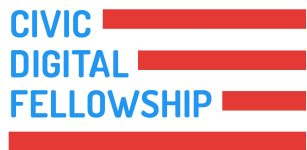


# Modernizing SERP through Human-Centered Design

Servicewide Electronic Research Program

Joshua M. Roberts — Chief, SERP Communications Program



**LAUREN HU**

Rice University

Computer Science & Cognitive Sciences

# What is SERP?

- **Servicewide Electronic Research Program**
  - Provides 70k+ frontline IRS employees intranet access to IRMs and other reference materials
    - Ex: Correspondence Letters, Forms, Publications, Information Alerts, Job Aids
- In the past, SERP has reached 50M+ hits a month, with users executing as many as 500-1000 searches per minute
- Maintained on SERP database using XML, HTML, CSS, and JS

**Goal:** To improve accessibility and UI of SERP's website featuring user-centric design concepts and modern front-end technologies.

Input IRM Number

Go

COVID-19

SERP IRMs

Job Aids

Document 6209

Portals

TTG

e-Guides

IAI

ITLA

SNIP

TCD

Feedback

Contact SERP

IRM Supplements

Who/Where

Forms/Letters/Pubs

Local/Sites/Other

Learning

## Welcome to SERP

Tuesday, June 28, 2022

[Previous News](#)  
[Previous News Finder](#)

## Priority News



## Today's News

(Click the column heading to sort table by that heading.)

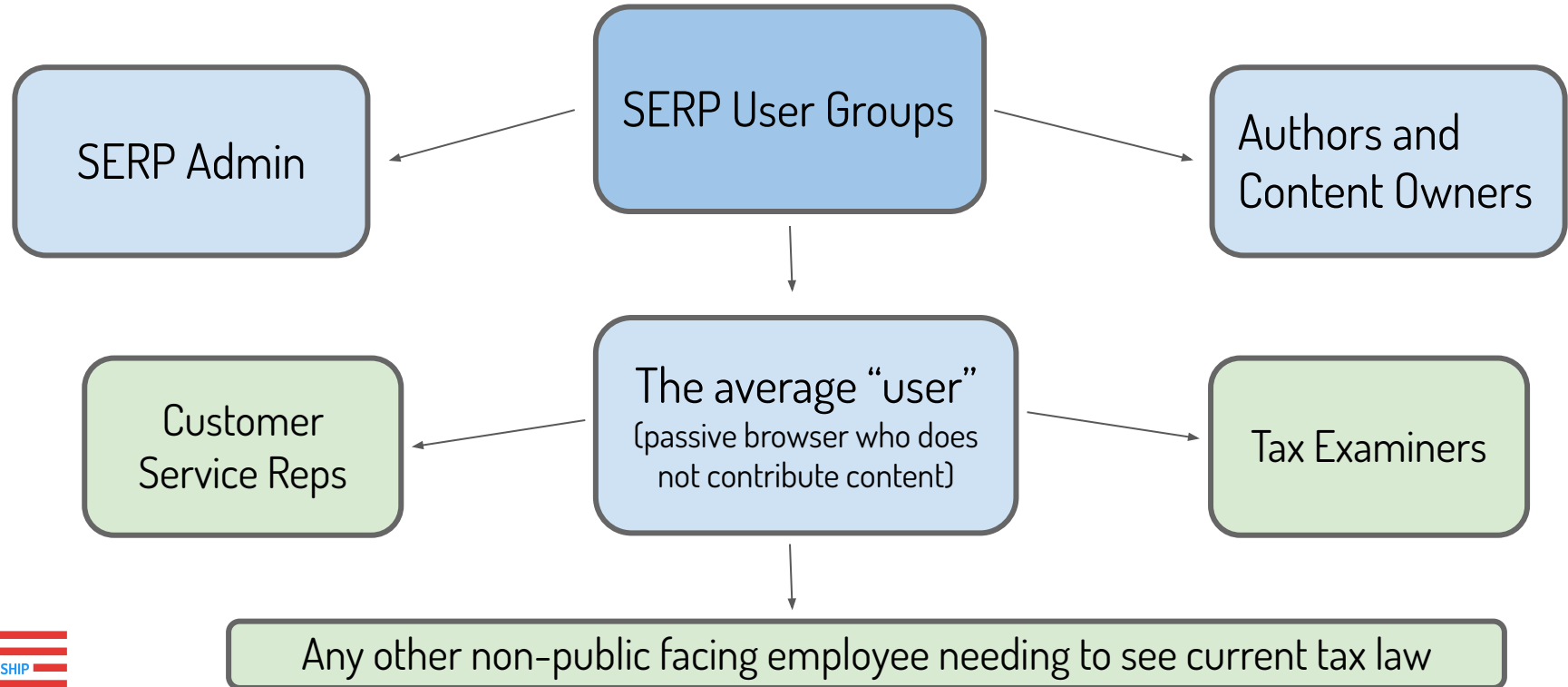
## Alerts and IPU's

Number	Subject	Audience	Master File	IRM Ref

## Audience Abbreviations

AM	C	CA	FC	O	R	SP	T	TA
Accounts Management	Compliance	Care	Field Collection	Other	RICS	Submission Processing	TEGE	TAS

# Who Uses SERP?



# Question Synthesis

As SERP contains very technical and skill-based content, what basic understanding do or should users have and what could be done to increase that if necessary?

What are common pain points for users now and what alternatives exist already or could be used to solve this? If a resource already exists, how can we point users to it effectively?

Are the design changes being made justifiable? How much does the new system resemble the old one and do the changes ultimately add value or bring about confusion?

# Research and Comparative Analysis

**Getting started**

- Introduction
- Download
- Contents
- Browsers & devices
- JavaScript
- Webpack
- Parcel
- Vite
- Accessibility
- RFS
- RTL
- Contribute

**Customize**

- Overview
- Sass
- Options
- Color
- Components
- CSS variables

## Get started with Bootstrap

Bootstrap is a powerful, feature-packed frontend toolkit. Build anything—from prototype to production—in minutes.

### Quick start #

Get started by including Bootstrap's production-ready CSS and JavaScript via CDN without the need for any build steps. See it in practice with this [Bootstrap CodePen demo](#).

1. Create a new `index.html` file in your project root. Include the `<meta name="viewport">` tag as well for [proper responsive behavior](#) in mobile devices.

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Bootstrap demo</title>
  </head>
  <body>
    <h1>Hello, world!</h1>
  </body>
```

## Human Interface Guidelines

The HIG contains guidance and best practices that can help you design a great experience for any Apple platform.

### Featured

- Platforms: Designing for iPadOS
- Foundations: Inclusion
- Platforms: Onboarding

Search

Only search within "Human Interface Guidelines"

QUICK LINKS

- iOS 16
- Latest News
- xcode
- What's included in Xcode
- What's new in SwiftUI

### Featured

- Platforms: Designing for iPadOS
- Foundations: Inclusion
- Platforms: Onboarding

# Wireframing / Planning

## STYLE GUIDE

### COLORS

#### LIGHT



#### DARK



#### BOTH



### TITLES

#### SERP

Welcome to SERP

Heading 1

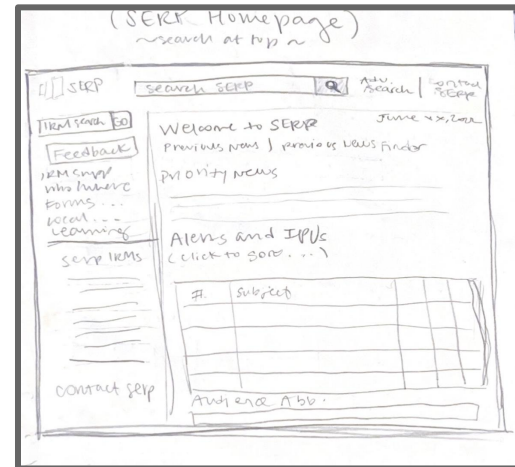
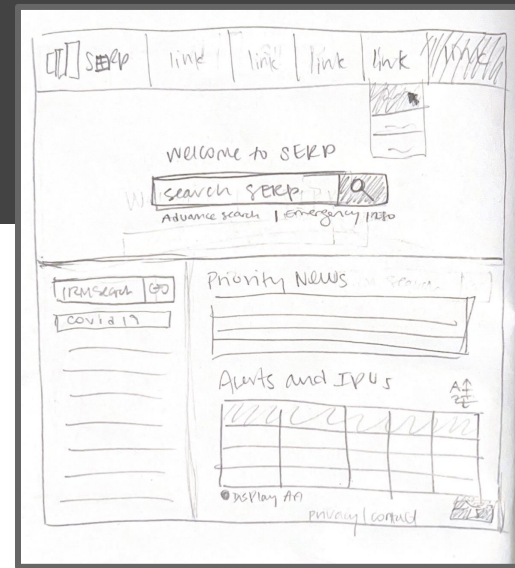
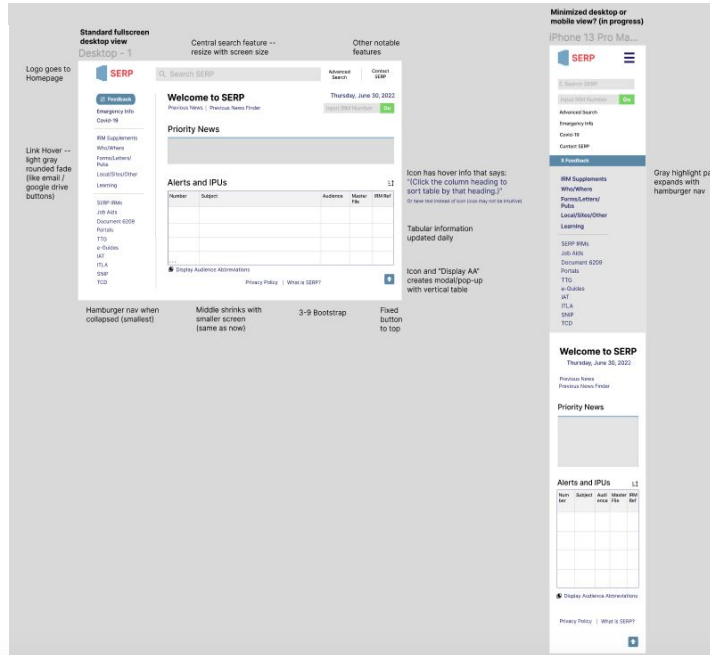
Heading 2

Links

Links

Descriptions


### BUTTONS / ICONS

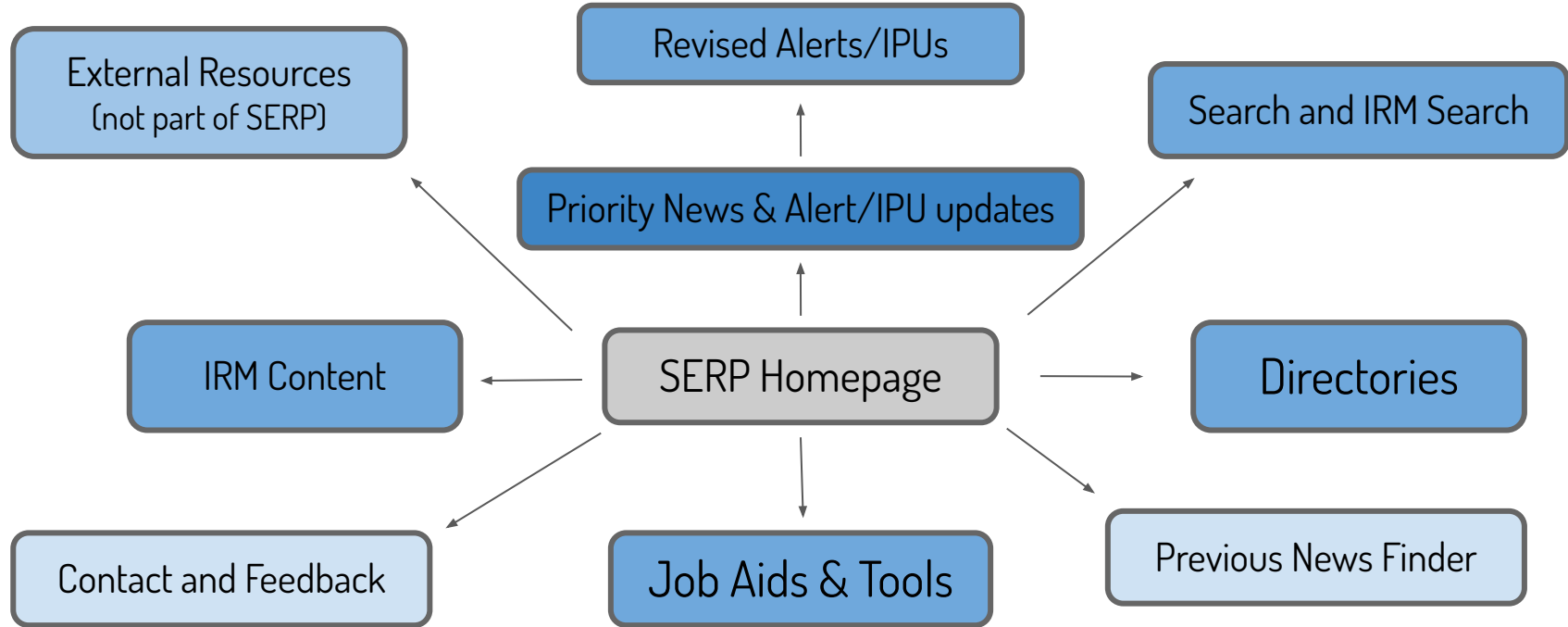


Sketched by hand & Wireframed using Figma

# High-level Site Map Focus

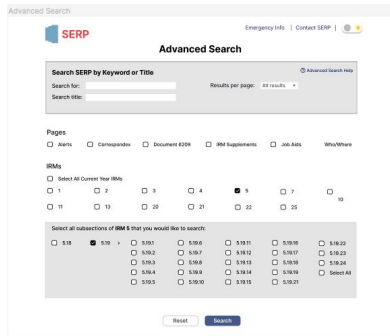
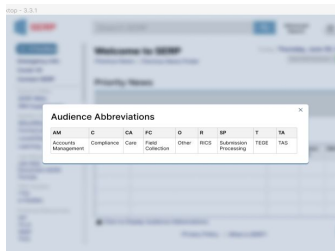
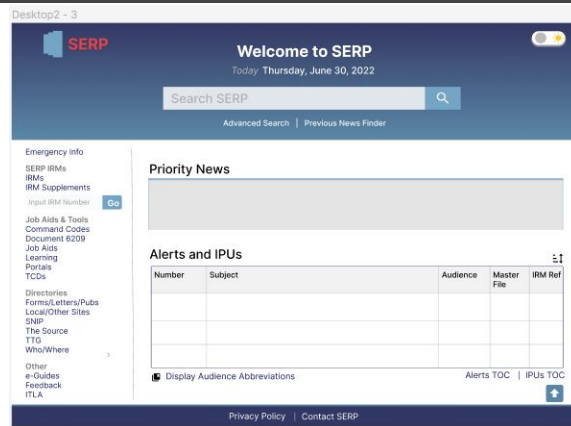
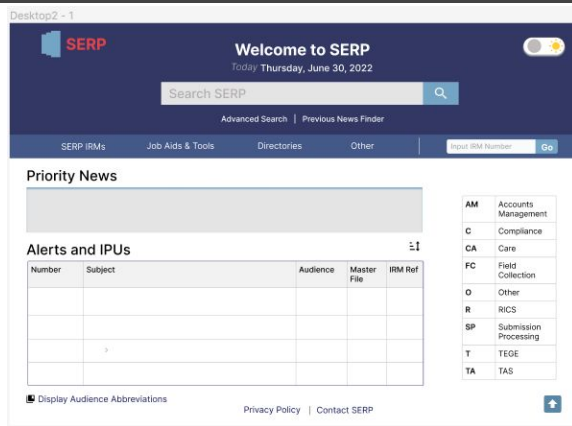
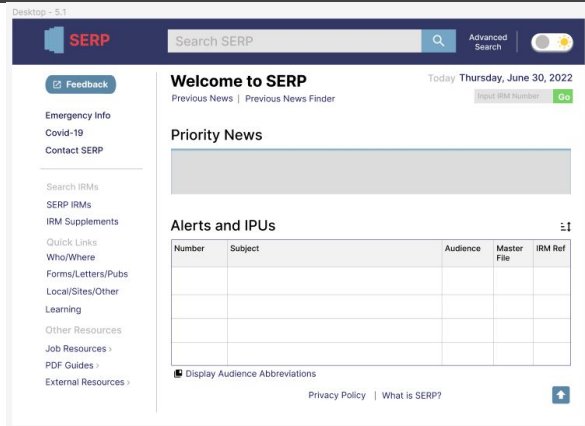
Prevalence of information on page  
from a user perspective

least prevalent  most prevalent

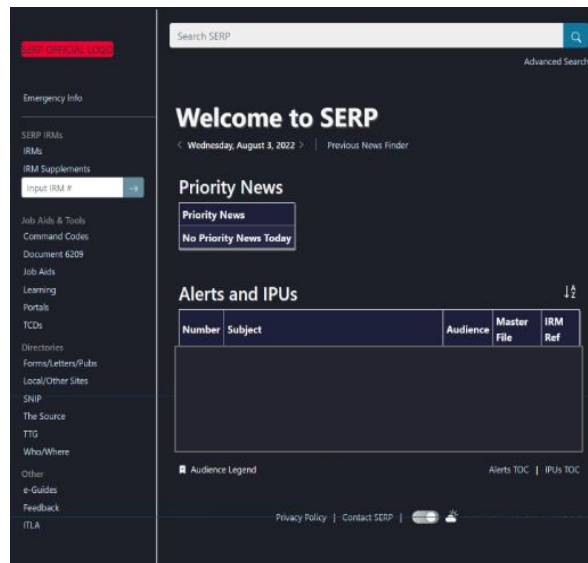
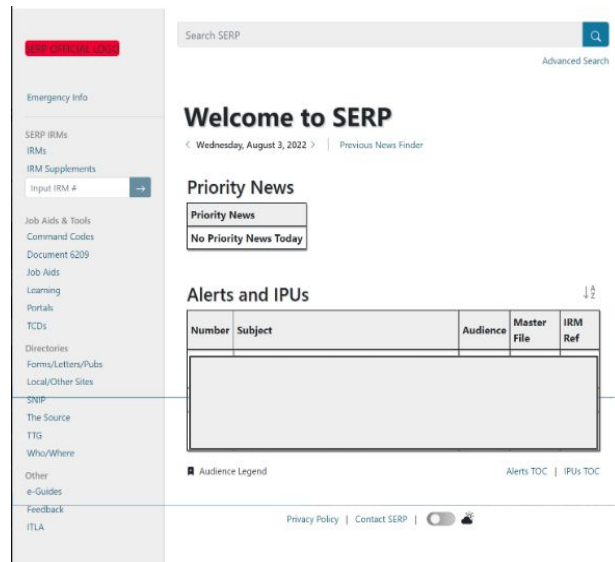




# Prototyping



# Iterating



Developed locally using Visual Studio Code

Consolidated  
navbar

Clearer link  
groupings

Responsive  
design

Color  
contrast

SERP OFFICIAL LOGO

Emergency Info

SERP IRMs

IRMs

IRM Supplements

Input IRM #



Job Aids & Tools

Command Codes

Document 6209

Job Aids

Learning

Portals

TCDs

Directories

Forms/Letters/Pubs

Local/Other Sites

SNIP

The Source

TTG

Who/Where

Other

e-Guides

Feedback

ITLA

Search SERP



Advanced Search

## Welcome to SERP

< Wednesday, August 3, 2022 >

Previous News Finder

### Priority News

Priority News

No Priority News Today

### Alerts and IPU's



Number	Subject	Audience	Master File	IRM Ref

Audience Legend

Alerts TOC | IPU's TOC

Centralized  
search feature

Simplified  
navigation of  
misc. links

Audience abb.  
modal on click  
& sort tool tip  
on hover

New light /  
dark mode

# Accomplishments Along the Way

**SCP Clubhouse**

## Feedback • Feedback Documentation

+ new document or drag files here

All Documents Explorer View Find a file

✓	Name	Modified	Modified By	Checked Out To
	ContentReport Emails	July 15	Hu Lauren S (Contractor)	
	ContentReport SQL	July 15	Hu Lauren S (Contractor)	
	FeedbackForm Emails	July 15	Hu Lauren S (Contractor)	
	FeedbackForm SQL	July 15	Hu Lauren S (Contractor)	
	FeedbackInbox Emails	July 15	Hu Lauren S (Contractor)	
	FeedbackInbox SQL	July 15	Hu Lauren S (Contractor)	
	FeedbackOwner Emails	July 15	Hu Lauren S (Contractor)	
	FeedbackOwner SQL	July 15	Hu Lauren S (Contractor)	
	FeedbackPortal Emails	July 15	Hu Lauren S (Contractor)	
	FeedbackPortal SQL	July 15	Hu Lauren S (Contractor)	

Count=0

SRP Dailies Training Revised 062722.docx 68 KB

IPUs.xlsm 56 KB

Chapter	Title	Lesson Time (hours)
1	<a href="#">Introduction to SERP Dailies Processing</a>	
2	<a href="#">Tools Used to Work IPUs and Alerts</a>	
3	<a href="#">Processing IPUs</a>	
4	<a href="#">Processing Alerts</a>	
5	<a href="#">Finalizing SERP Daily Processing</a>	
6	<a href="#">Working SERP Inbox Requests</a>	
7	<a href="#">Working SERP Dailies Review</a>	
8	<a href="#">Annual Processes Impacting SERP Dailies</a>	

```
File Edit Selection View Go Run Terminal Help dark-mode.js - VS Code Test - Visual Studio C...
homepage_test.html JS dark-mode.js test.css test-dark.css
Homepage > htdocs > resources > jquery > JS dark-mode.js > eventsListener > document.addEventListener('DOMConte
1 const modeSelector = document.querySelector('.mode');
2 const theme = document.querySelector('#change-theme');
3 let themeDark = true;
4
5 eventsListener();
6
7 function eventsListener() {
8   document.addEventListener('DOMContentLoaded', () => {
9     changeThemeLocalStorage();
10   });
11   modeSelector.addEventListener('click', changeMode);
12 }
13
14 function changeMode() {
15   if (themeDark) {
16     theme.href = "/C:/Users/7dsvb/Documents/Lauren's%20Work/VS%20Code%20Test
17     modeSelector.classList.remove('mode--right')
18   }
19   else {
20     theme.href = "/C:/Users/7dsvb/Documents/Lauren's%20Work/VS%20Code%20Test
21     modeSelector.classList.add('mode--right');
22   }
23   saveThemeLocalStorage(theme.href);
24   themeDark = !themeDark;
25 }
26
27 function saveThemeLocalStorage(theme) {
28   localStorage.setItem('themeSocial', theme)
29 }
30
```

# What's Next?

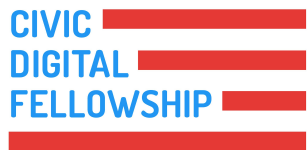
- Debug on live server
- Identify a variety of users to interview to further flush out user personas
- Test design with users to collect and analyze feedback
  - Formulate detailed questions and metrics to test upon
- Present mockups to IT for implementation

# Takeaways

1. Designing is for nobody and everybody at the same time.
2. More work doesn't always equal more value.
3. There is a need and space for design in government.

# THANK YOU!

To Coding It Forward, the IRS, NextGen, and everyone at  
SERP who made this experience unforgettable



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