Incorporating User Experience Into Your Projects

Karl Kaufmann @karolus

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

-DON NORMAN & JAKOB NIELSEN, NN/G

Introduction

ABOUT ME

- Visual Designer-Print/Branding
- Web Design/IA/Content Strategy
- Drupal Site Building/Architecture

Why UX?

User experience encompasses everything your organization does. After all, government is public service, and without effectively meeting the needs of the public, we're missing our principal mission goal.

UX-Value Proposition

Correctly aligning user experience goals with your organizational goals will:

- Enhance your organization’s ability to fulfill its mission
- Enable users to more quickly achieve their goals
- Empower greater community engagement

UX≠UI

CONTENT

UI

UX

UX≠UI

How UX Wants to Be Seen

Field Research
Face to face interviewing
Creation of user tests
Gathering and organizing statistics
Creating personas
Product design
Feature writing
Requirement writing
Graphic arts
Interaction design
Information architecture
Usability
Prototyping
Interface layout
Interface design
Visual design
Taxonomy creation
Terminology creation
Copywriting
Presentation and speaking
Working tightly with programmers
Brainstorm coordination
Design culture evangelism

How UX Is Typically Seen

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SOURCE: Erik Flowers http:uxisnotui.com

UX≠UI

What does UX actually mean? The various UX roles that a person can fulfill are plentiful. Some are whole jobs, some whole careers; others are tactical roles that we all move in and out of.

What so many UX designers would like you to remember is that UX is not just UI design.

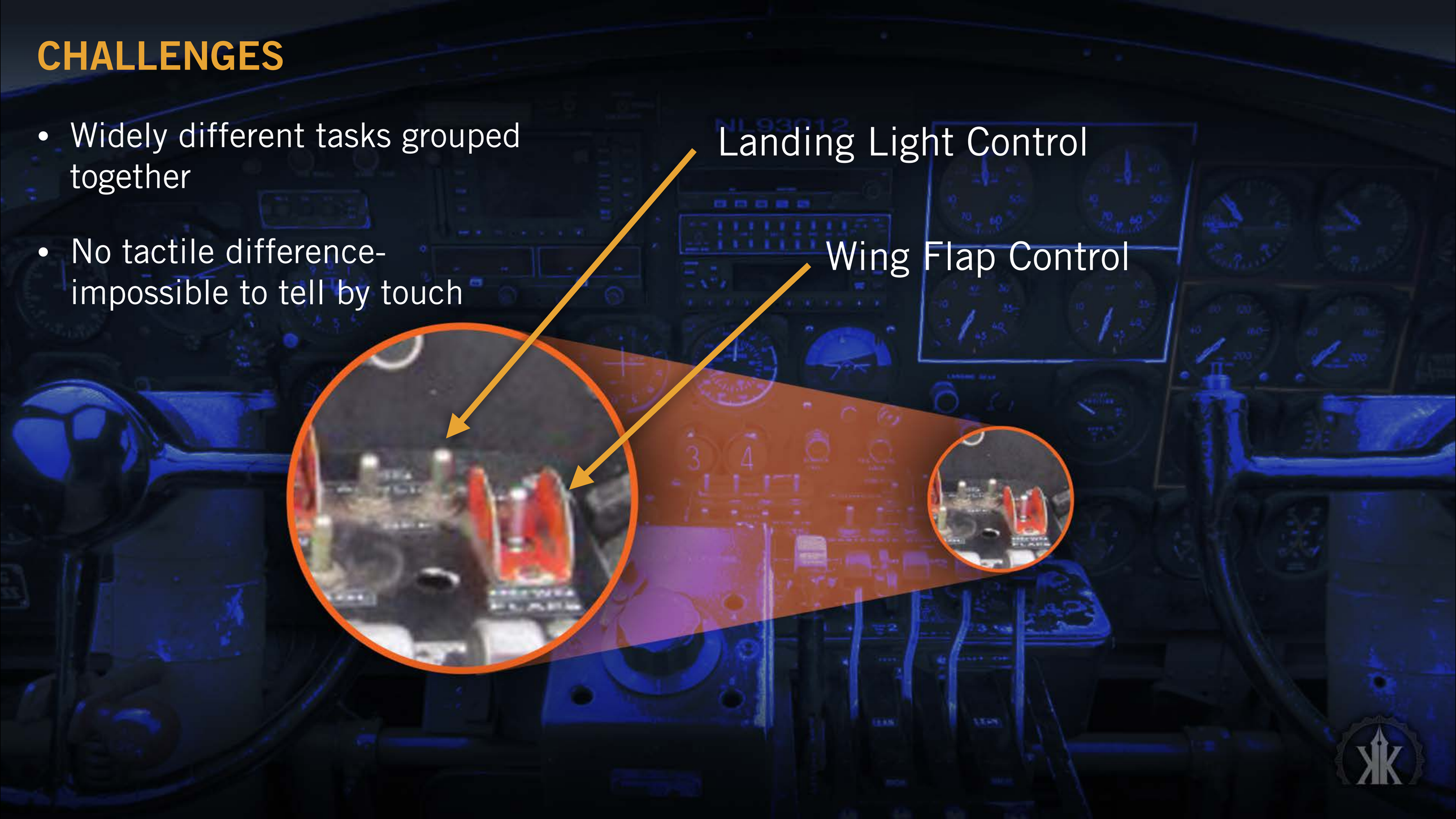
SOURCE: Erik Flowers http:uxisnotui.com

UI Impacting UX

NL93012
LANDING GEAR
FLAP POSITION

CHALLENGES

- Widely different tasks grouped together
- No tactile difference- impossible to tell by touch



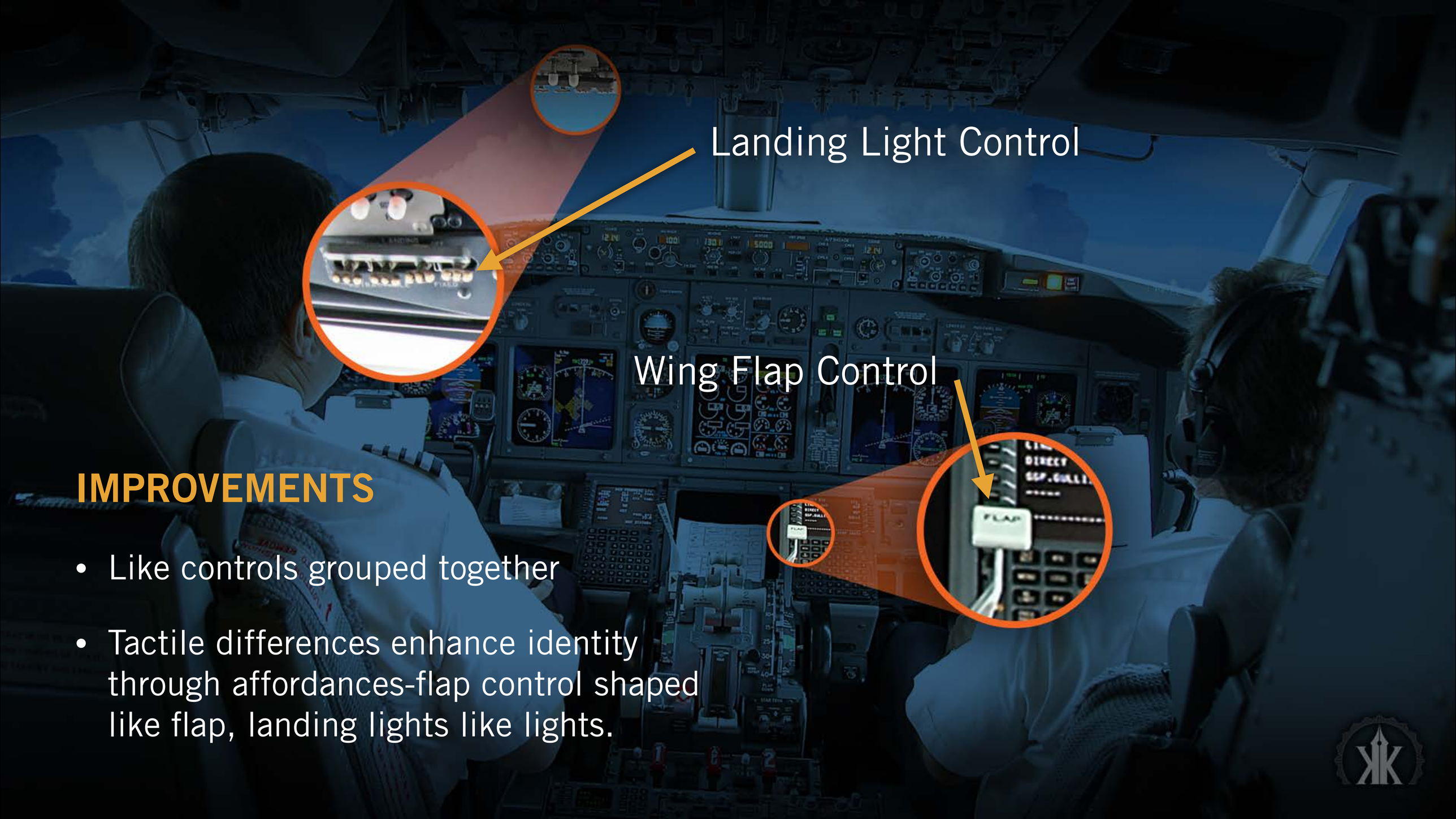
UI Challenges-Takeaways

Coming in on final approach in a B-17, the pilot asked for landing lights. The flaps were over one-half down and we were about 2,500 feet short of the runway. When reaching for the landing lights the flap switch was accidentally hit, knocking the flaps up causing the [aircraft] to mush into the ground. Major damage was done to the plane.

I think this could have been prevented had the switches been further apart.

SOURCE: Kim Vicente, *The Human Factor: Revolutionizing the Way We Live with Technology*, Knopf Canada

UI Improving UX



IMPROVEMENTS

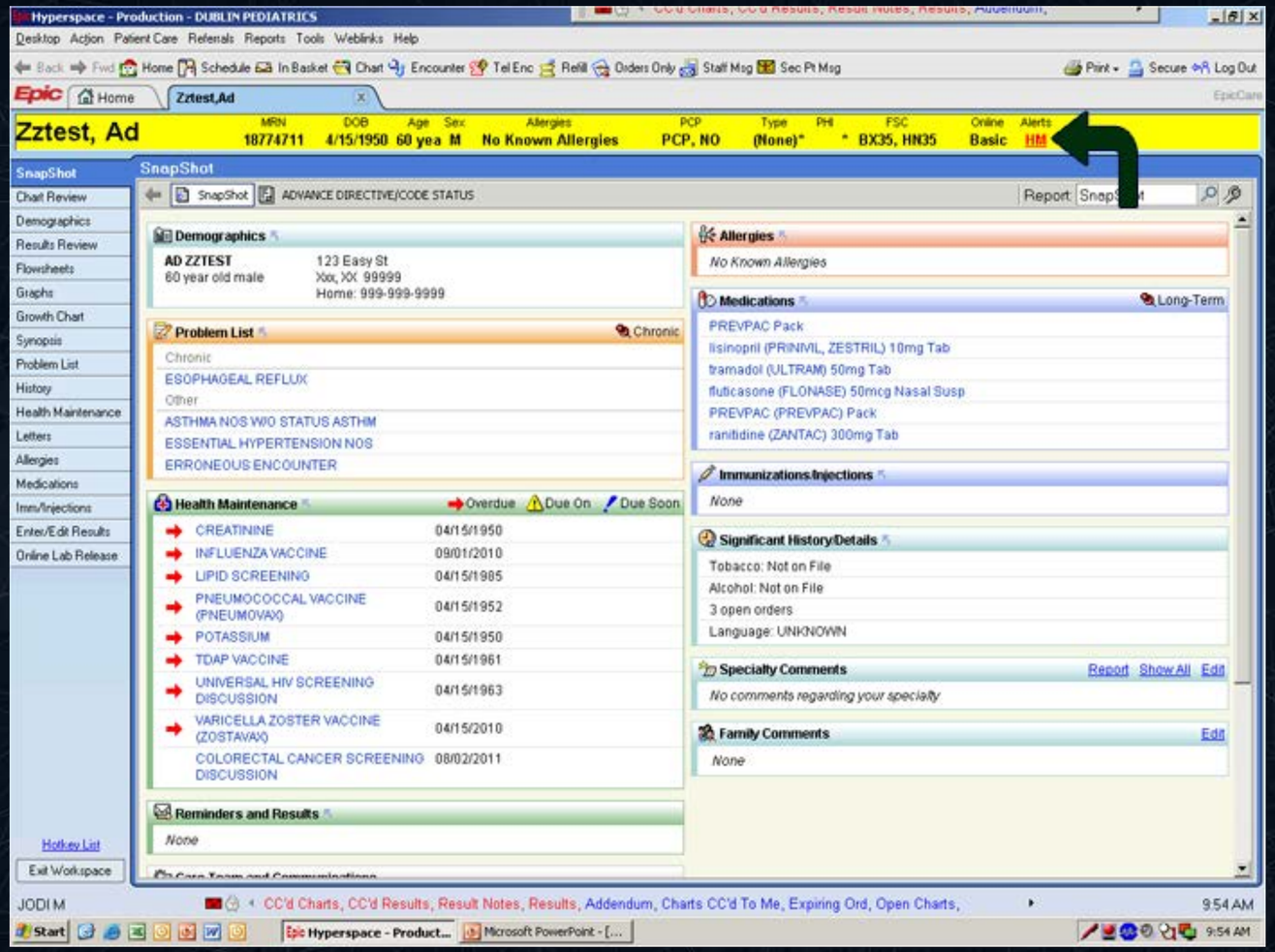
- Like controls grouped together
- Tactile differences enhance identity through affordances-flap control shaped like flap, landing lights like lights.

UI Improvements-Takeaways

- Almost all pilots in the studies during World War II indicated making some type of error, regardless of their experience level
- Designers didn’t pay enough attention to the human factor
- Accidents could be avoided by tailoring to the human factor—providing a way to guide to better decisions
- Affordances like the examples shown help to decrease cognitive load

SOURCE: Kim Vicente, The Human Factor: Revolutionizing the Way We Live with Technology, Knopf Canada

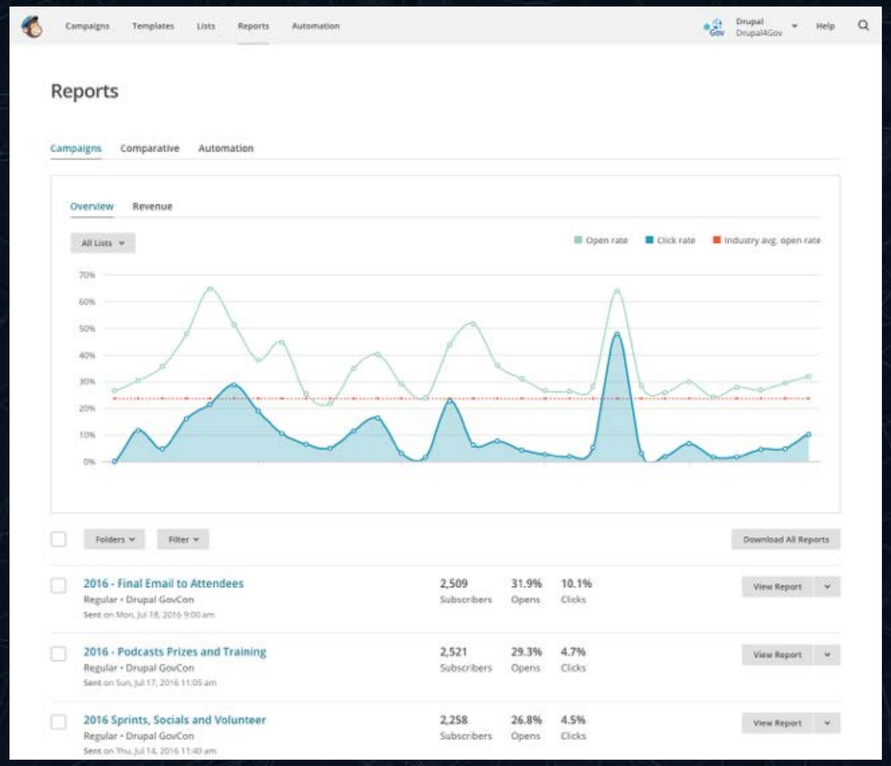
Challenging Web UX

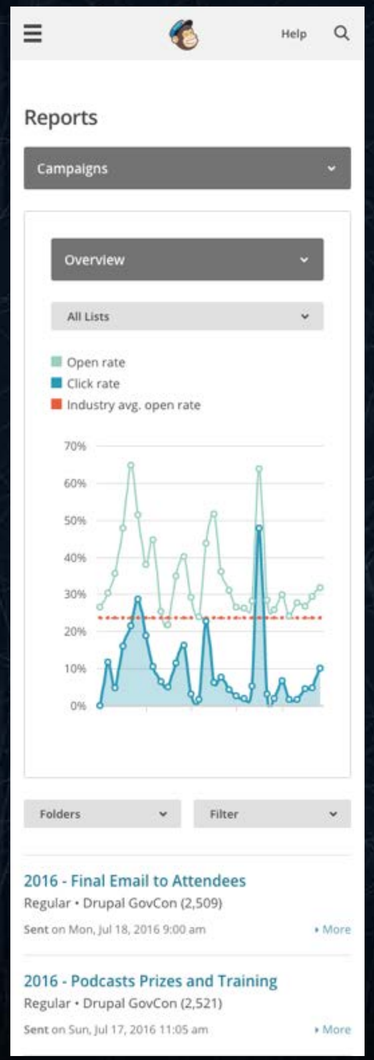


- Example of design still troublingly prevalent in medical field
- Arrow indicates critical alert, that's easily overlooked
- In this case, high staff cognitive load coupled with poor UX resulted in accidental patient death

SOURCE: Jonathan Shariat, How Bad UX Killed Jenny, medium.com

Excellent Web UX





- Clear, balanced layout, smart use of negative space avoids information overload
- Content hierarchy readily apparent—overview, with clear links to more for each item
- Affordances for interactivity and format limitations

What it Means for Us

- Like the aircraft examples, UX challenges don’t require revolutionary technology
- Using empathy to help users achieve their goals helps us help them– making us partners working toward a common goal
- As with the UI improvements in the aircraft, it often requires minimal technological or development investment
- Rapid iteration and prototyping can help enhance your existing projects, as well as those starting out

Principles of UX

Principles of UX

Considering how broad the field UX encompasses, it's wise to break it down into segments:

- Useful
- Usable
- Desirable
- Findable
- Accessible
- Credible
- Valuable

SOURCE: Peter Morville, Semantic Studios, http://semanticstudios.com/user_experience_design/

Principles of UX-Expanded

USEFUL

As practitioners, we can't be content to paint within the lines drawn by managers. We must have the courage and creativity to ask whether our products and systems are useful, and to apply our knowledge of craft + medium to define innovative solutions that are more useful.

SOURCE: Peter Morville, Semantic Studios, http://semanticstudios.com/user_experience_design/

Principles of UX-Expanded

USABLE

Ease of use remains vital, and yet the interface-centered methods and perspectives of human-computer interaction do not address all dimensions of Web design. In short, usability is necessary but not sufficient.

SOURCE: Peter Morville, Semantic Studios, http://semanticstudios.com/user_experience_design/

Principles of UX-Expanded

DESIRABLE

Our quest for efficiency must be tempered by an appreciation for the power and value of image, identity, brand, and other elements of emotional design.

SOURCE: Peter Morville, Semantic Studios, http://semanticstudios.com/user_experience_design/

Principles of UX-Expanded

FINDABLE

We must strive to design navigable web sites and locatable objects, so users can find what they need.

SOURCE: Peter Morville, Semantic Studios, http://semanticstudios.com/user_experience_design/

Principles of UX-Expanded

ACCESSIBLE

Just as our buildings have elevators and ramps, our web sites should be accessible to people with disabilities (more than 10% of the population). Today, it's good business and the ethical thing to do. Eventually, it will become the law.

SOURCE: Peter Morville, Semantic Studios, http://semanticstudios.com/user_experience_design/

Principles of UX-Expanded

CREDIBLE

Thanks to the Web Credibility Project, we're beginning to understand the design elements that influence whether users trust and believe what we tell them.

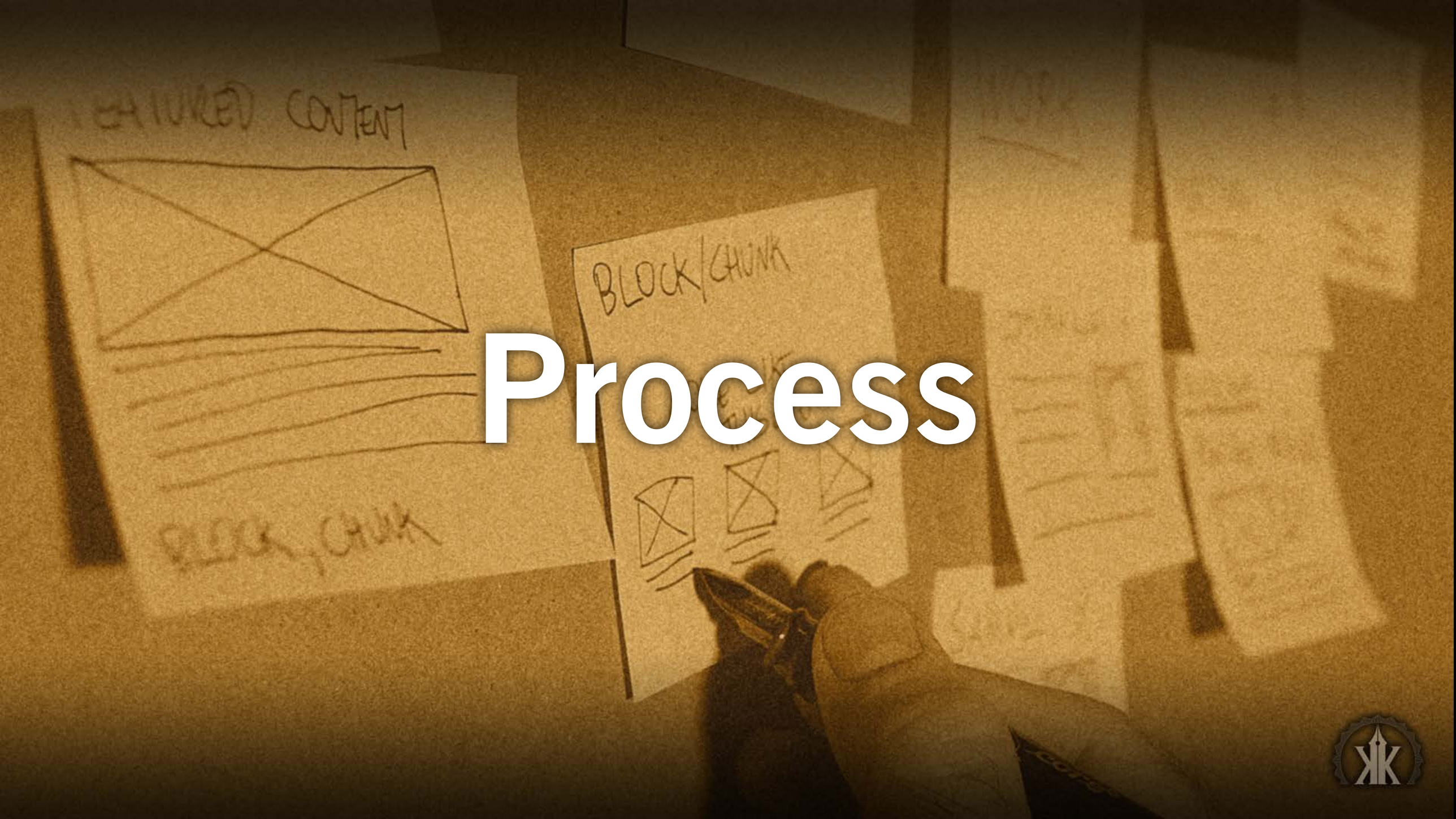
SOURCE: Peter Morville, Semantic Studios, http://semanticstudios.com/user_experience_design/

Principles of UX-Expanded

VALUABLE

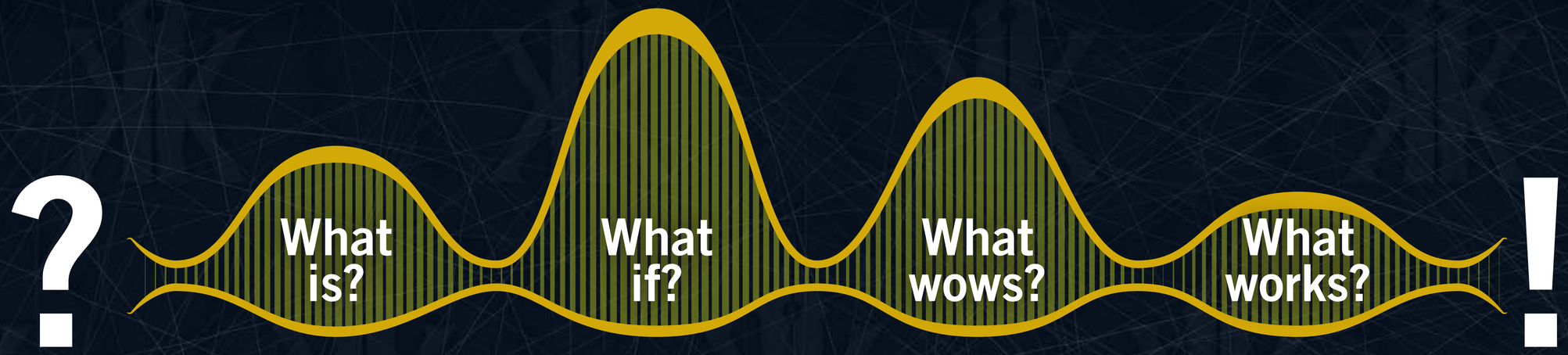
Our sites must deliver value to our sponsors. For non-profits, the user experience must advance the mission. With for-profits, it must contribute to the bottom line and improve customer satisfaction.

SOURCE: Peter Morville, Semantic Studios, http://semanticstudios.com/user_experience_design/



Process

Process



EMPATHIZE
framing
interviewing
observing
analyzing

VISUALIZE
exploring
brainstorming
creating

CO-CREATE
building
refining
evaluating

ITERATE
experimenting
testing
implementing

Design Thinking: A framework from which to launch your UX initiatives.

SOURCE: IDEO, Stanford d.school

Design Thinking Process

PROCESS OVERVIEW

- **WHAT IS?** Empathize: framing, interviewing, observing, analyzing
- **WHAT IF?** Visualize: exploring, brainstorming, creating
- **WHAT WOWS?** Co-create: building, refining, evaluating
- **WHAT WORKS?** Iterate: experimenting, testing, implementing

SOURCE: IDEO, Stanford d.school

Design Thinking Process-1

EMPATHIZE

WHAT IS—This begins by framing the challenge—uncovering a key problem to remedy. Finding out what is a given problem. By careful interviewing, base assumptions can be revised/validated. **Of principal importance here is effective interviewing—becoming childlike in repeatedly asking why, and not leading on interviewees.** It requires a mindset where the design thinkers know nothing, and the interviewees (users) everything, not allowing prejudices to creep in and hamper the discovery of the key question to solve.

SOURCE: IDEO, Stanford d.school

Design Thinking Process-2

VISUALIZE

WHAT IF—Especially on short time frames, it's easy to reach for an obvious solution, which can become repetitive. Design thinking works to avoid this by **requiring many solutions to a given problem be generated, and evaluated while withholding judgment.** This allows for more possibilities, by breaking down preconceptions we may not be aware of. Framing possibilities in the context of what if [this idea solved]...

SOURCE: IDEO, Stanford d.school

Design Thinking Process-3

CO-CREATE

WHAT WOWS—Narrowing down the generated visualizations, and building quick prototypes helps validate solutions. A rapid process is key here—making quick prototypes to test, not high-fidelity mocks. This allows for experimentation and refinement with little emotional and resource expenditure. **By leveraging team members, more ideas can be generated more quickly than even a skilled practitioner working alone.** By finding what wows (delights/satisfies) a user in this fashion, successful iterations can then proceed.

SOURCE: IDEO, Stanford d.school

Design Thinking Process-4

ITERATE

WHAT WORKS—combining the refined research and prototypes into a workable solution that can be quickly tested. Again, although the solution is more refined, it's still important to allow modification/revision—as will be informed by thorough testing and real-world experience. If successful, there will be a shippable product/service. If not, perhaps cycling back to more user research and testing will be needed to solve the challenge.

SOURCE: IDEO, Stanford d.school

Design Thinking Takeaways

- Method to solve “wicked problems” that may seem intractable
- Allow for UX design work on a budget—extrapolate from a small sample in a short time frame
- Focuses on qualitative vs. quantitive. More holistic than pure statistics
- Basic requirements lower barriers to entry, allowing greater participation
- Imposing rapid timeframes generate ideas quickly, force out-of-box methods
- Best not approached as dogma, but to adapt to your specific use case
- Only the start—not a substitute for the formal UX design work

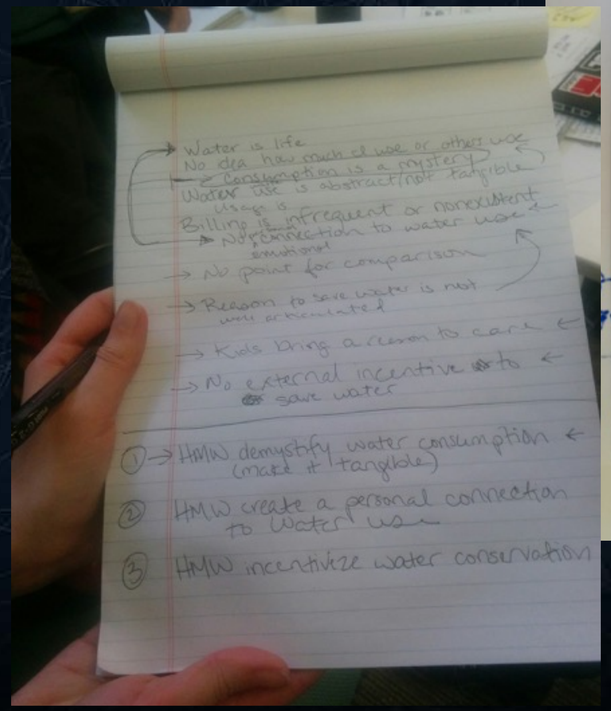
Design Thinking-Example

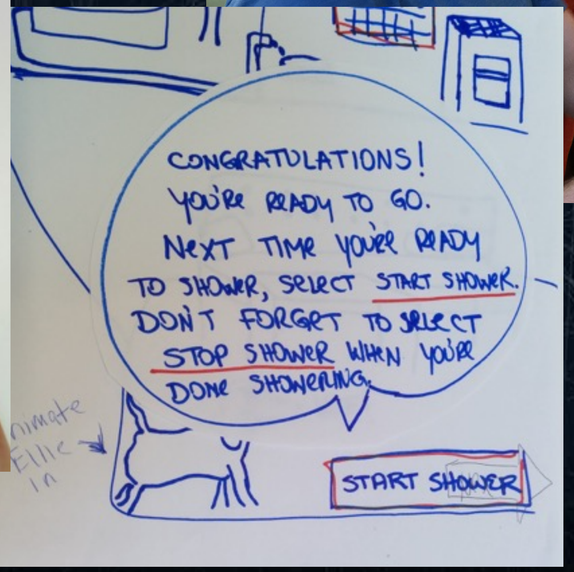
PARCHED PUPPY WATER CONSERVATION CONCEPT

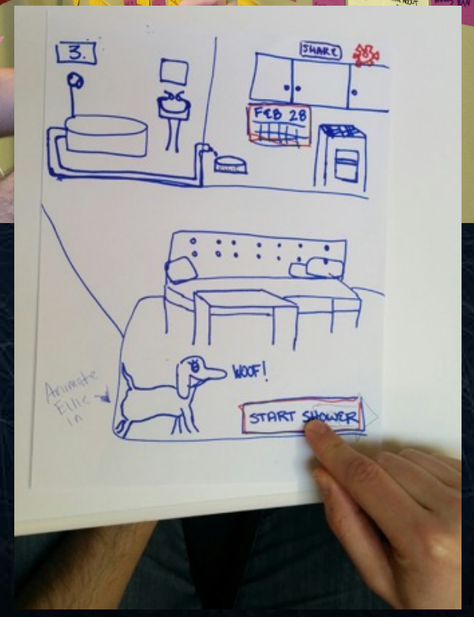
- Created during the Global Service Jam 2016 held in Washington, DC, a project that would need to go from concept to working prototype in a 48-hour timeframe.
- Demonstration of DT process used to find novel solutions to water conservation challenges.

Design Thinking-Example

Rapid pace necessitates non-linear process, short research, fast, throw-away deliverables to get to working final prototype.



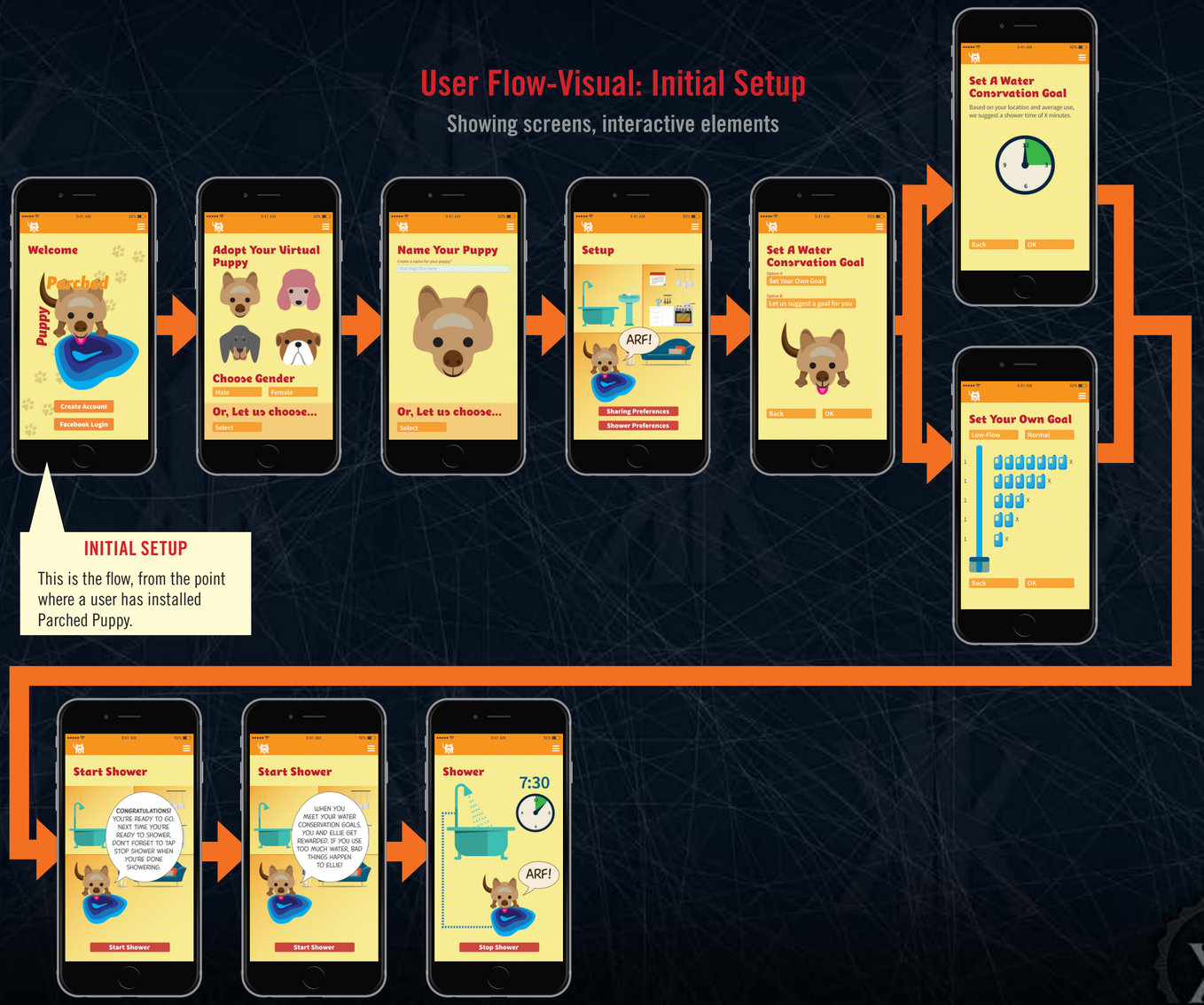




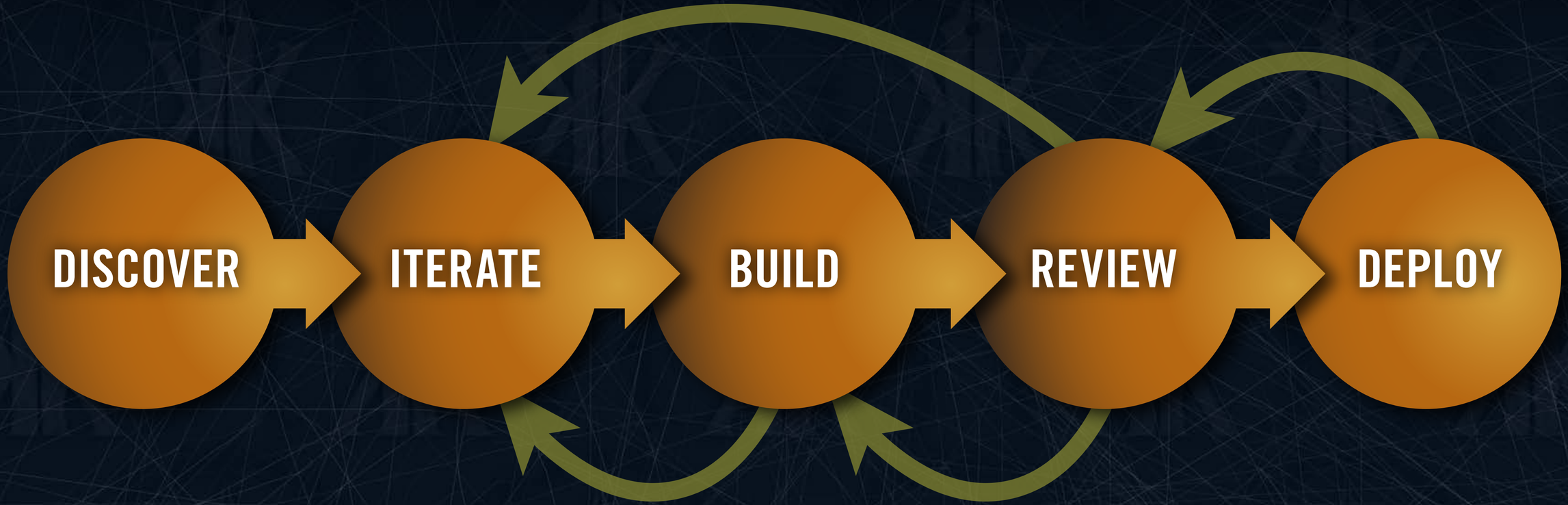
Design Thinking-Example

The iterative framework can be expanded to a more finished prototype for validation quickly.

Focusing on the user from the outset helps anticipate many potential challenges.



My Process



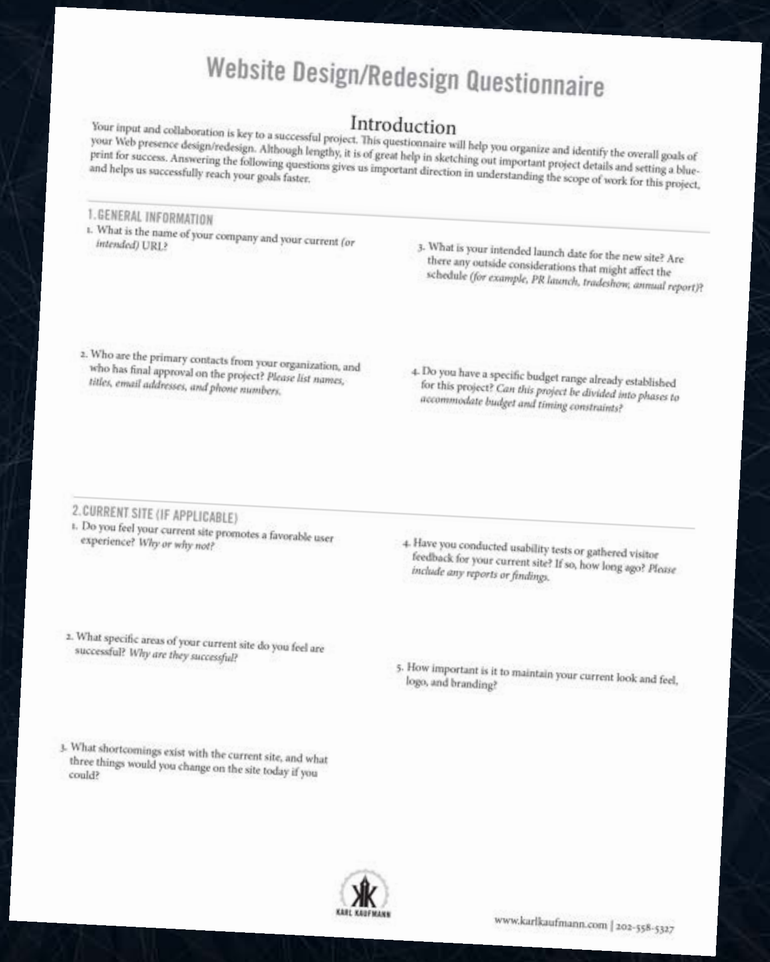
Empathy for **all** project members is key—as well as leaving the fear to be wrong behind. Rapid iteration and close collaboration.

Discover

- User and stakeholder interviews—find the actual goal, not a vague desired result
- Requirements gathering
- Securing buy-in from key stakeholders
- Personas—don’t have to be elaborate, but offer an effective method to gauge the effectiveness of your product in real-world situations

Discover-Tool Set

- Whiteboard
- Post-Its
- Paper
- Interviewing aids-recorders



Website Design/Redesign Questionnaire

Introduction

Your input and collaboration is key to a successful project. This questionnaire will help you organize and identify the overall goals of your Web presence design/redesign. Although lengthy, it is of great help in sketching out important project details and setting a blueprint for success. Answering the following questions gives us important direction in understanding the scope of work for this project, and helps us successfully reach your goals faster.

1. GENERAL INFORMATION

1. What is the name of your company and your current *(or intended)* URL?
2. Who are the primary contacts from your organization, and who has final approval on the project? *Please list names, titles, email addresses, and phone numbers.*
3. What is your intended launch date for the new site? Are there any outside considerations that might affect the schedule *(for example, PR launch, tradeshow, annual report)*?
4. Do you have a specific budget range already established for this project? *Can this project be divided into phases to accommodate budget and timing constraints?*

2. CURRENT SITE (IF APPLICABLE)

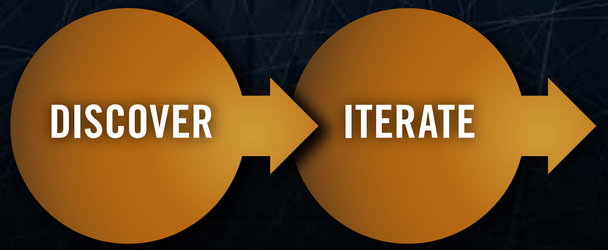
1. Do you feel your current site promotes a favorable user experience? *Why or why not?*
2. What specific areas of your current site do you feel are successful? *Why are they successful?*
3. What shortcomings exist with the current site, and what three things would you change on the site today if you could?
4. Have you conducted usability tests or gathered visitor feedback for your current site? If so, how long ago? *Please include any reports or findings.*
5. How important is it to maintain your current look and feel, logo, and branding?

KARL KAUFMANN

www.karlkaufmann.com | 202-558-5327

Iterate

- Incorporate research and requirements into prototype
- Use (low fidelity) tools that allow you to rapidly test ideas
- Sprints are excellent methods to generate ideas
- When possible, involve stakeholders here as well.

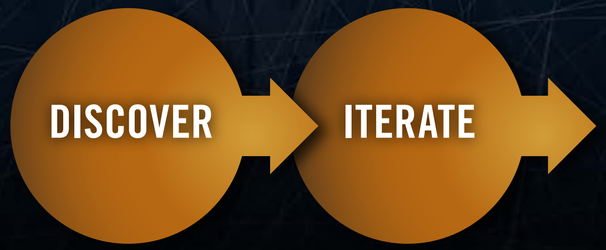


Iterate-Tool Set

SUGGESTED TOOLS

- Paper Templates
- Whiteboard
- Post-Its
- Low-fidelity digital comping tools

N.B. Focus on this stage is rapid generation. Avoid being sucked into drawn-out processes. If need be, devise sprints or short time limits.



Build

- Incorporate your best prototype(s) into your product
- Test repeatedly, and as often as feasible
- Guerilla UX—random testing can uncover valuable insights
- Modularity—use systems that allow for easy modifications
- If major issues are discovered—iterate again!

Build-Tool Set

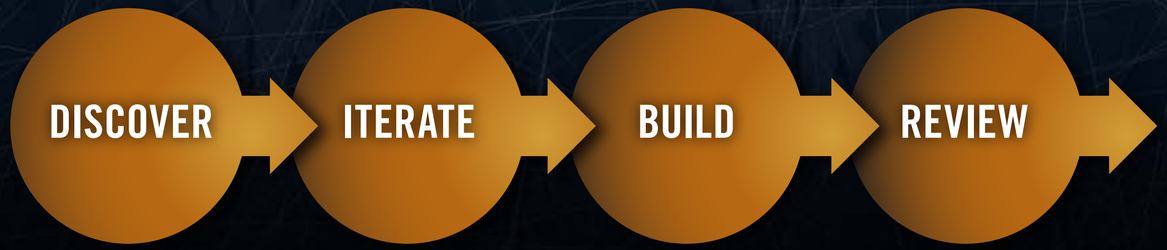
SUGGESTED TOOLS

- Code/Image editors of choice
- Spirit of collaboration—do what you can to break down barriers between team members (and clients)
- Array of devices the product will be used on

N.B. Allow your builds to be revised, if at all possible. Developing tunnel vision on a given path can have disastrous consequences.

Review

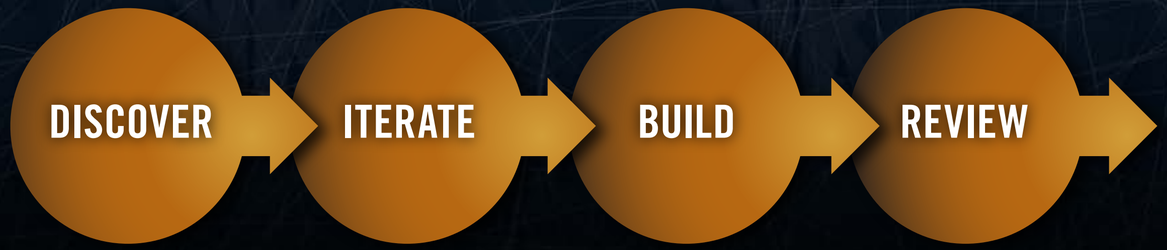
- Functional testing—will the product perform as advertised?
- User testing—getting the project into the hands of actual users is one of the fastest ways to gauge overall effectiveness
- Security—thorough reviews in real-world cases is essential.
- If major issues are discovered—rebuild and/or iterate!



Review-Tool Set

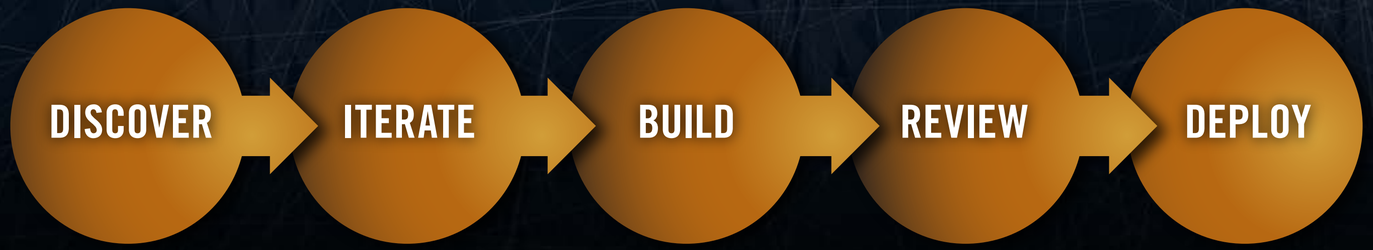
SUGGESTED TOOLS

- Array of devices and browsers to reflect user base
- Account for low bandwidth and other technical challenges
- User testing—make sure the product performs as required, and make necessary adjustments, if needed.



Deploy

- Once major requirements are successfully fulfilled, launch
- Continual attention to users is essential, whether by the client, or by you. In a constantly changing user landscape, what may have been clear during discovery may now be cloudy.
- If major issues are discovered—review the project, and adapt as needed!

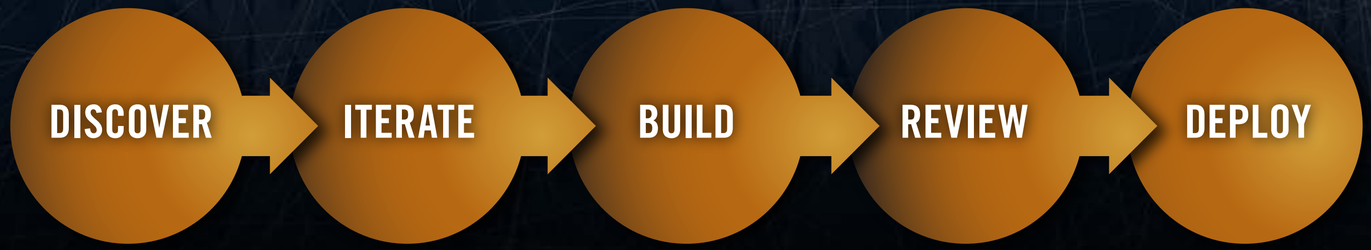


Deploy-Tool Set

SUGGESTED TOOLS

- Software/hardware of choice
- Analytics observations
- Stakeholder feedback

N.B. The UX process doesn't stop here—the path is for continual improvement over the life of the product.



Project Example

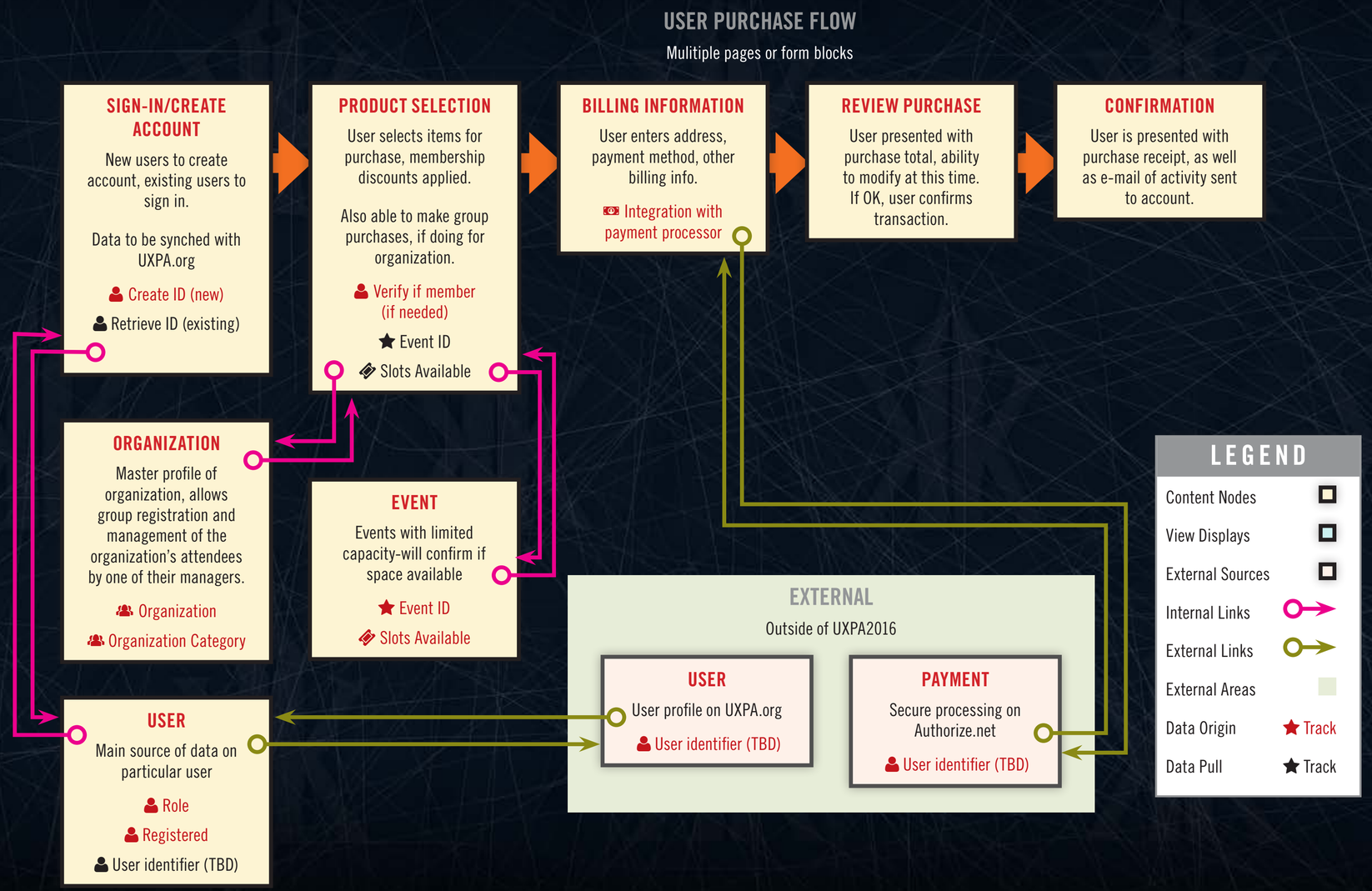
UXPA International 2016

- Conference site, built from ground-up in Drupal
- Required custom coding to interact with main site
- Demanding UX-centric user base
- Due to prior experience, no printed program would be used
- Careful balance of performance and features

UXPA International 2016

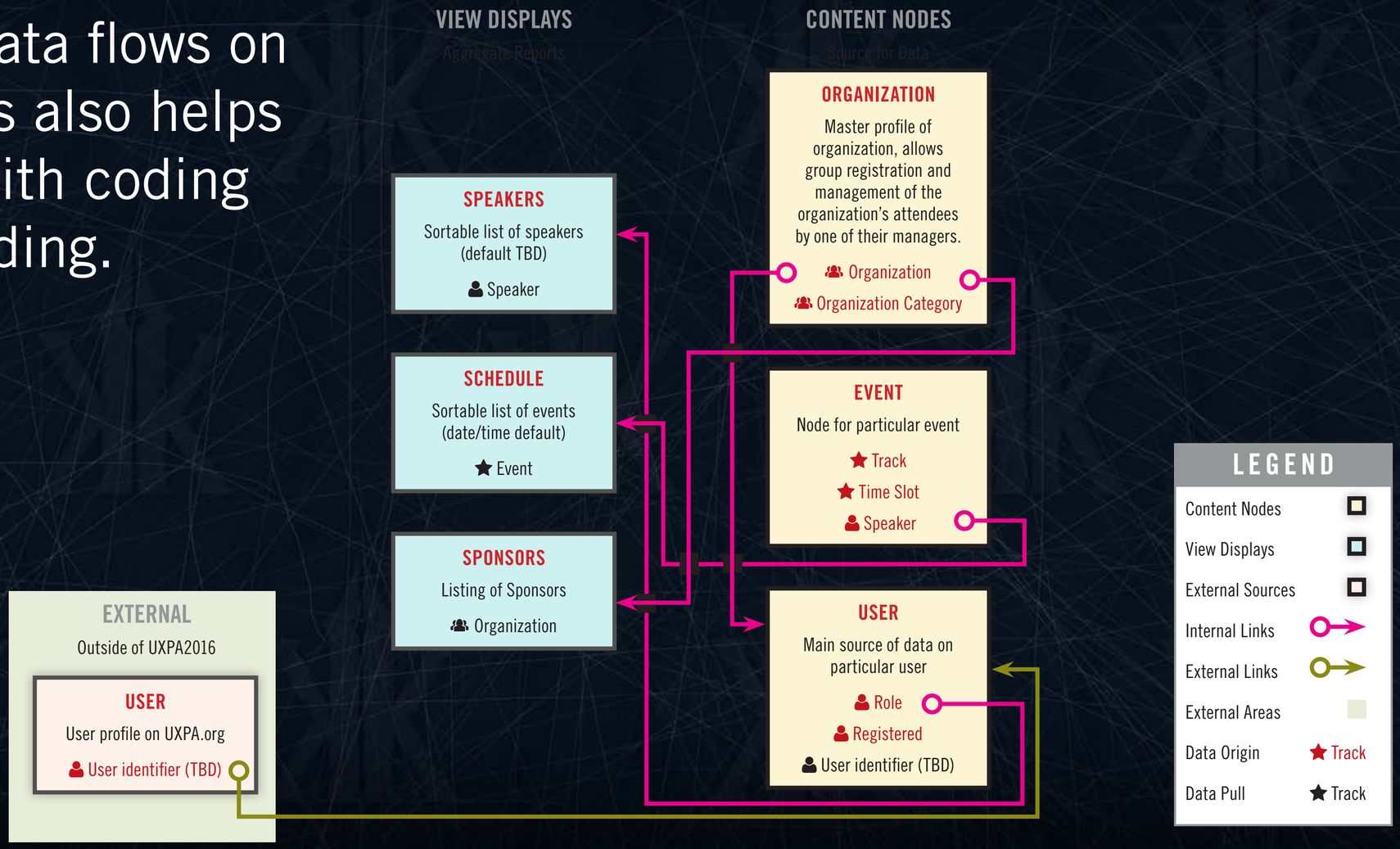
User Flow

Creating visual flows helps stakeholders see the steps involved, and anticipate and resolve issues before launch.



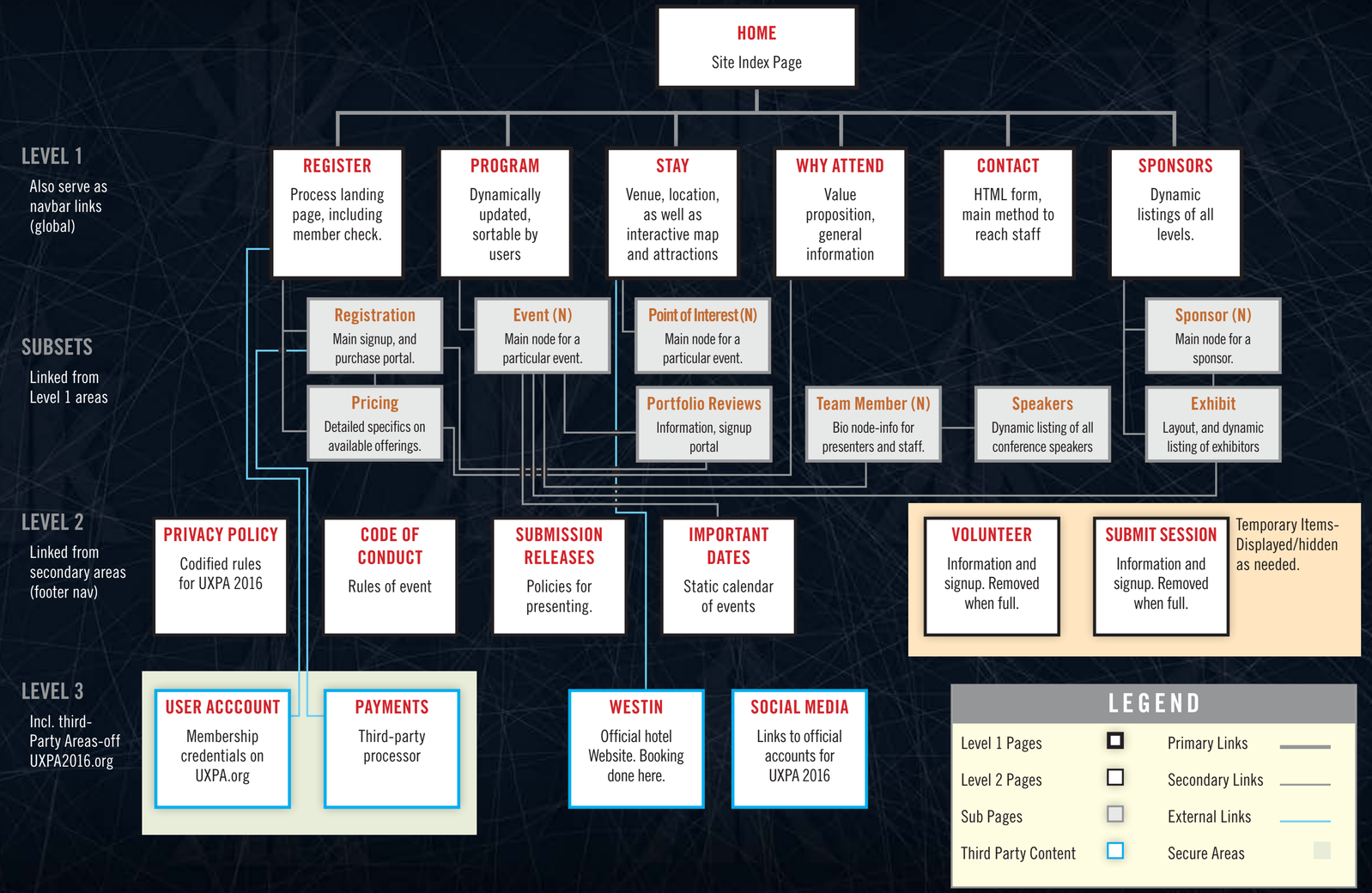
Data Flow

Visualizing data flows on complex sites also helps immensely with coding and site building.



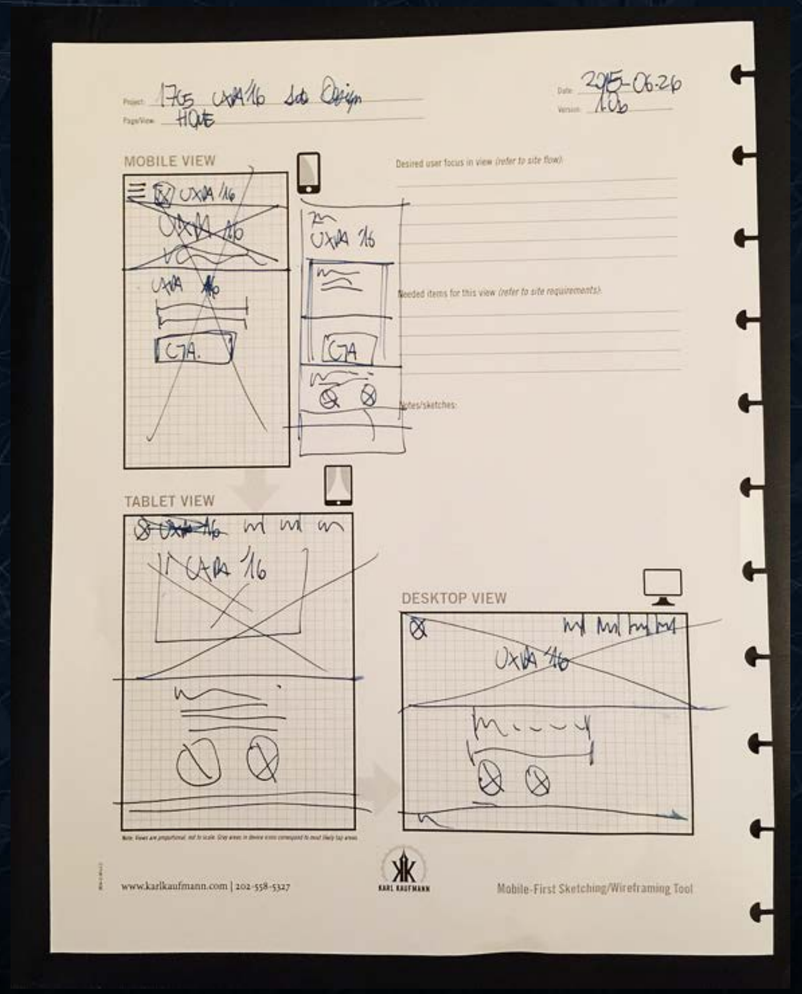
Site Architecture

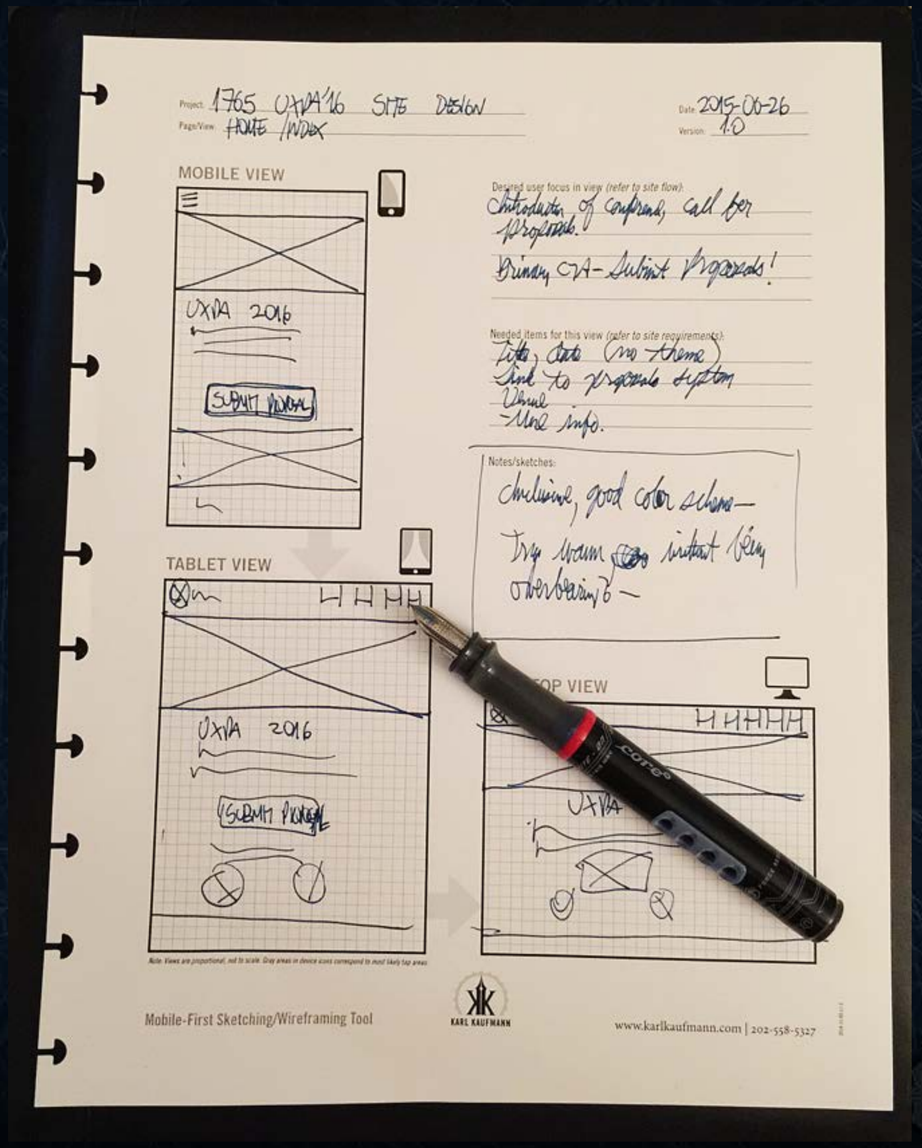
Necessary, but often neglected. Excellent way to improve UX and find possible issues, of all sorts.



UXPA 2016-Comping

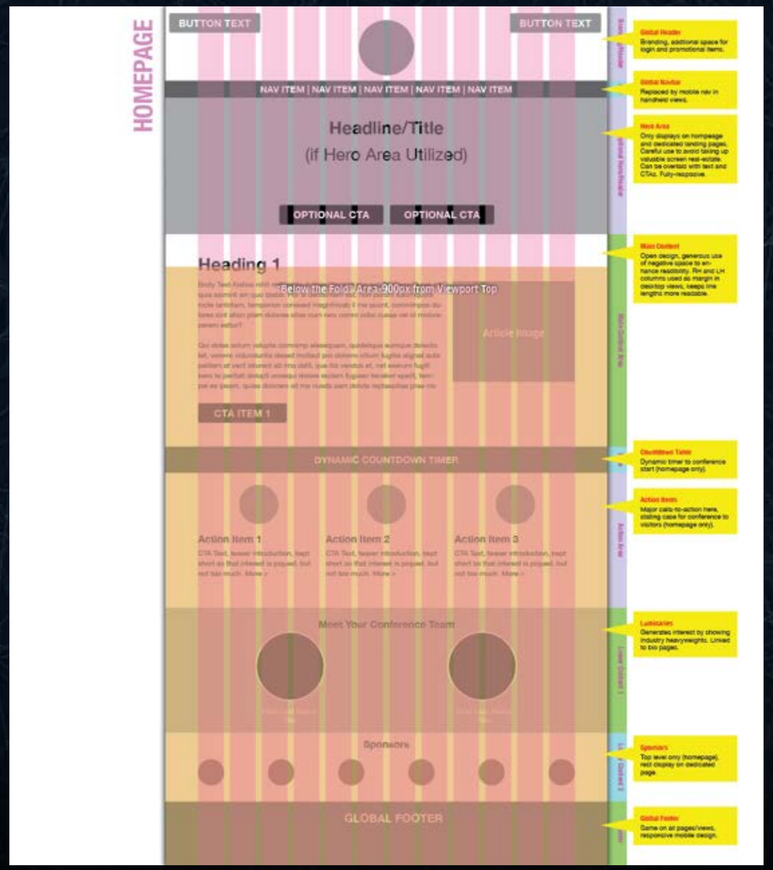
Rapid paper iteration to start.





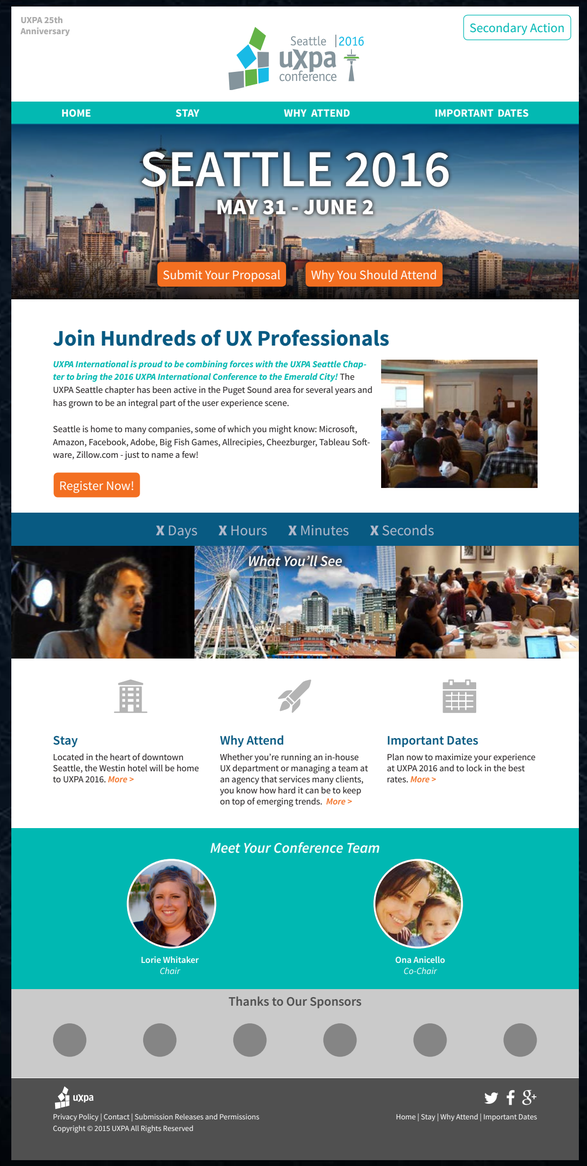
Wireframes

Keeping assets low fidelity until content and functionality has been set allows for modification without fear of “sunk cost”

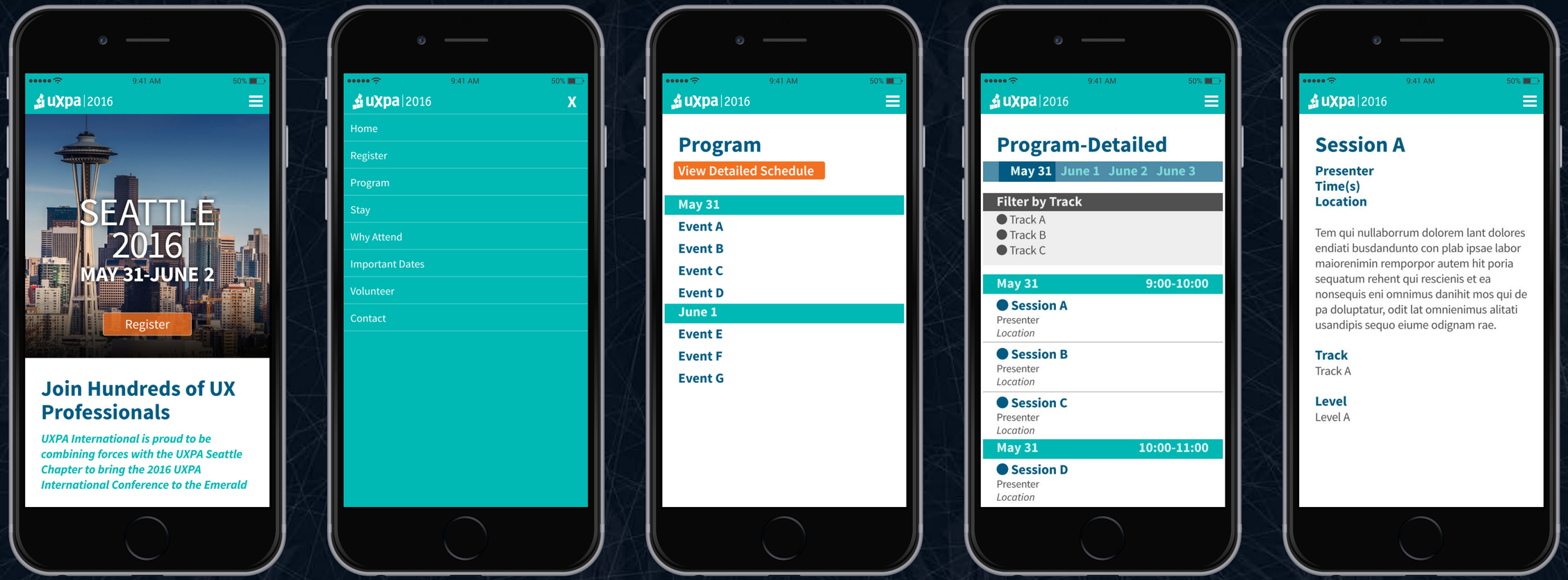


Style Tiles & Static Mocks

Design, theme, and visual elements can be explored and revised well before any coding.

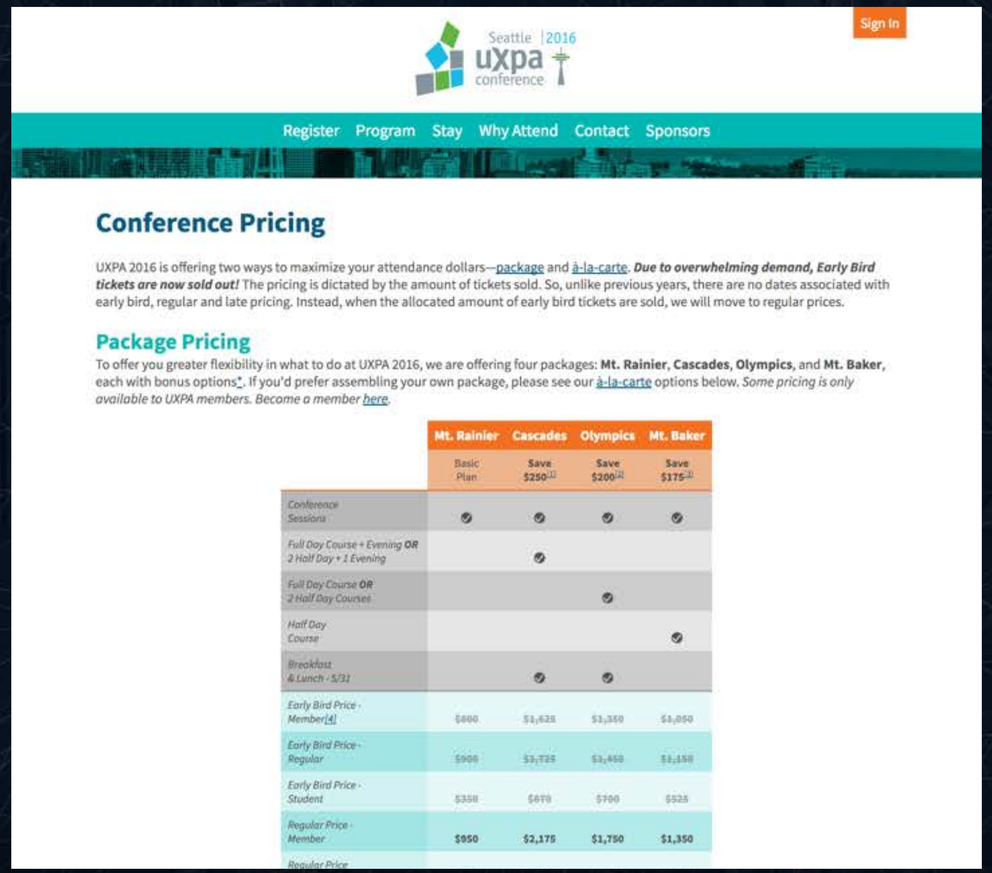


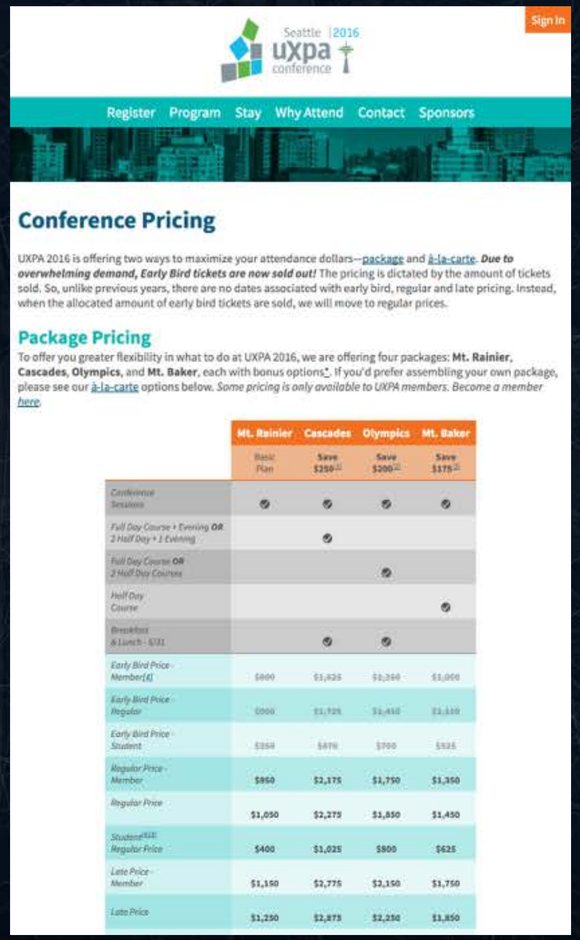
Interactive Mocks



Tools such as InVision allow functional prototypes without coding, allowing faster iteration for UX-critical testing.

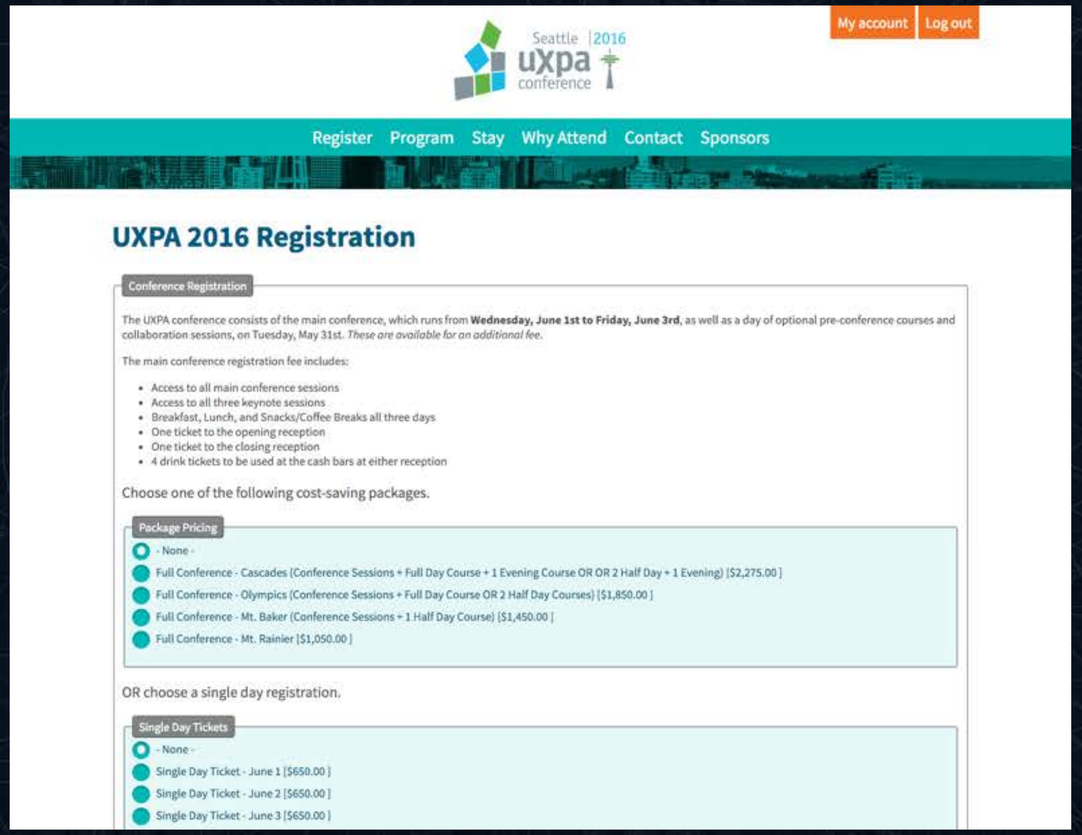
User-Centered Table Design

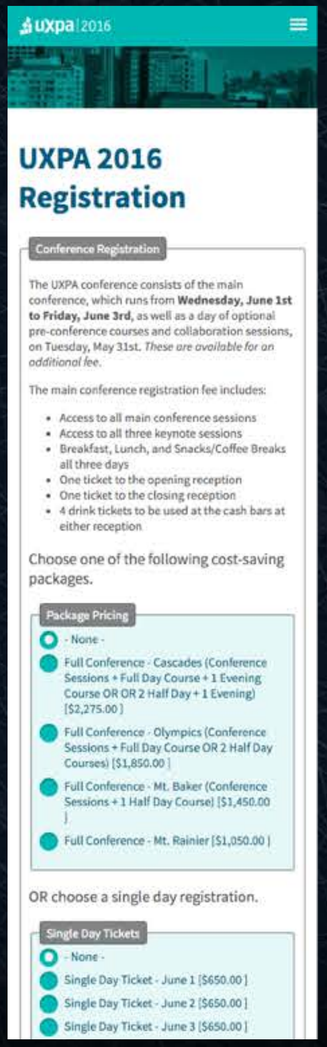




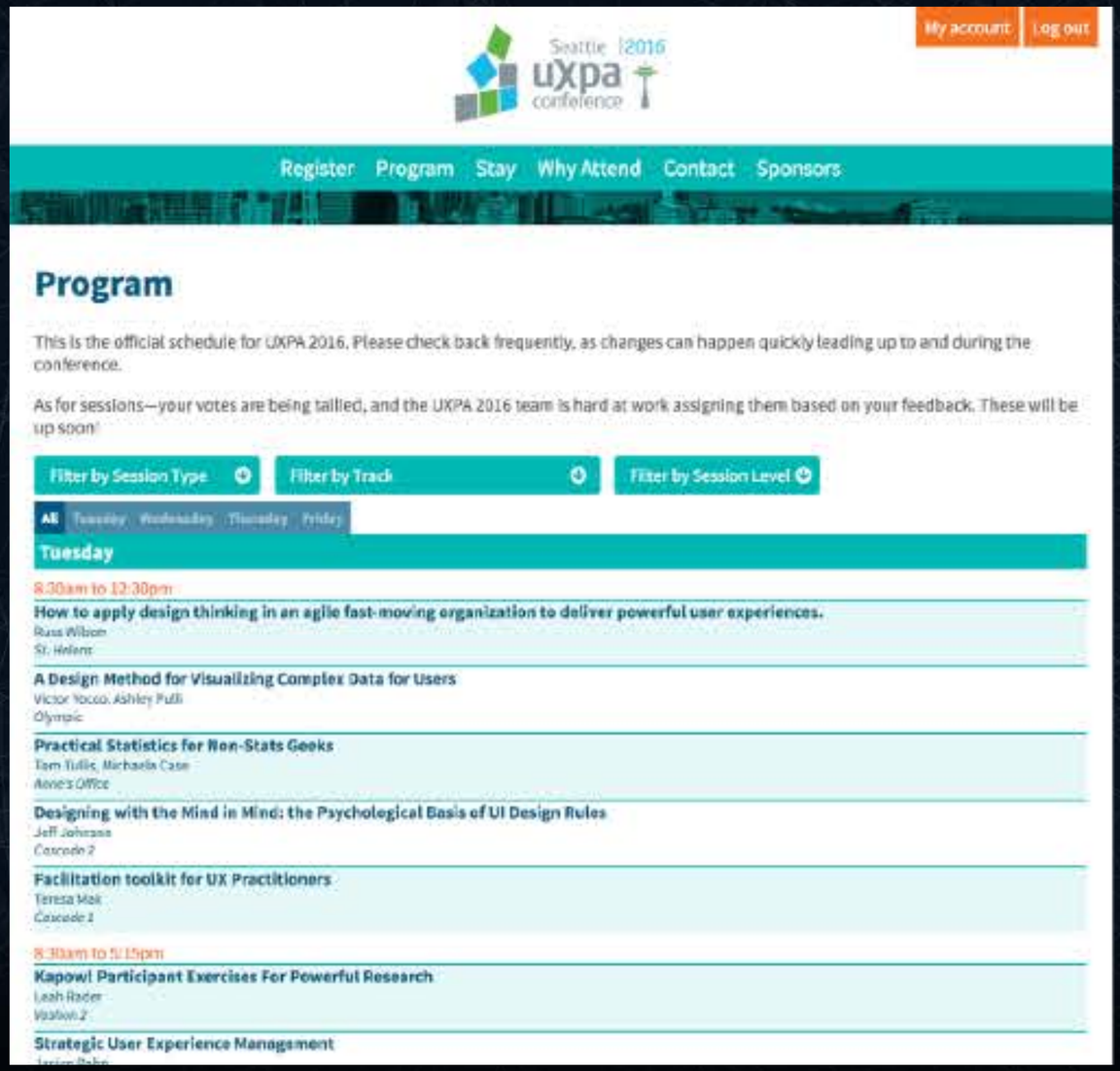
User-Centered Form Design

Often overlooked, but critical for sales conversions. Here, careful attention paid to tap areas on selects and readability on mobile.

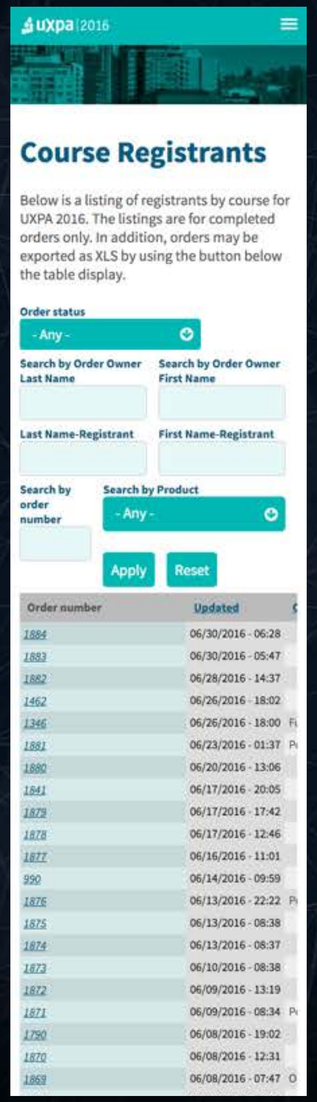


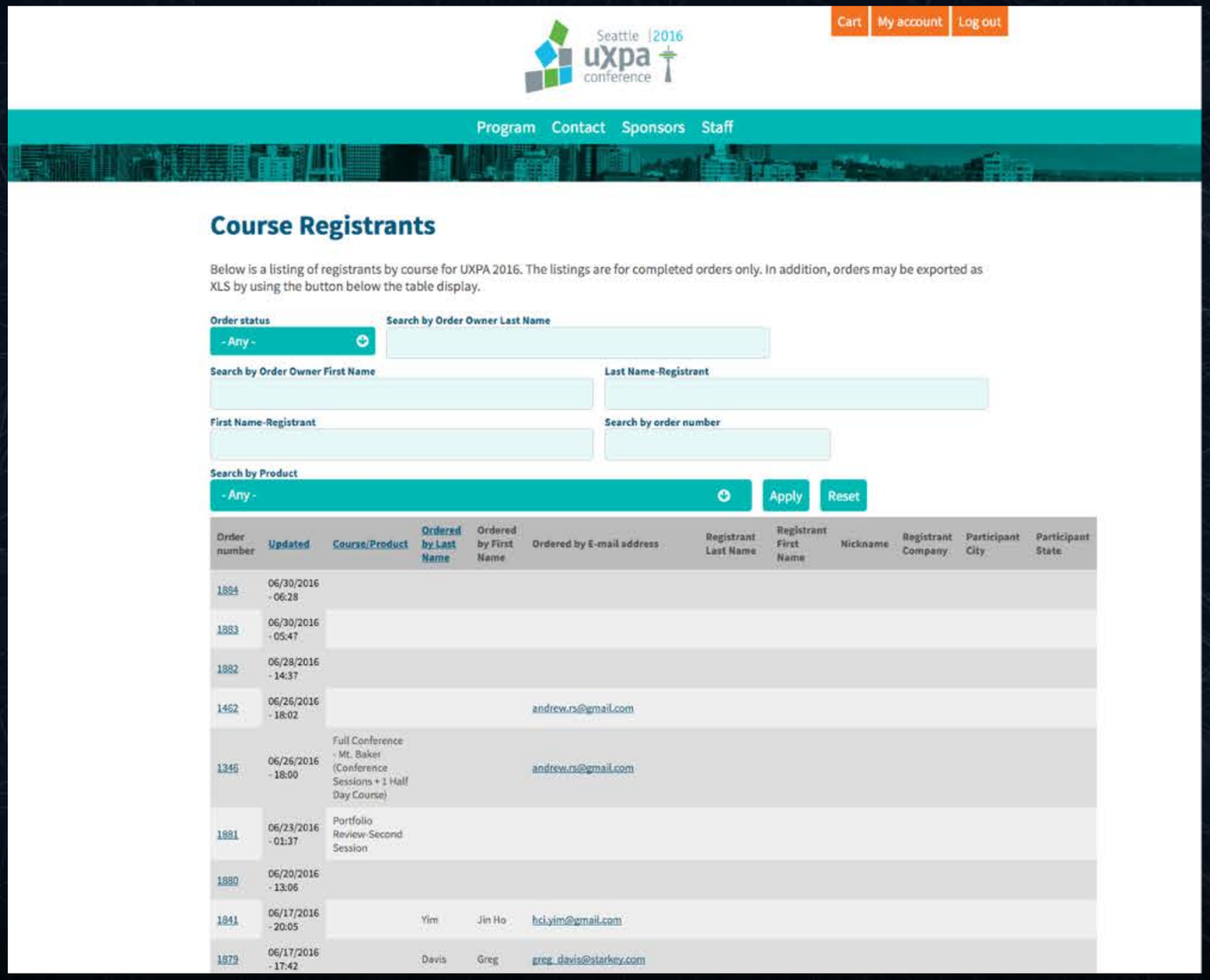


Improved Program UX



Staff Administration UX





UXPA 2016 Takeaways

- Registration is up, helped by an improved user experience
- Mobile experience is enhanced, especially for on-site schedule needs
- Improved integration with surveys and presentations
- Enhanced staff functionality—for registration reports and editing

Building Support

Building Support

- Involving key stakeholders from the start of the process helps to ensure buy-in.
- In-house success stories help strengthen your case. Supplement with noted external stories when starting out.
- Making others aware of the process (and what's involved) raises your standing within the organization.
- Government initiatives such as the USDS (U.S. Digital Service).
- Empathize that what helps the user ultimately helps you.

Most business models have focused on self interest instead of user experience

TIM COOK, CEO, APPLE

Organizations

- UXPA International
- AIGA
- DC Design Thinking
- Local Web and design-related Meetups
- Online communities (Stack Exchange, LinkedIn, for starters)

Additional Reading

Suggested Resources

- ***The User Experience Team of One: A Research and Design Survival Guide*** (Rosenfeld) Leah Buley, July 2013
- ***Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability*** (3rd Edition) (Voices That Matter) Steve Krug, January 2013
- ***The Design of Everyday Things: Revised and Expanded Edition*** (Basic Books) Don Norman Nov 5, 2013
- ***A Project Guide to UX Design: For user experience designers in the field or in the making*** (2nd Edition) (Voices That Matter) 2nd Edition Russ Unger and Carolyn Chandler, March 2012

Thank You

@karolus

kkaufmann@karlkaufmann.com

karlkaufmann.com