assessment Framework (DRAFT v2.3)

Capacity to Do UX PEOPLE Staffing • W

RESOURCES

**PRACTICES &** 

**PROCESSES** 

LITERACY

**BENEFITS** 

**ORGANIZATIONAL** 

**ORGANIZATIONAL** 

**DECISION-MAKING** 

**Team Structures** 

Skills

Budget

**Planning** 

Methodology

Leadership

Infrastructure

**Team Management** 

**Professional Growth** 

**Guidelines & Standards** 

**Organizational Linkages** 

**User-Centered Focus** 

**Decision Support** 

Management

**Product Quality** 

**User Satisfaction** 

**Process Improvement** 

Advocacy

Communication & Visibility

**Participation & Collaboration** 

and structures
required to employ UX
processes, methods,
and tools

Capacity to Use UX

UX knowledge into

organizational decision-making

The ability to integrate

processes and create quality products

The competencies

#### Results (so far)

Applied the framework in three case studies involving a non-profit, museum, and academic library.

So far, the framework seems to be very effective.

All participating organizations said that it helped them to better understand their current UX capacity and helped figure out where and how to invest their capacity-building efforts.

We are currently writing a paper to present the results and the final framework.

## If this seems like a lot of hard work, it is.

# WHIE MINISTER AGREBUM

## Remember: good UX takes time.\*

\*Years, not months.

## First: Figure out what you want your UX to be. (don't forget to listen to your users, too)

### Second:

Adopt a UX mindset: be grounded, deliberate, and persistent.

(choose the right methods and do the methods right)

## Third: Build your UX capacity, one step at a time.

(be as inclusive as possible; build coalitions; advocate relentlessly)

### Thank you.

#### **Craig M. MacDonald**

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