

The Evolution Of A New UX Design Resolution

Jared M. Spool
@jmspool



1

January 13, 2018
8:08 am
Hawaii Time



EMERGENCY ALERTS

1m ago

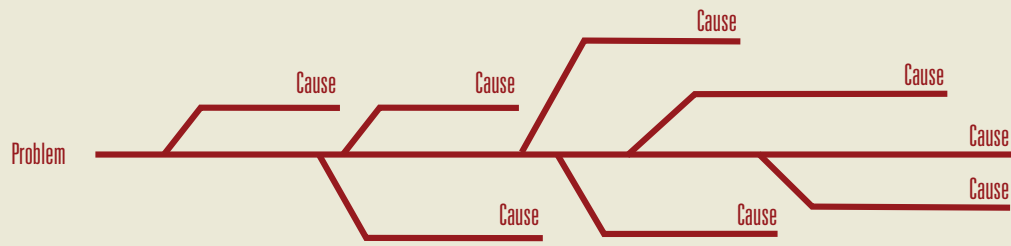
Emergency Alert

BALLISTIC MISSILE THREAT INBOUND TO HAWAII. SEEK IMMEDIATE SHELTER. THIS IS NOT A DRILL.

Why?

What was the root cause?

Fishbone Analysis



BMD False Alarm

Amber Alert (CAE) - Kauai County Only

Amber Alert (CAE) Statewide

1. TEST Message

PACOM (CDW) - STATE ONLY

Tsunami Warning (CEM) - STATE ONLY

DRILL - PACOM (CDW) - STATE ONLY

Landslide - Hana Road Closure

Amber Alert DEMO TEST

High Surf Warning North Shores

1. State EOC

1. TEST Message

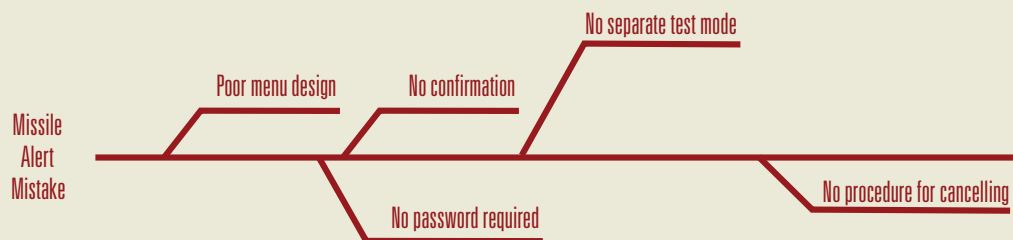
DRILL-PACOM (DEMO) STATE ONLY

False Alarm BMD (CEM) - STATE ONLY

Monthly Test (RMT) - STATE ONLY

PACOM (CDW) - STATE ONLY

Why did a false alert happen?





Karl
@supersat

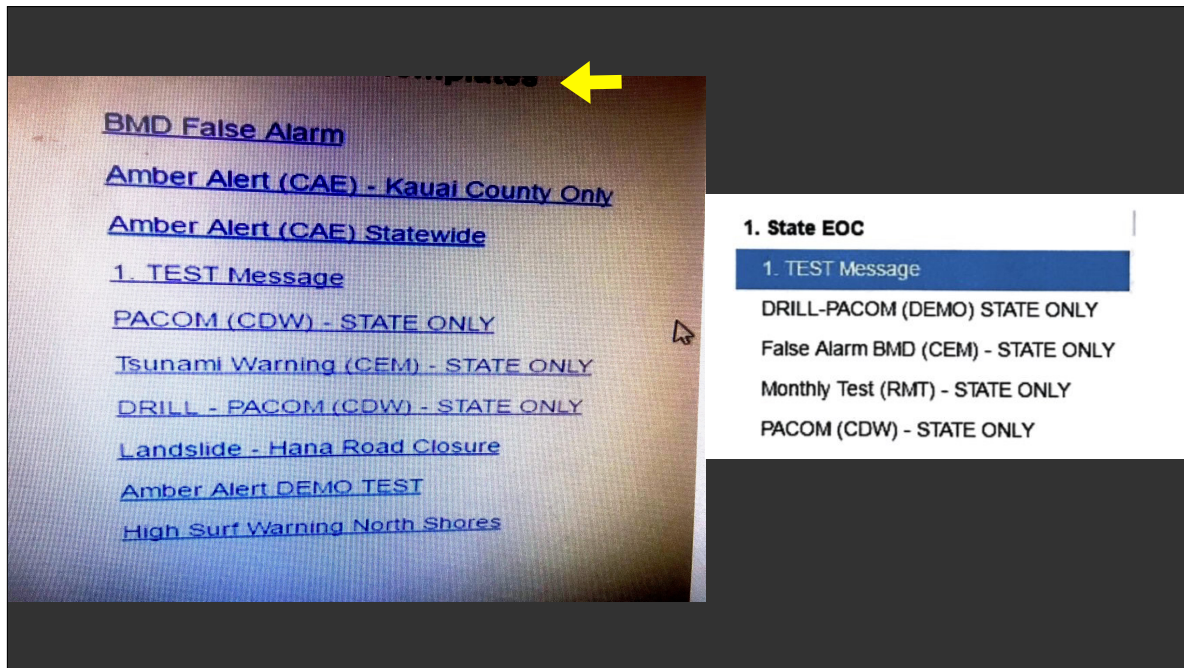
Follow

In case you're curious what Hawaii's EAS/WEA interface looks like, I believe it's similar to this. Hypothesis: they test their EAS authorization codes at the beginning of each shift and selected the wrong option.

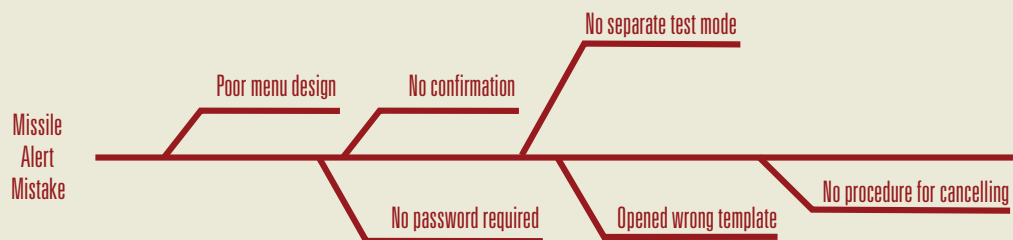
The screenshot shows two browser windows. The left window, titled 'SYSTEM CONSOLE', displays the 'SEND EAS ALERT' form. It includes a 'SELECT ALERT TYPE' section with a radio button for 'Send EAS Alert'. Below this is a 'TEMPLATES' section with a 'New Template' button and a 'Template' dropdown. The 'BASIC INFORMATION' section has fields for 'Required Field' and 'EAS ID Number'. The right window, titled 'EAS ALERT SAFEGUARD', shows a dialog box with the text 'To send a LIVE EAS Alert, you must check the SEND LIVE button.' and radio buttons for 'Send TEST only' and 'SEND EAS LIVE *'. A 'SUBMIT' button is at the bottom.

1:45 PM - 14 Jan 2018

The screenshot shows the 'AlertSense' dashboard with the 'Create Public Message' form. The form has sections for 'Message Type' (with a dropdown for 'EMERGENCY ALERT SYSTEM'), 'Message Settings' (with fields for 'Event Type', 'Response Type', and 'Duration'), and 'EAS / WEA Broadcast Message Content'. The 'EAS / WEA Broadcast Message Content' section includes a 'Event Description' field with a text area, a 'Recommended Instructions' field with a text area, and a 'CAP to EAS Translation' section. The 'WEA - Mobile Phone Content' section includes a 'Text Message' field with a text area and a 'Mobile Phone Content' field with a text area. The form also includes a 'SUBMIT' button and a 'Cancel' button.



Why did a false alert happen?



TECHNOLOGY

Hawaii Missile Alert Wasn't Accidental, Officials Say, Blaming Worker

查看简体中文版 | 查看繁體中文版

By CECILIA KANG JAN. 30, 2018



A sign in Honolulu that corrected a false alert about an incoming ballistic missile on Jan. 13.
Cory Lum/Associated Press

RELATED COVERAGE



False Missile Alert Looms as a Black Eye for Hawaii and Its Governor JAN. 14, 2018



False Missile Warning in Hawaii Adds to Scrutiny of Emergency Alert System JAN. 13, 2018

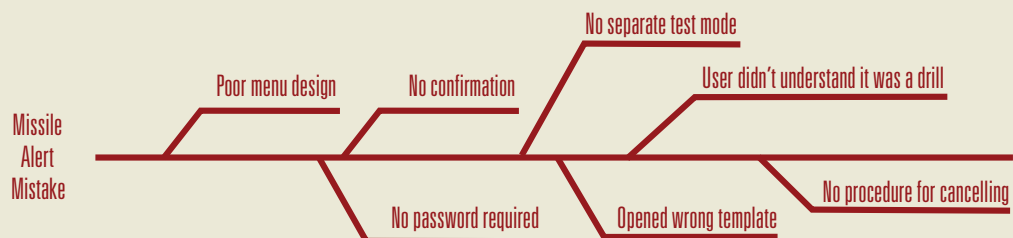


Hawaii Panics After Alert About Incoming Missile Is Sent in Error JAN. 13, 2018



Causes of False Missile Alerts: The Sun, the Moon and a 46-Cent Chip JAN. 13, 2018

Why did a false alert happen?





3:48

+ Queue

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Transcript



NEWS

Who Should Warn The Public Of Nuclear War?

February 12, 2018 · 7:00 AM ET
Heard on Morning Edition



MARTIN KASTE



Honolulu attorney Michael Green, right, sits with his client, the former Hawaii Emergency Management Agency employee who sent a false missile alert to residents and visitors in Hawaii, left, during an interview with reporters on Feb. 2, 2018 in Honolulu. The ex-state employee says he's devastated about causing panic, but he believed it was a real attack at the time.
Jennifer Sinco Kelleher/AP

Technically, the alerts could be sent by any federal, state or local agency that has access to [IPAWS](#), the Integrated Public Alert & Warning System, which sends emergency alerts to TV, radio and smart phones.

But Federal officials say it's not their role to warn the public about missiles. "FEMA will tell the states that there's a missile inbound and where it's going to land," says Mark Lucero, chief of engineering for IPAWS. "And then the state will initiate any plans it has in place, one of which being issuing an alert to the public, telling them what to do."

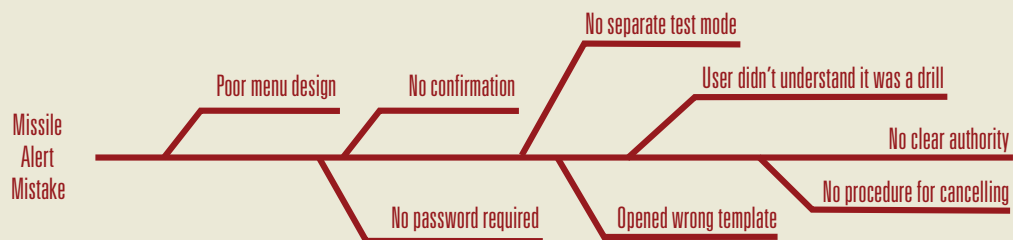
[FEMA's national warning system manual](#) echoes that localism: Once federal authorities have used the National Warning System (NAWAS) to alert state and local authorities of the missile threat, "Local authorities sound the Attack Warning signal on public warning devices."

This comes as a surprise to many of those local emergency management officials.

Francisco Sanchez Jr., deputy emergency management coordinator for Harris County, Texas — which includes Houston — says he assumed the public message would come directly from the federal government.

"Military events are not something that we envision or have within the scope of our responsibilities to alert for," Sanchez says.

Why did a false alert happen?



Hawaii Emergency Management Agency

Emergency Preparedness

11/11/2017

1



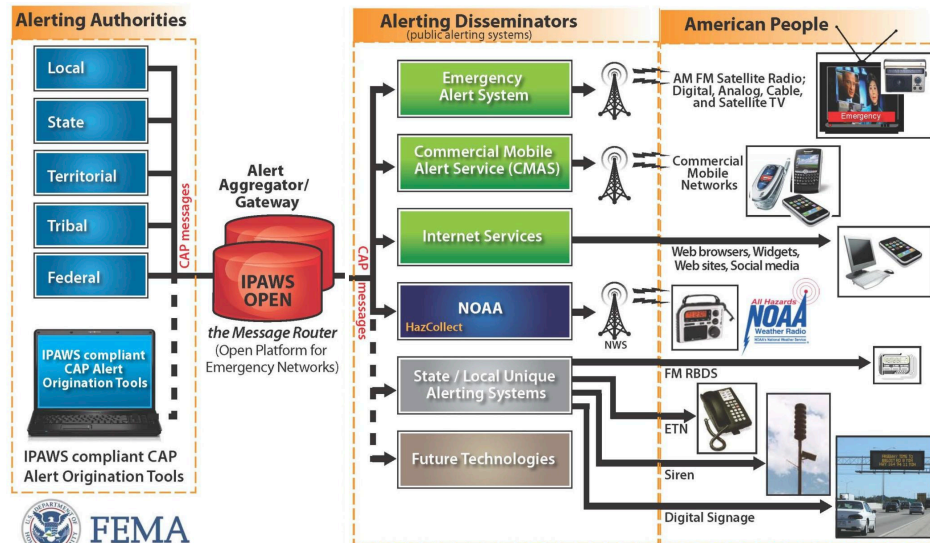
"Eighteen minutes before a missile gets here? Who am I going to call at the [Department of Defense] if I get that alert on my phone to verify this is real?" he asks. "Who can I get confirmation and double-confirmation from to make sure this is an authentic alert, this isn't the result of a hack, this isn't a mistake? By the time I've done that, something's gone boom."

**THIS IS A TEST.
THIS STATION IS
CONDUCTING A TEST
OF THE EMERGENCY
BROADCASTING SYSTEM.
THIS IS ONLY A TEST.**



IPAWS Architecture

Standards based alert message protocols, authenticated alert message senders, shared, trusted access & distribution networks, alerts delivered to more public interface devices



Alert origination software providers that have successfully demonstrated their IPAWS capabilities

- ✓ AlertSense
- ✓ AmberAlertGPS – LEAP (Law Enforcement Alerting Portal)
- ✓ Asher Group – Hyper Reach
- ✓ AtHoc – IWS Alerts
- ✓ Blackboard – Blackboard Connect
- ✓ Buffalo Computer Graphics – DisasterLAN
- ✓ Comlabs – EMNet
- ✓ CommPower – iNotify
- ✓ Everbridge – Nixle
- ✓ Federal Signal Corporation – CenterPoint Dashboard
- ✓ Geo-Comm, Inc. – GeoLynx
- ✓ GSS Alert Studio – ALERT FM
- ✓ HipLink
- ✓ Inspiron Logistics – WENS
- ✓ Intermedix – WebEOC
- ✓ Interop-Solutions – Paraclete
- ✓ KDEE Technology LLC – On-the-go Alerting
- ✓ Monroe Electronics – DAS-EOC
- ✓ NC4 – E-Team
- ✓ OnSolve – CodeRED
- ✓ Ping 4 – Ping 4 Alerts!
- ✓ Regroup Mass Notifications – CivicPlus
- ✓ SwiftReach – Swift911

12/07/17

Organizations Involved in the Missile Alert

Hawaii Emergency Management Agency



Hawaii State Warning Point



US PACOM



FEMA



Federal Communications Commission



23 Alert Origination Software Providers



Design:
The Rendering of Intent

Organizations Involved in the Missile Alert

Hawaii Emergency
Management Agency



Hawaii
State Warning Point



US PACOM



FEMA



Federal
Communications
Commission



23 Alert Origination Software Providers

Organizations Involved in the Missile Alert

Hawaii Emergency
Management Agency



Hawaii
State Warning Point



US PACOM



FEMA



Federal
Communications
Commission




23 Alert Origination Software Providers

**Who is responsible
for choosing the
intention?**



Governance: The Owning of Intent



Who owns the intention
when the design involves
multiple organizations?

2 Seeking a different resolution.

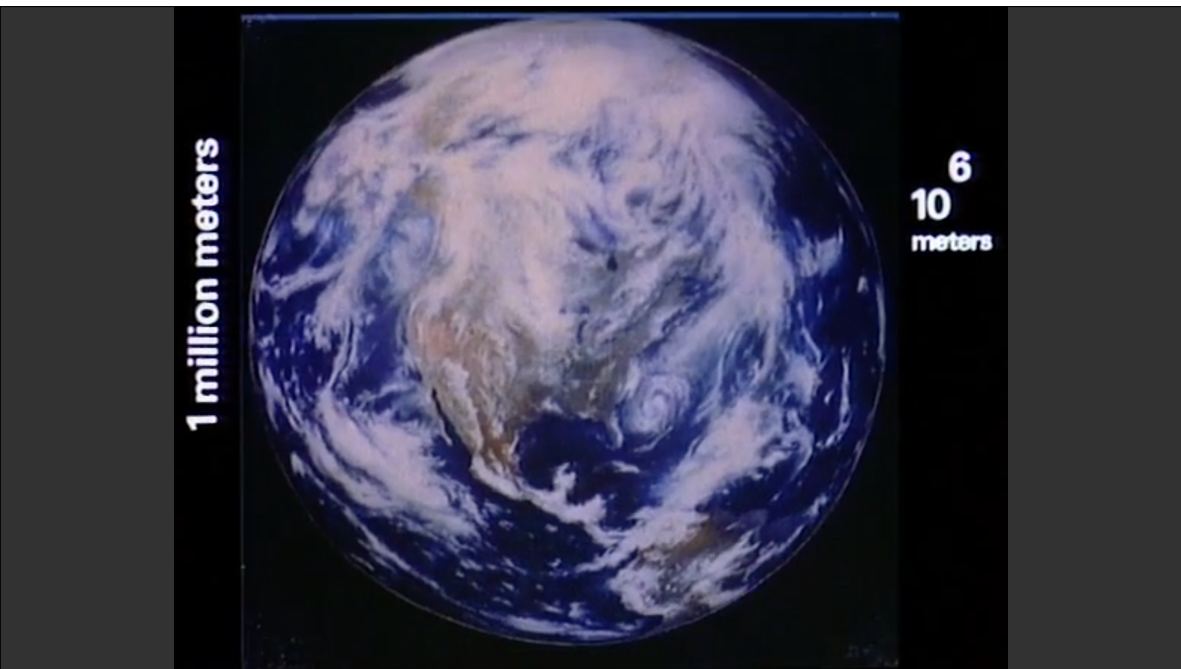
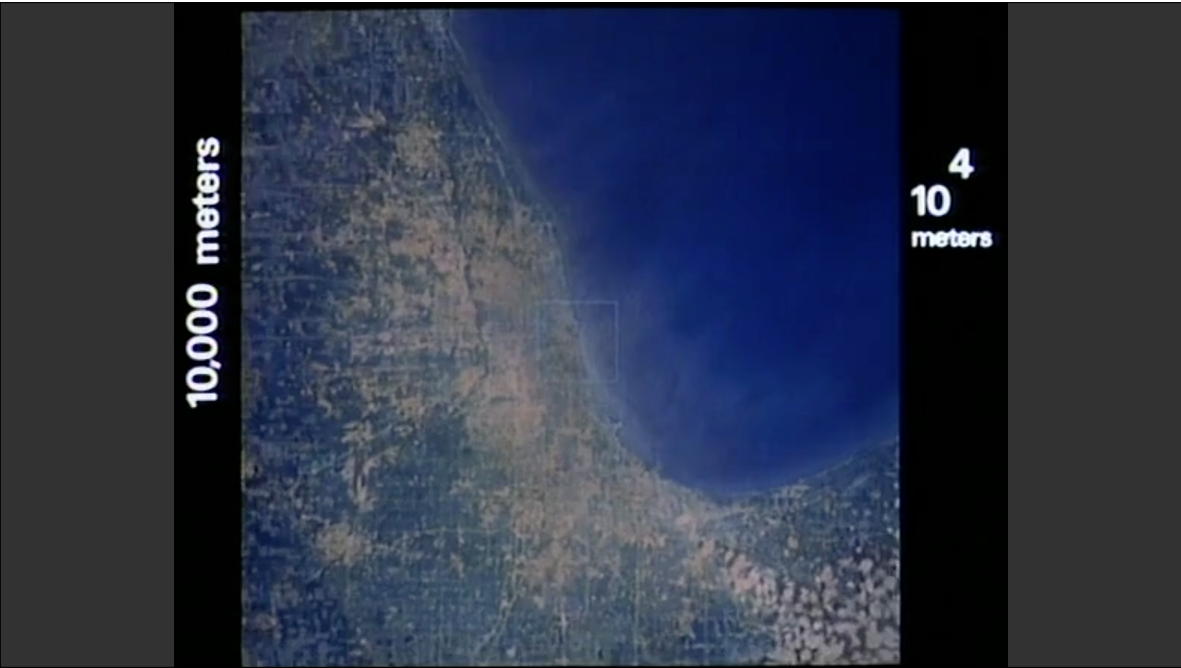


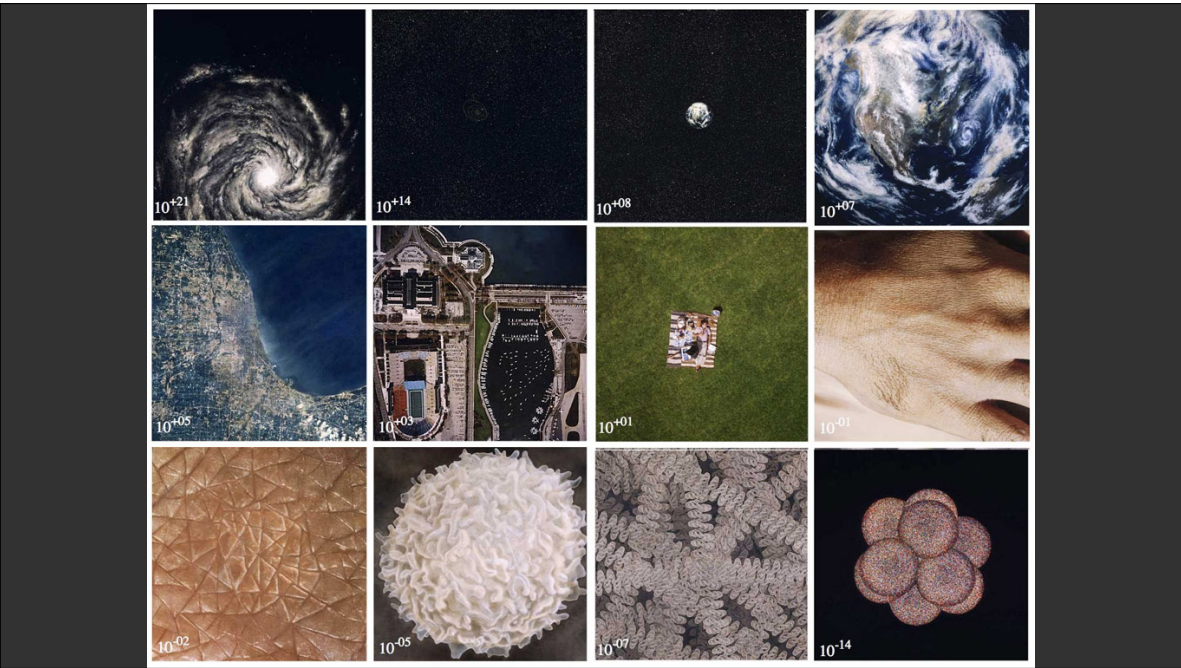
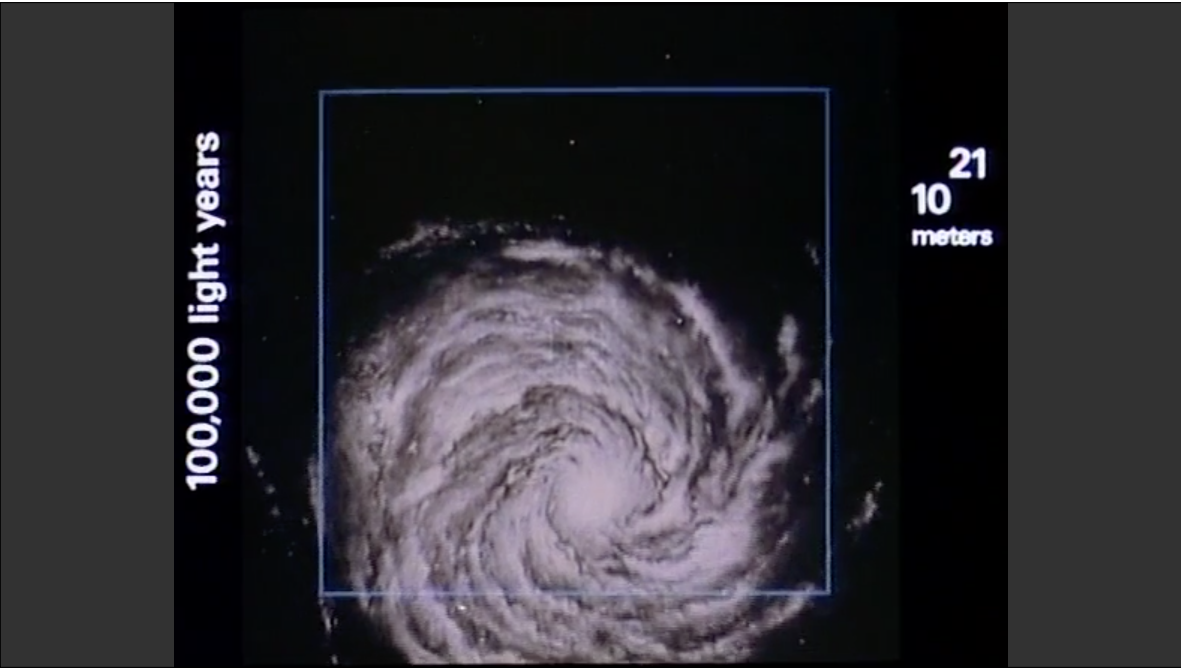
POWERS OF TEN

1 meter

10^0
meters









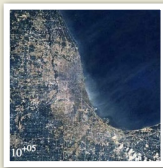


We need different tools for
each resolution.

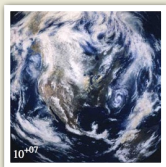
The Problem of Pollution



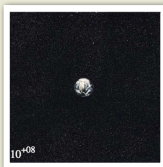
Resolution: Park
Problem: Litter



Resolution: City
Problem: Trash and Landfill Management



Resolution: Planet
Problem: Climate Change



Resolution: Orbit
Problem: Space Junk

**Different resolutions have different problems.
Different resolutions demand different solutions.**

Design is the rendering of intent.

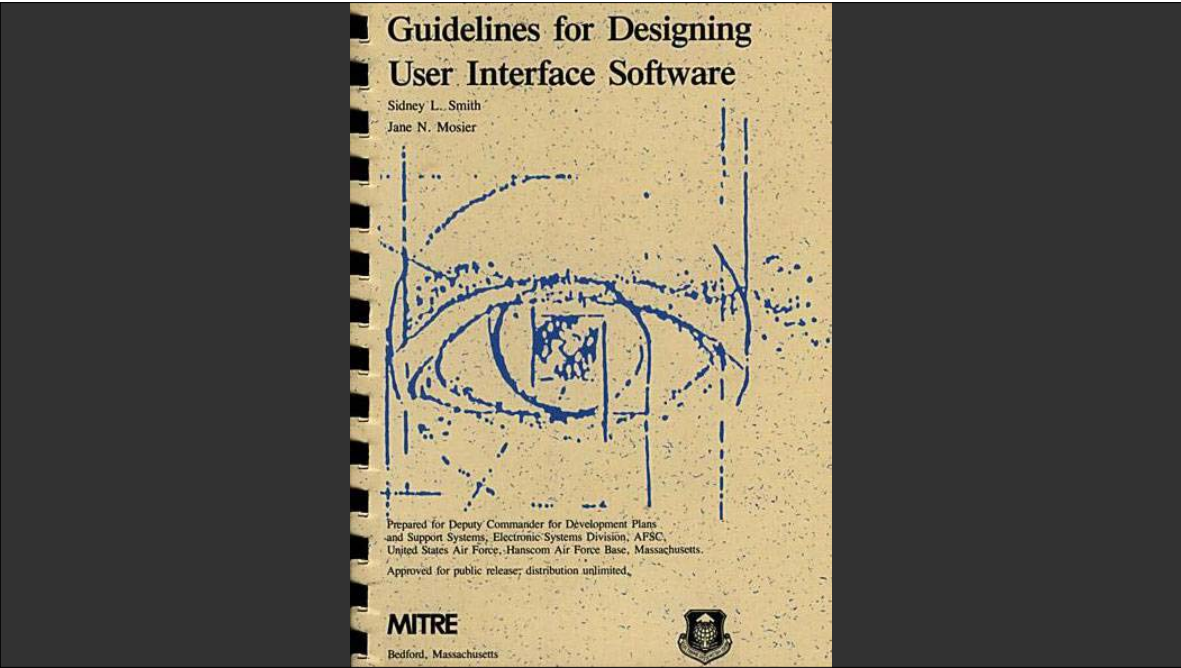
At each level of resolution, the intentions change.

The way we render those intentions change.

That **design is the rendering of intent** doesn't change.

3

The resolutions of
UX Design.



```

DISPLAY CUSTOMER INFORMATION                      Acct # B10093
-----

Credit Limit:$      0      Finance Charge? Y      Area:      Sort Codes: 8

      BILLING                                SHIPPING
Name: A CLEAN WELL LIGHTED PLACE FOR      Name: A CLEAN WELL LIGHTED PLACE FOR
Address: 601 VAN NESS AVENUE              Address: 601 VAN NESS AVENUE
      :                                       :
      :                                       :
City: SAN FRANCISCO                        City: SAN FRANCISCO
State: CA                                  State: CA
Zip: 94102                                Zip: 94102
Country: U.S.A                            Country:
Phone:                                     Phone:

-----

Enter ↑ to skip back, ↓ to skip forward, or <ESC> to exit

```

1.4 DATA ENTRY: Data Forms
1.4/10 Marking Field Boundaries

Display special characters or other consistent means of highlighting to clearly delineate each data field.
Example: An underscore might be used for this purpose, perhaps broken to indicate the number of symbols required in an entry, as

(Good) | Enter account number: _ _ _ _ _ |
(Bad) | Enter account number: |

Example: See sample displays in this section.

Comment: Such implicit prompts help reduce data entry errors by the user.

Reference:
BB 2.2.1
EG 6.3 6.3.1
MS 5.15.4.3.4
PR 4.8.1
Savage Habinek Blackstad 1982

See also: 1.0/6 2.2/2 4.4/15

1.4 DATA ENTRY: Data Forms
1.4/11 + Prompting Field Length

Provide cues in field delineation to indicate when a fixed or maximum length is specified for a data entry.

Example:
(Good) | Enter ID: _ _ _ _ _ |
(Bad) | Enter ID (9 characters): |

Example: See sample displays in this section.

Comment: Prompting by delineation is more effective than simply telling the user how long an entry should be. In the example cited here, underscoring gives a direct visual cue as to the number of characters to be entered, and the user does not have to count them.

Comment: Similar implicit cues should be provided when data entry is prompted by auditory displays. Tone codes can be used to indicate the type and length of data entries.

Reference:
BB 2.2.1
EG 6.3
MS 5.15.4.3.7
PR 4.8.2
Smith Goodwin 1970

See also: 4.4/15

Smith & Mosier Guidelines

Consistency of data-entry transactions

Minimal input actions by the user

Minimal memory load on users

Compatibility of data entry with data display

Flexibility for user control of data entry

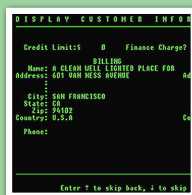
```
DISPLAY CUSTOMER INFORMATION          Acct # B10093
-----
Credit Limit:$      0      Finance Charge? Y      Area:      Sort Codes: 8

      BILLING                                SHIPPING
Name: A CLEAN WELL LIGHTED PLACE FOR      Name: A CLEAN WELL LIGHTED PLACE FOR
Address: 601 VAN NESS AVENUE              Address: 601 VAN NESS AVENUE
:                                          :
City: SAN FRANCISCO                      City: SAN FRANCISCO
State: CA                                State: CA
Zip: 94102                               Zip: 94102
Country: U.S.A                           Country:
Phone:                                    Phone:

-----
Enter ↑ to skip back, ↓ to skip forward, or <ESC> to exit
```

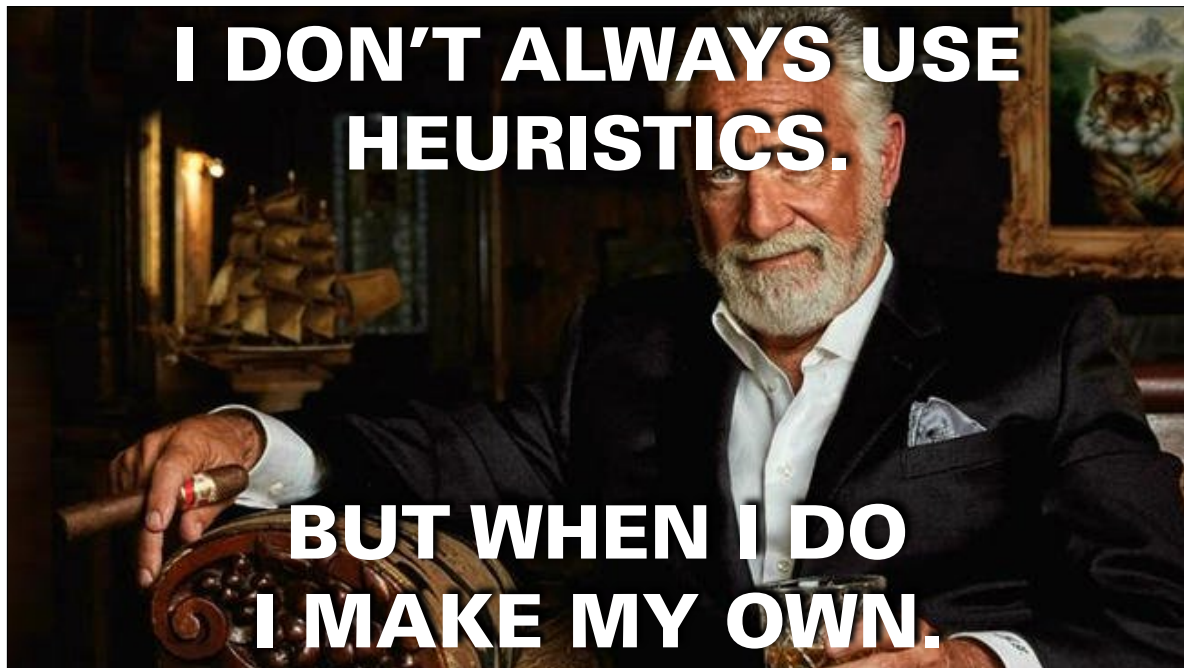


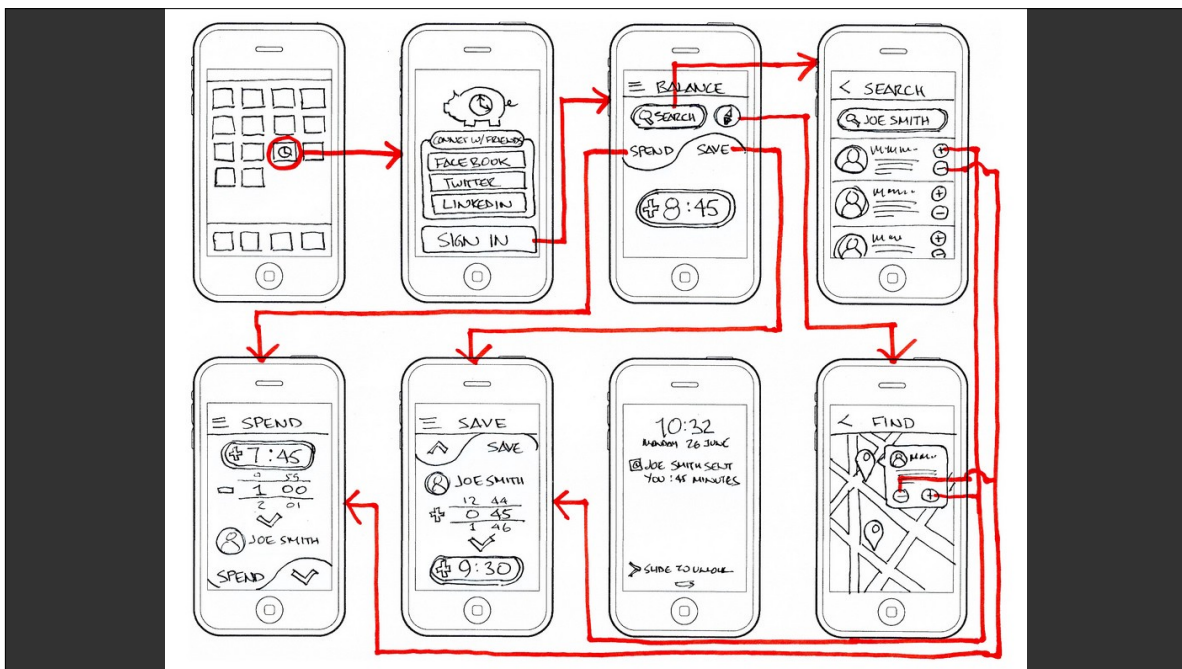
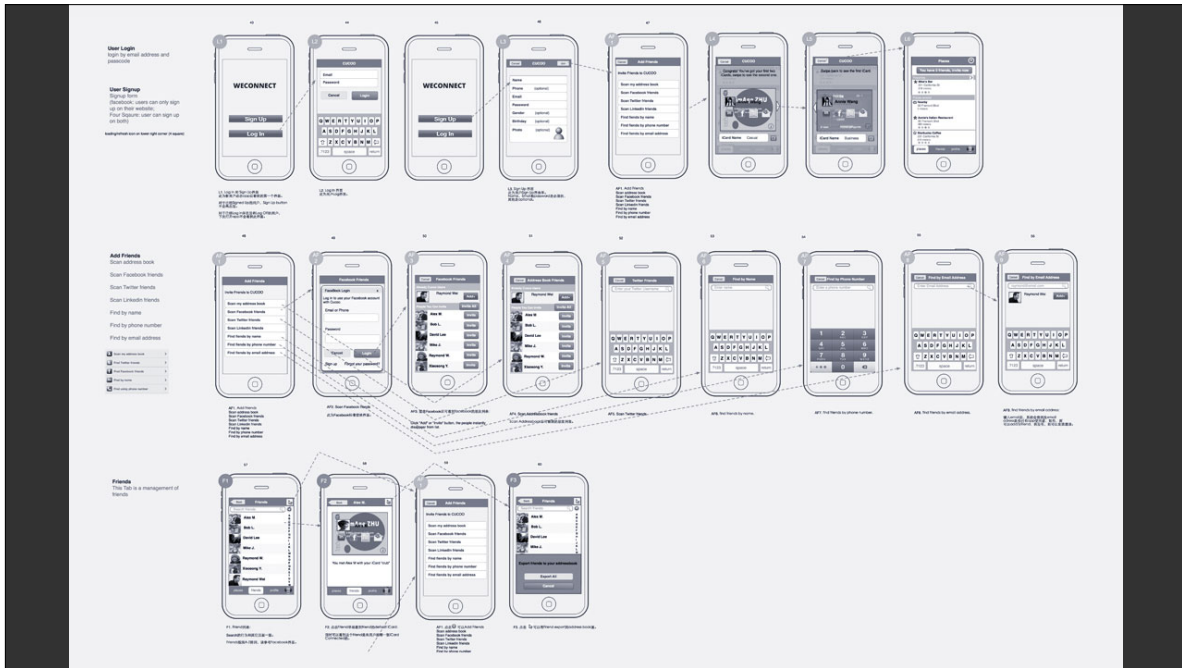
Resolution: Screen-wide



Focus: User interface design

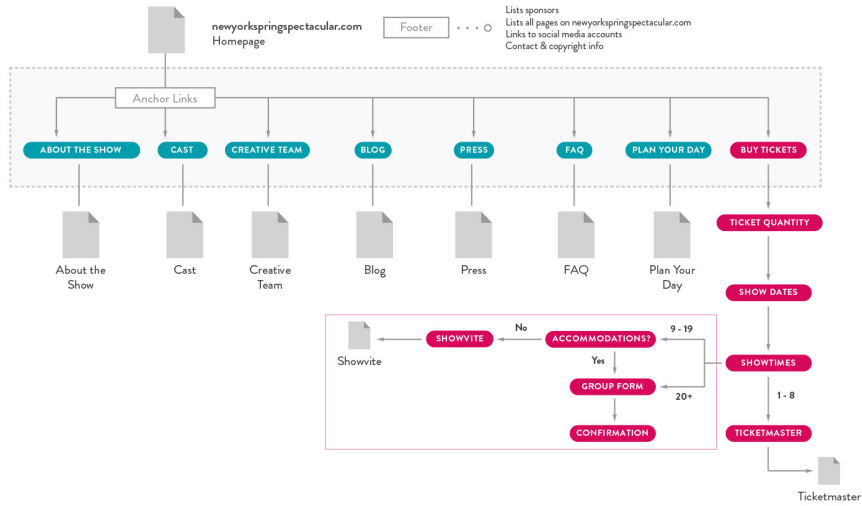
Tools: UI components
Form guidelines
Usability testing
Heuristics



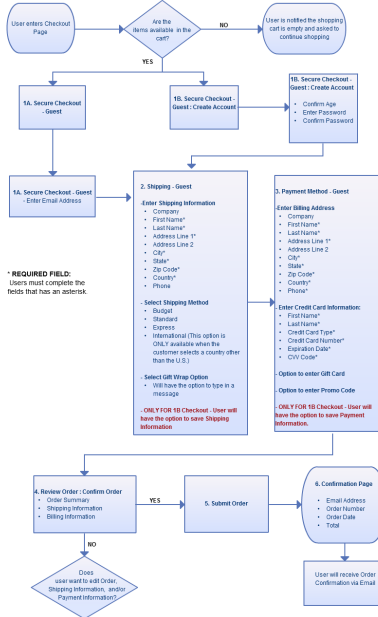


SITEMAP (NEW)

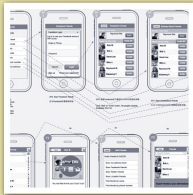
New York Spring Spectacular



Shopping Cart - Guest Checkout Process



Resolution: Application-wide / Site-wide



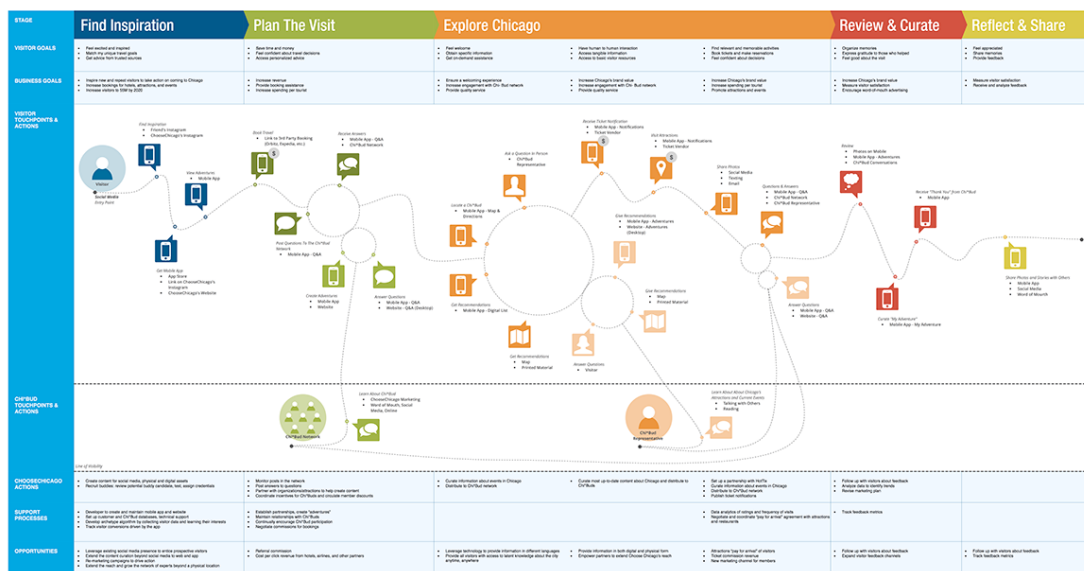
Focus: UX design and information architecture

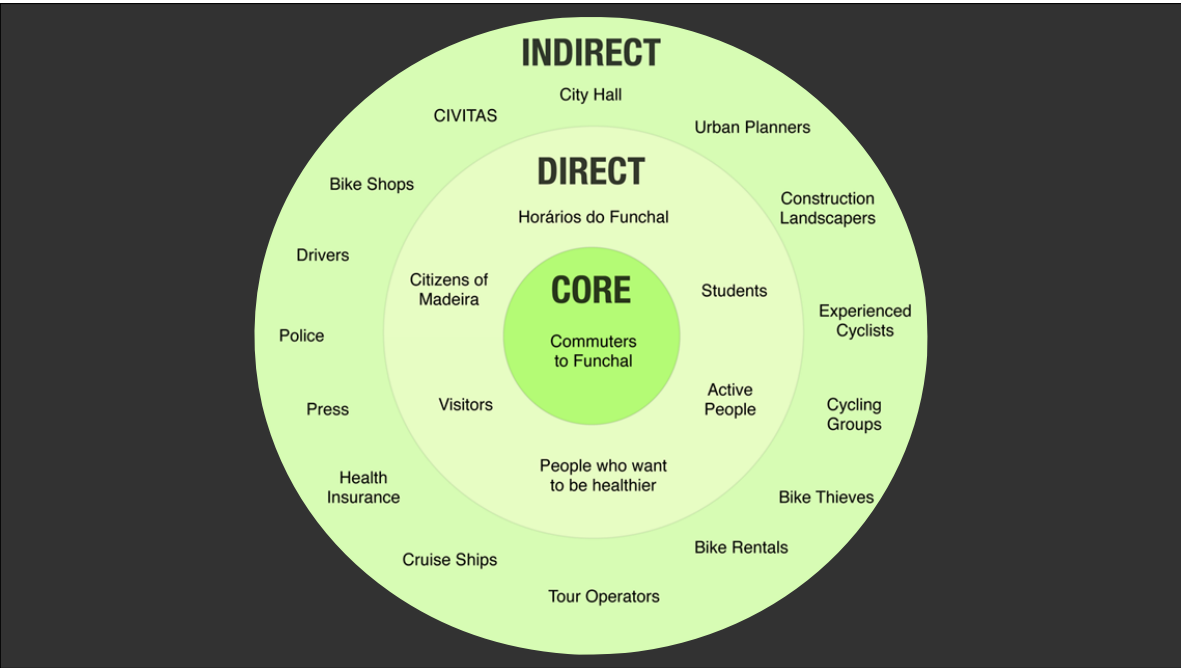
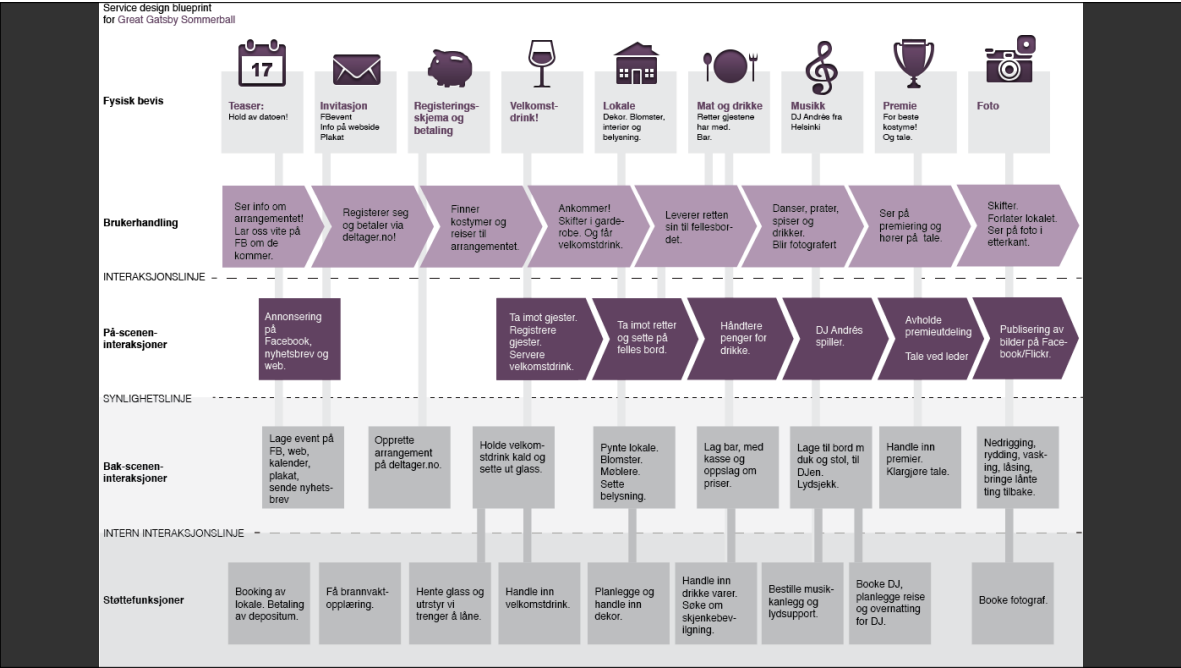
Tools: Wireframes
Site maps
Card sorts
User research

The Chi*Bud Network Visitor Experience & Service Model

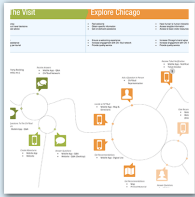
What is the future Chicago visitor experience?

CHOOSE CHICAGO
Dec 2015





Resolution: Organization-wide

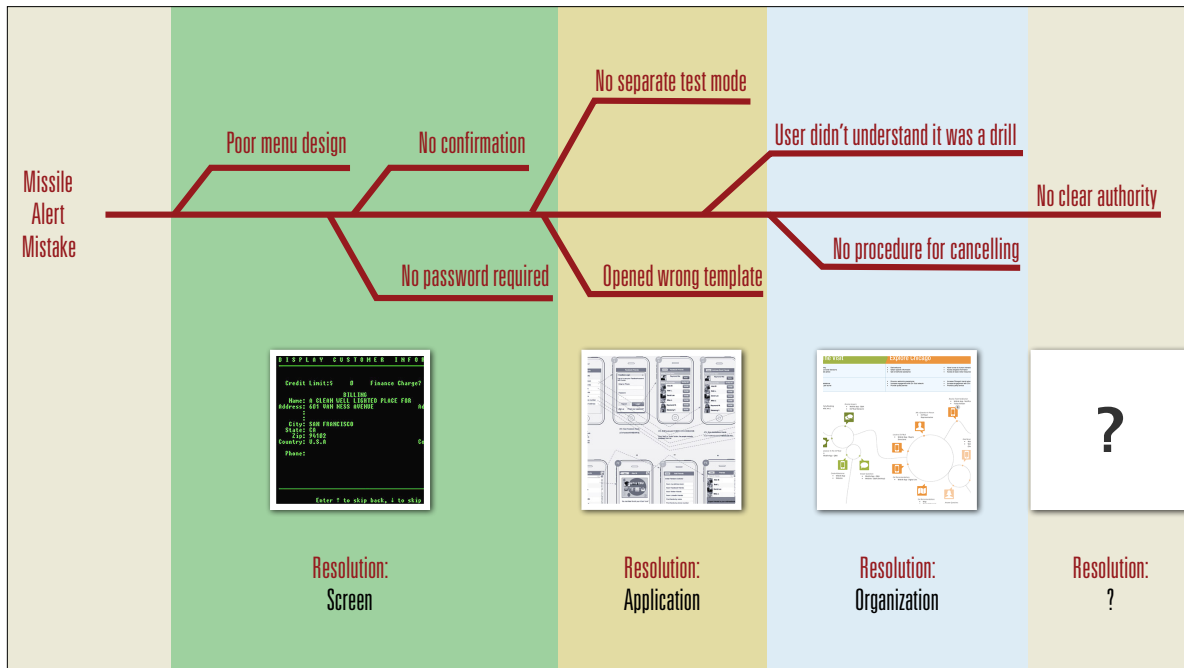


Focus: Service and experience design

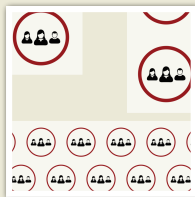
Tools: User journeys
Design systems
Ethnographic research
Design thinking

**I DON'T ALWAYS USE
DESIGN THINKING.**

**BUT WHEN I DO
I PREFER TO DESIGN WITH
MY THOUGHTS.**



Resolution: Ecosystem-wide



Focus: Eco-system design

Tools: ?





When we solve the tough challenges at one resolution, the next higher resolution's challenges that hold us back.

4

The pioneers of a new resolution.

CO.DESIGN

01.06.17 | INNOVATION BY DESIGN

How Ariel Kennan Solves NYC's Most Intractable Design Problems

Kennan, who heads a design and product team for Mayor Bill de Blasio, is bringing service design to the city.



[PHOTO: KISHA BARI]

BY DOREEN LORENZO 6 MINUTE READ



Ariel Kennan is the Director of Design and Product at the Center for Economic Opportunity in New York City Mayor's Office of Operations. She spoke to Doreen Lorenzo as part of Designing Women, a series of interviews with brilliant women in the design industry.

Doreen Lorenzo: Tell me a little bit about your background.

What was your first exposure to design?

Ariel Kennan: I took to design early. My mother is an

Ariel Kennan
NYC Mayor's Office of Opportunity



Traci Walker
US Digital Service



The U.S. Digital Service
The United States Digital Service is a tech startup working across the Federal government to deliver better services to the American people. www.usds.gov
Feb 9, 2017 · 8 min read

Meet the Procurement and Acquisition Experts

By Clair Koroma

Current government buying methods struggle to keep pace with fast-changing technology. This includes how the government purchases tools and services, and how it establishes contracts with vendors of all sizes to build technology. For instance, they often take an all or nothing approach, either meticulously defining every requirement or remaining unhelpfully vague about expected outcomes. On top of that, many contracts focus on *how* the work will be done (i.e. how many people will work on what how often, how they'll report their progress, etc.) instead of *what* they will deliver in the end.

This status quo makes it difficult to:

- Quickly adapt to ensure delivery of working code and products.
- Mandate regular, continuous delivery throughout a contract.
- Introduce new technologies while ensuring high quality and performance.

For all of these reasons, government digital projects often overrun budgets and timelines, and final products either don't work or don't fit the needs of real users. We need to catch up to the private sector by focusing on outcomes, continuous delivery, and products that truly work for end users. The good news is that we can, and we're already making and seeing change.

Dana Chisnell
Harvard Kennedy School of Public Policy



 **HARVARD** Kennedy School
JOHN F. KENNEDY SCHOOL OF GOVERNMENT





Resolution: Ecosystem



Resolution: Organization



Resolution: Application




Resolution: Screen



Pioneers

Simon Wardley

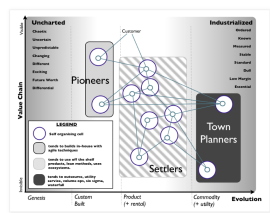


Friday, March 13, 2015

On Pioneers, Settlers, Town Planners and Theft.

I often talk about the use of cell based structures (e.g. think Amazon Two Pizza, Starfish model) which are populated not only with aptitude (the skill to do something) but the right attitude (type of people). A map is an essential part of building such a structure (see figure 1).

Figure 1 - Pioneers, Settlers and Town Planners.



The concept of the first Town Planners is a derivative of Robert A. Cooper's description of companies as Commandos, but the structure was a bit different. It was a bit more like a map of the future.

Pioneers

Pioneers are brilliant people. They are the ones who explore the uncharted land. They show you wonder but they fail a lot. Half the time the thing doesn't work properly. You wouldn't trust what they build. They create "crazy" ideas. Their type of innovation is what we call core research. They make future success possible. Most of the time we look at them and go "what?", "I don't understand?" and "is that magic?". In the past, we often burnt them at the stake. They built the first ever computer (Z3, 1941), the first ever digital computer (ENIAC, 1946), the first ever digital computer (ENIAC, 1946), the first ever digital computer (ENIAC, 1946).

Settlers

Settlers are brilliant people. They are the ones who build the future. They build understanding. They make the possible future actually happen. They turn the prototype into a product, make it manufacturable, listen to customers and turn it profitable. Their innovation is what we tend to think of as applied research and differentiation. They built the first ever computer products (e.g. IBM 650 and onwards), the first generators (Hippolyte Pixii, 1832), the first generators (Hippolyte Pixii, 1832), the first generators (Hippolyte Pixii, 1832).


Town Planners

Town Planners are brilliant people. They are the ones who take it taking advantage of the future. They find ways to make the future a fact. They build the services that pioneers build upon. Their type of innovation is industrial research. They take something that exists and turn it into a commodity or a utility (e.g. with Electricity, then Edison, Tesla and Westinghouse). They are the industrial giants we depend upon.

What you want is brilliant people in each of these roles.

How do you get things going within a company?

Simon Wardley



Pioneers

The explorers of the new resolution.

They create the map of the landscape.

Simon Wardley



Settlers

The first builders in the new resolution.

They craft the initial practices we all use.

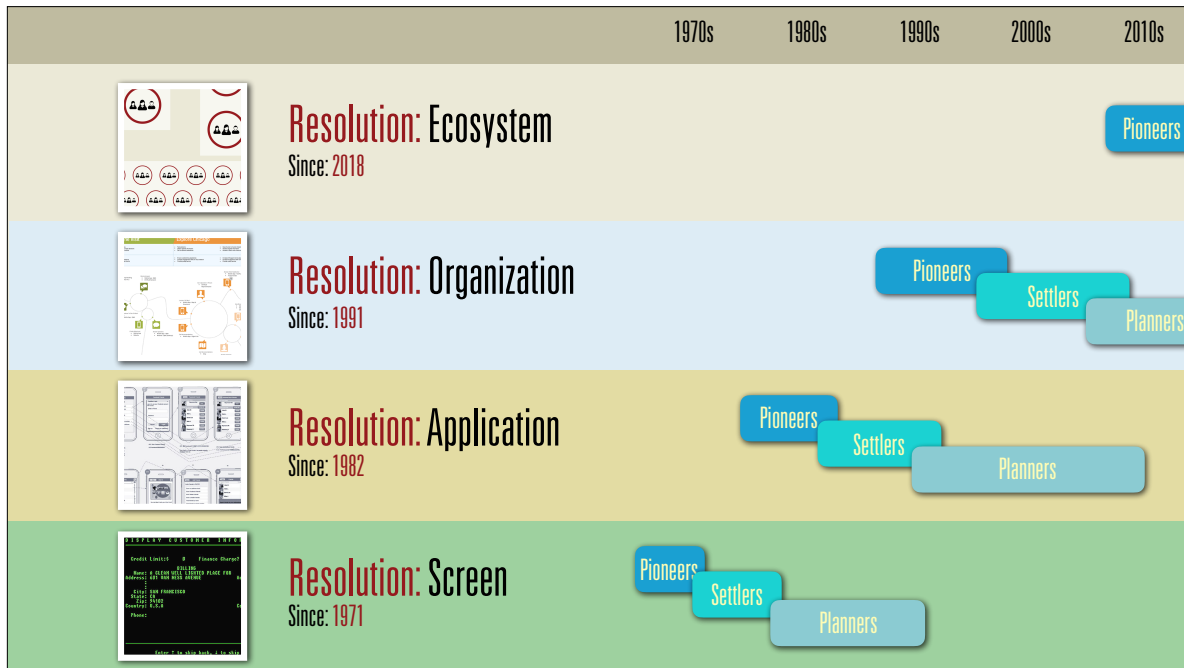
Simon Wardley



Planners

They bring the new resolution to a mass scale.

They build the systems, processes, tools, and practices.



Where will the next
resolution of pioneers,
settlers, and planners
come from?

5

Progress brings
controversy.



Jared Spool
@jmspool

Anyone who influences what the design becomes is the designer.

This includes developers, PMs, even corporate legal. All are the designers.

10:07 AM - 1 Mar 2017



Sarah B. Brooks
@sarahbbrooks

@jmspool You're going to have to start prefacing "everyone is a designer" with a trigger warning.

11:14 AM - 4 Mar 2018



Jared Spool @jmspool · 1 Mar 2017
Anyone who influences what the design becomes is the designer.

This includes developers, PMs, even corporate legal. All are the designers.

103 476 800



Damian
@Damian_Kidd

Replying to @jmspool

So that confirms our worst fears. The clients are actually designers too. Fuck

7:33 AM - 2 Mar 2017

Traci Walker
US Digital Service



The U.S. Digital Service
The United States Digital Service is a tech startup working across the Federal government to deliver better services to the American people. www.usds.gov
Feb 9, 2017 · 8 min read

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Harvard Kennedy School of Public Policy



 **HARVARD** Kennedy School
JOHN F. KENNEDY SCHOOL OF GOVERNMENT



Everyone is a designer.

Not everyone is a good designer.

Everyone can become a better designer.



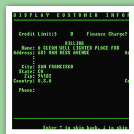
Resolution: Ecosystem



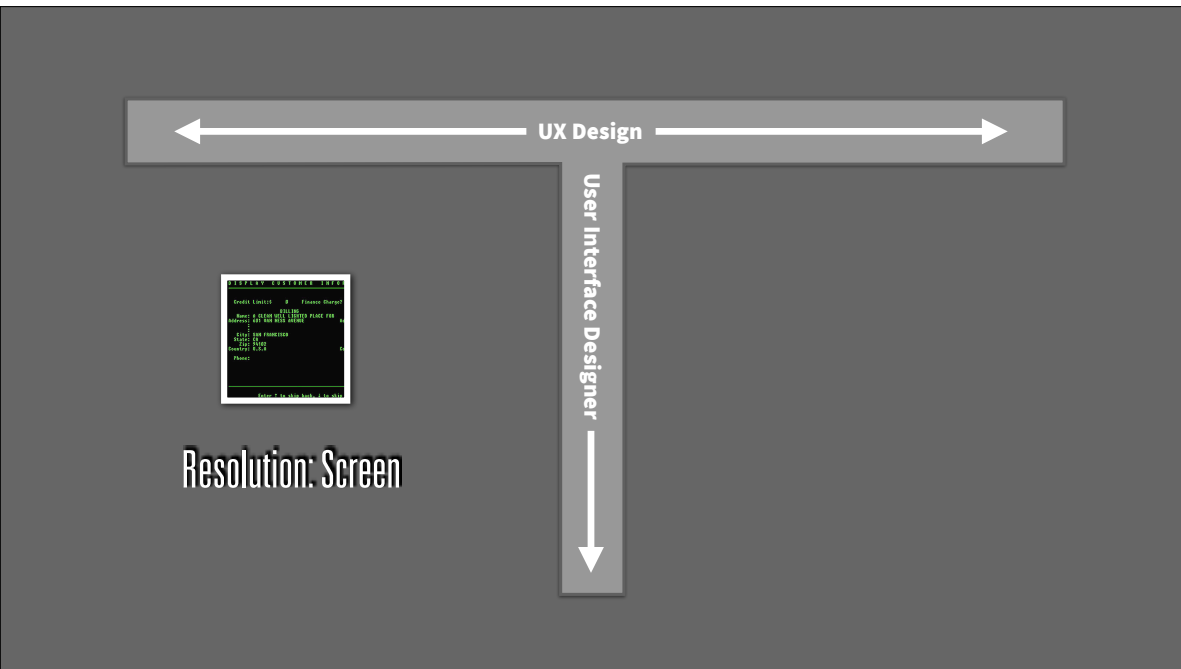
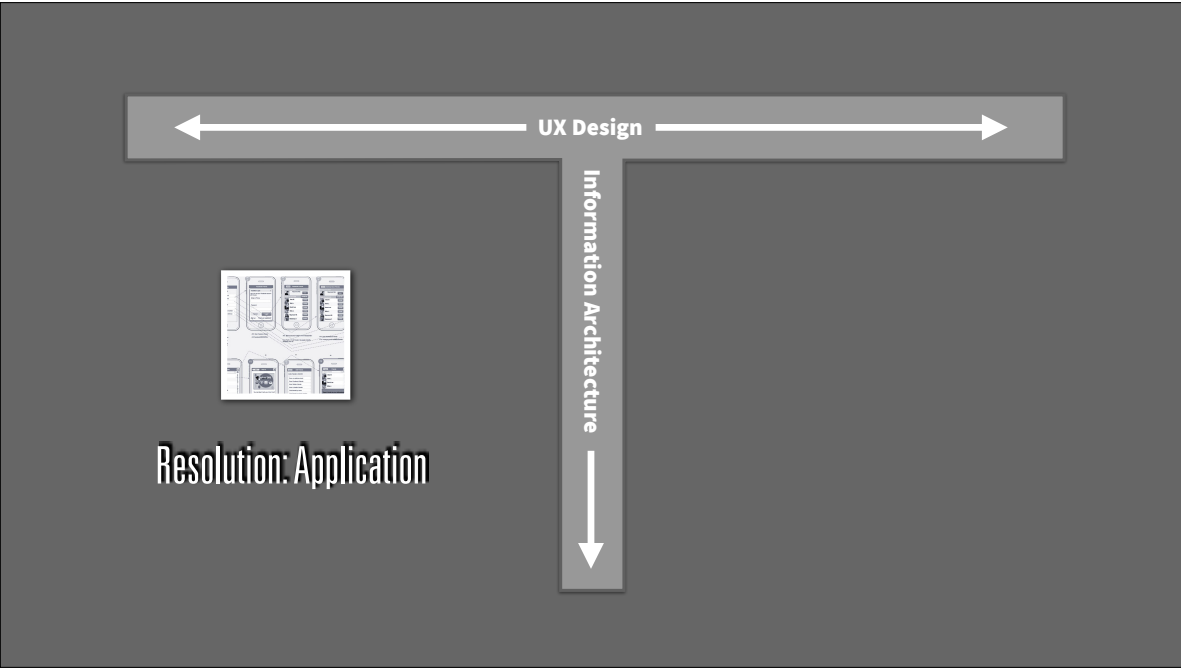
Resolution: Organization

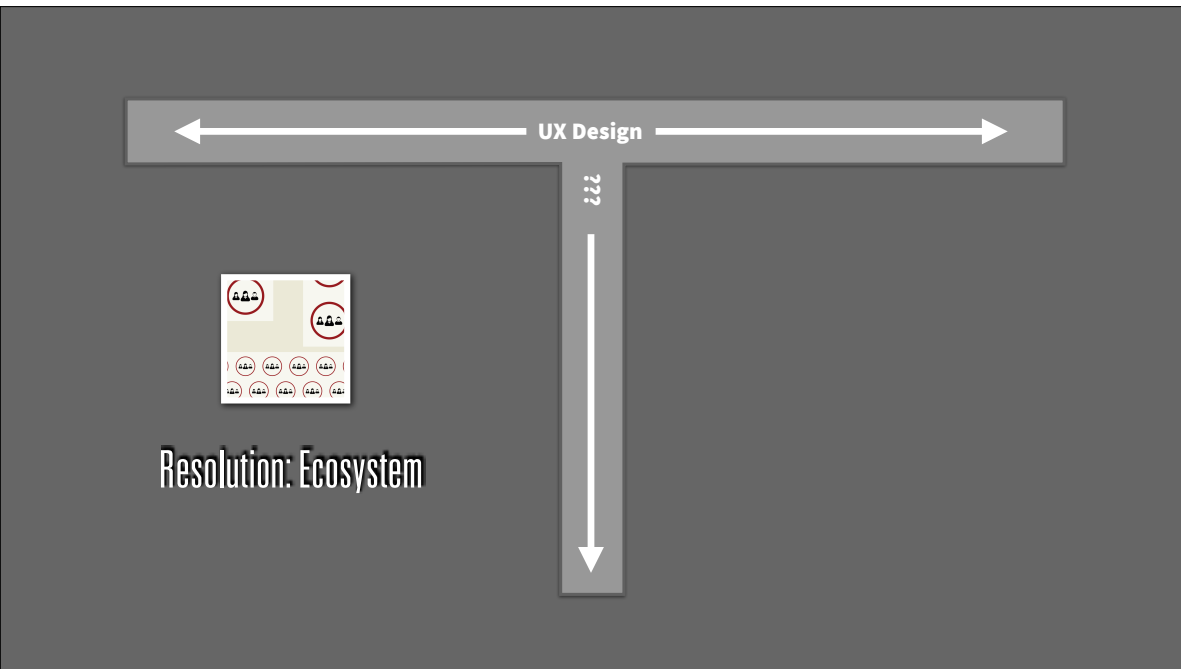
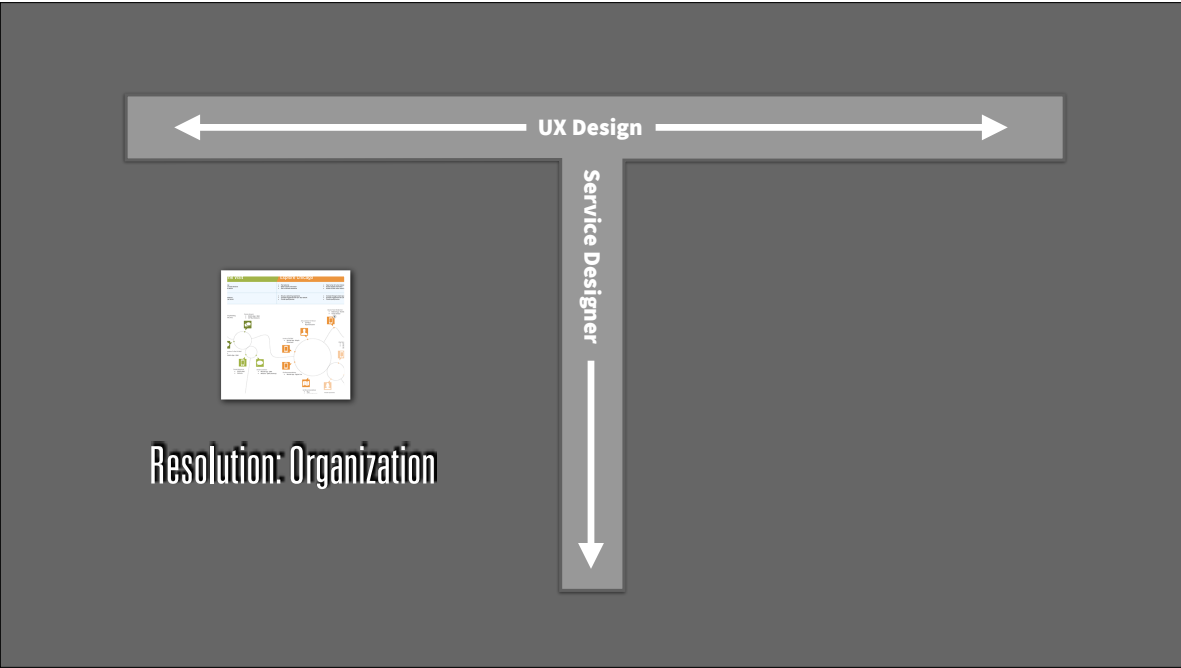


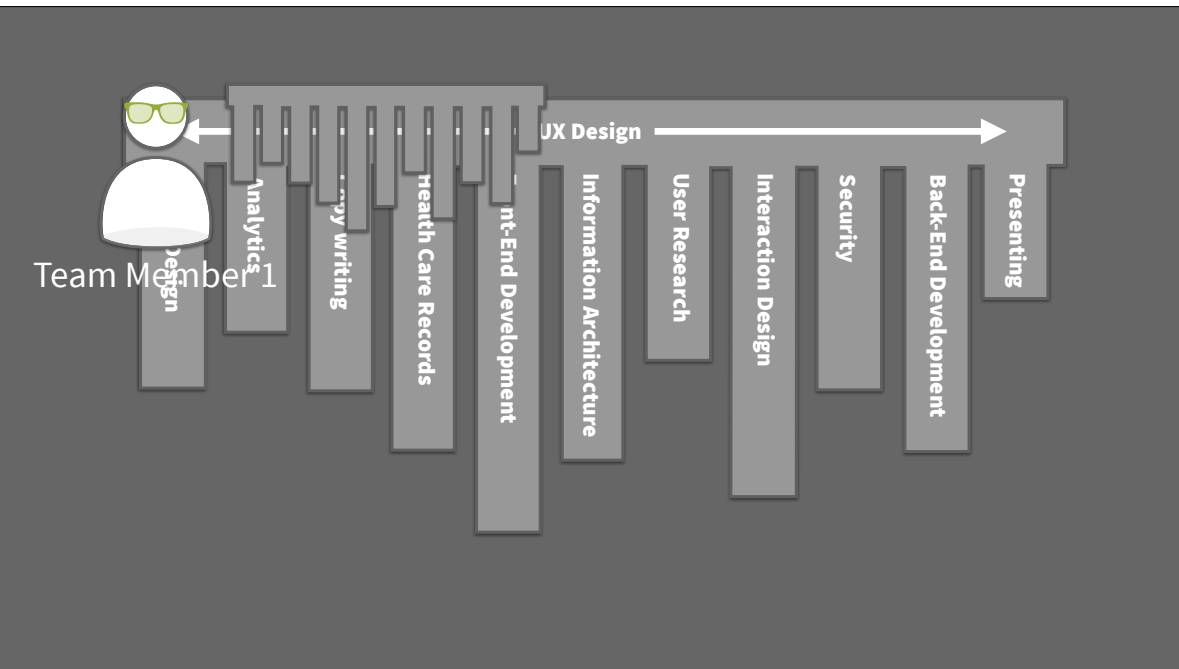
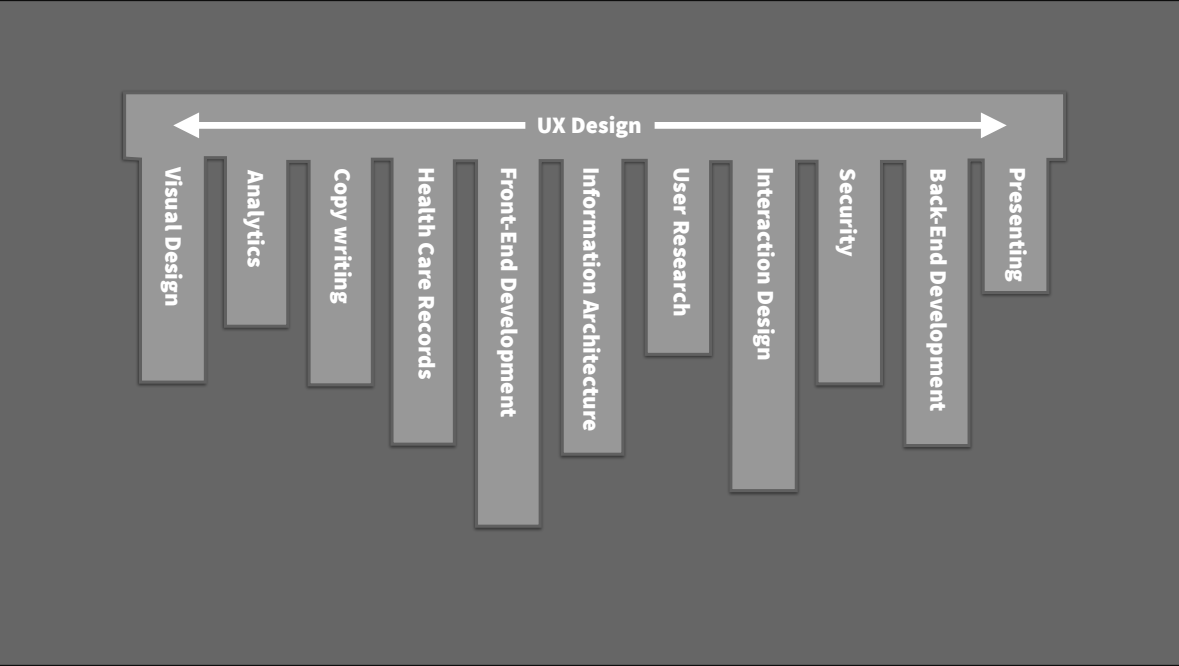
Resolution: Application

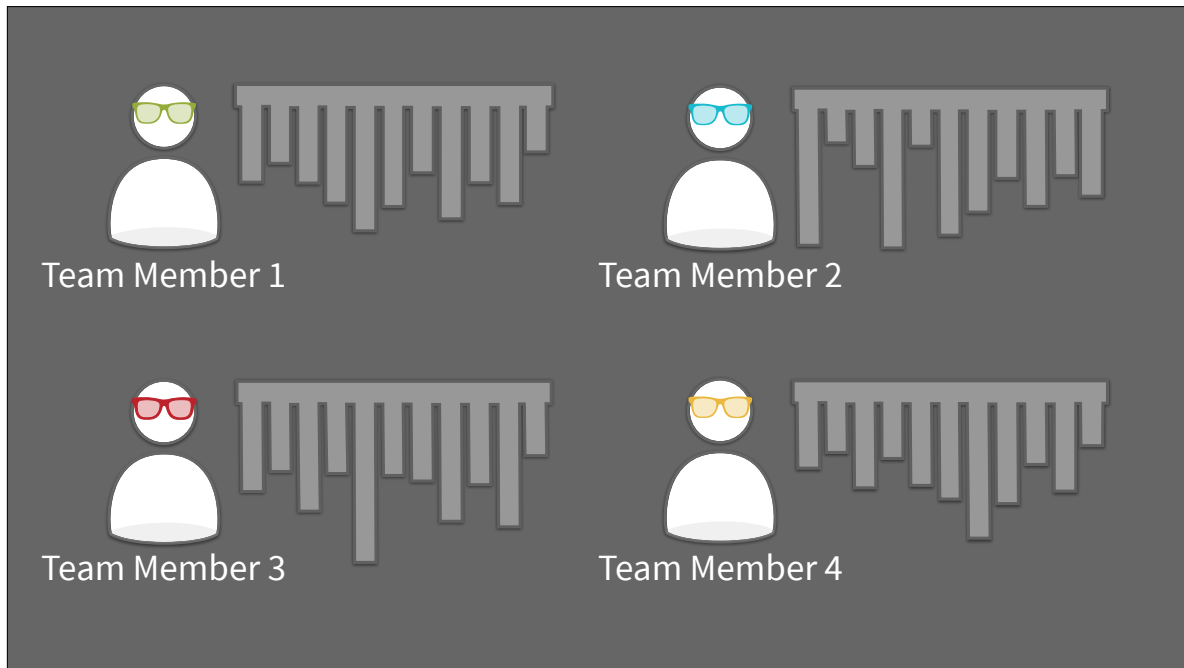


Resolution: Screen









When spanning resolutions,
skills are more important
than roles.



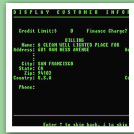
Resolution: Ecosystem



Resolution: Organization



Resolution: Application



Resolution: Screen

We can now zoom out what
we thought the UX design
landscape was.

We must to design a
better world.

The Evolution of a New UX Design Resolution

- ▶ We need to learn how to design across organizational boundaries
 - ▶ We need to understand who determines the intent
- ▶ We solve different problems at every resolution
 - ▶ We need different tools, processes, techniques for each resolution
- ▶ Ecosystem-wide design is the next resolution with challenges to tackle.
 - ▶ We'll need pioneers, settlers, and planners to tackle those challenges.
 - ▶ We need to shift our focus to skills, not roles.
- ▶ It's UX design resolutions all the way down.



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