

DIGITAL WEB Services Network

Bringing together digital product managers, designers, and engineers.

cdt.ca.gov/dwsn

DWSN Quarterly Forum

Thursday, April 18, 2024



California DEPARTMENT OF TECHNOLOGY STRATEGY INNOVATION DELIVERY



Digital Web Services Network

- Welcome to the DWSN forum, we will begin shortly.
- For the best experience, please use your computer to join the meeting.
- Mute your audio.
- Turn off your video.
- Use the raise hand button or the meeting chat for comments and questions.



Opening Remarks

Koji Kumpulainien

State Web Services Manager California Department of Technology





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DWSN Forum Agenda

Opening Remarks	
State Web Template / Design System updates	
Artificial Intelligence Community (AIC)	Katie Regan (10 minutes)
CalData	Britt Allen (10 minutes)
Accessibility	Linda Tracy (10 minutes)
Metadata, Open Graph and government websites	Luke Fretwell/ Elias Fretwell (25 minutes)
Suggested Future Topics / Closing Remarks	



State Web Template / Design System updates

Artem Khomishen

Web Development Manager California Department of Technology



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Web Template Updates

Latest release Web template v6.3.1

- Mobile navigation accessibility improvements
- Updated Google font delivery methods including a system-ui font fallback
- Continuing integration into <u>CAWeb</u> <u>publishing</u> (WordPress)

State Web Template Website



Eureka CA's Design System



What we've been working on (1 of 2)

Responsive cards using just html and CSS Fluid typography based on ratios and clamping Global navigation variations to meet the needs of websites of all sizes

Global header design to allow for better continuity across ca.gov websites while maintaining state entity branding

New themes with color palette variables that can be updated and customized more easily and globally

New patterns and components for marketing and special initiative type websites

Design

What we've been working on (2 of 2)

Reducing JavaScript Dependency by using pure HTML/CSS solutions for navigation menus enhancing performance and simplifies maintenance.

Improving Accessibility by incorporating appropriate "ARIA-" tags into the base markup to enhance the semantic meaning of elements.

Improving usability by reducing reliance on visual cues and designing menus that can be easily navigated using keyboard tabs.

Enhancing navigation by using the browser's ability to track tab selections allowing us to create menus that expand and contract seamlessly.

Building in portability by leveraging Shadow DOM to encapsulate style and markup in web components.

<dev>

Up next...

Exploring pilot partnerships for website redesigns or specific component use cases

Continuing to design and build a foundational set of components and patterns towards a beta/v1

Facilitating more community engagement and feedback opportunities

designsystem@state.ca.gov



Statewide Analytics

Blaine Wasylkiw

Deputy Chief Technology Innovation Officer California Department of Technology



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Universal Analytics: July 1st Sunset Date

- Google's Universal Analytics going away July 1st
- Must be replaced with Google Analytics 4 (GA4) tags before that date

- To request a GA4 account/property that is managed by CDT, reach out to us at <u>analytics@state.ca.gov</u>
- For more info, visit <u>https://webstandards.ca.gov/analytics/</u>

Google Analytics



CA Department of Technology

Al Community

Katie Regan

State Data Services Manager California Department of Technology

AIC Objectives

- 1. Demonstrate how leveraging Al technologies can improve the delivery of digital services.
- 2. Promote responsible and ethical use of AI.
- 3. Provide a coordinated and collaborative approach for implementing Al technologies.
- 4. Develop and increase the AI knowledge base and skill set of state professionals.
- 5. Support the creation and implementation of deliverables from Governor Newsom's Executive Order N-12-23.





AIC Scope

- 1. Examine use cases across departments from EO N-12-23.
- 2. Test technology training methods and resources and offer feedback.
- 3. Encourage participation in statewide Al initiatives.
- 4. Communicate AI developments from/to individual State entities.
- 5. Feature academic, non-profit, and industry partners as speakers to learn more from AI experts.





Register for the Next AIC

Thursday, May 9 from 2:30 – 4:00 Speakers:

- Renoir Pope Overview of the new GenAl Guidelines
- Dr. Lauren Sanders Overview of current Al uses at NASA and a look ahead to opportunities for using GenAl



Attend the AIC

- AIC meetings will be held every other month
- Attendees will need to register for each
 - upcoming meeting
- Subscribe to the AIC listserv using the QR code for future meeting invitations





We want your feedback!

Use the QR code to submit your response to the AI Community

survey



Accepting responses through April 19, end of business





CalData

Britt Allen Role Department



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Background

Office of Data and Innovation $Meet \ ODI$

ODI works toward a state government that is:

- Modern
- Effective
- Provides exceptional customer service to all Californians

We serve other state departments by helping them improve tools and processes with:

- User research
- Human-centered design
- Data read the strategy we are delivering: <u>bit.ly/california-data-strategy</u>
- Analytics



Background Data service offerings



Data Science Accelerator

Solve challenges using advanced statistical techniques

You bring us a problem that needs data science, and we work together to do the analysis and find a service change



Modern Data Stack Accelerator

Build your data house with modern tools, practices, and patterns

You bring us a data integration problem, and we help your team develop a solution using a modern cloud-based data stack



Data Science Accelerator

Data Science Accelerator

Data Science Accelerator overview

Data Science

Applying advanced statistical tools to existing data to generate new insights

Service Change

Converting new data insights into (often small) changes to state processes

Smarter Work

More efficient, effective, and equitable use of resources More sustainable and safer practices Enables data-driven decision making Data Science Accelerator What problems can be solved?



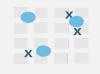
Find the needle in the haystack



Prioritize your backlog



Flag "stuff" early

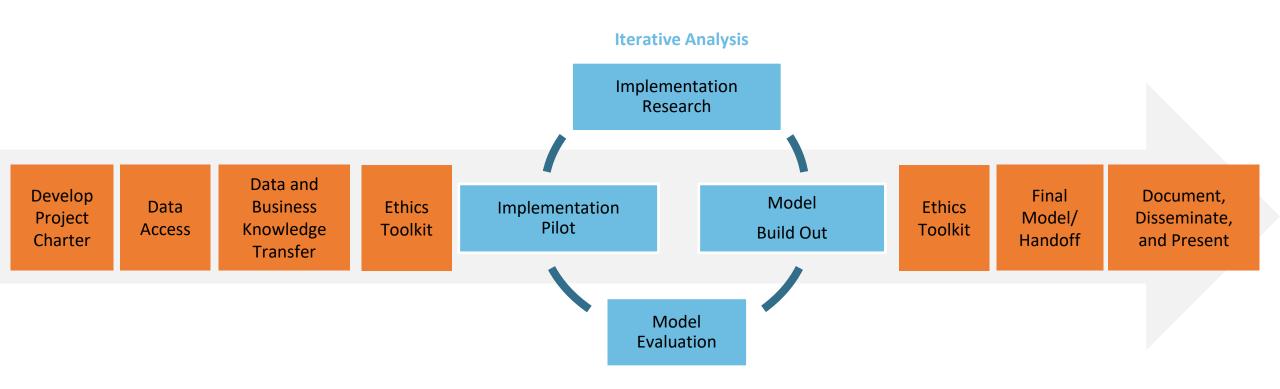


Optimize your resources



Forecast for effective planning

Data Science Accelerator Typical project workflow



Data Science Accelerator

Document, disseminate, and present

Con Official website of the State of Cal	ifornia
State of California Innovation Hub	
How to use the Hub Human	-centered design \vee Content design \vee Data \vee Product management \vee
CA.gov / Innovation Hub / Data	/ Foncesting community water system outages
On this page	S Papers
Problem statement	Forecasting community water
Our approach	system outages
Impact	Monica G. Bobra 📀. Dan Wang, Hung Bui, Esa Eslami, Kimberly Hicks, Eric Züñiga, Arman Madani
Recommendations	We forecasted the impact of drought on community water systems.
References	we relecasted the impact of drought on community water systems.
Code	ی Download PDF P https://zenodo.org/doi/10.5281/zenodo.30832962
Authors	

Problem statement

The Division of Drinking Water (DDW) monitors 2866 community water systems across California. Every yeas, a small fraction of these water systems run out of water. This causes a major public health emergency for the communities served by these systems. In some cases, communities run out of water and the DDW provides funding for deliveries of bottled or hauled water.

With a few months of advance notice about which communities might face problems, the DOW could investigate and mitigate subset beforehand as well as preposition resources. This motivated the DDW to take a preactive approach by developing a model to forecast drought impacted water systems, in early 2022; the model identification of the outer systems likely to run into an issue. But investigating all 50 bater systems would take too many resources, while investigating less may potentially miss problematic systems. So DDW approached 00 to improve and streamilton the modeling process.

Our approach

Data

Forecasting the impact of drought on community water systems requires modeling three processes. One, an infrastructure process that describes the flow of water throughout the network of water systems in California. You, a physical process that describes the flow of groundwater, through notes and soil and the flow of surface water through streams, rhvers, and reservoirs. Three, readily available drought indicators that summarize regional drought stress over time.

To capture elements of these processes, we used three categories of data. One categories describes how interconnected the water youthen is to other northy water systems. Researchers show that many systems fail because blay relay on only one source of water Multin-2020. Another category of data describes the location, long with characteristics of surface water watershods and ground water basins, of each water system related to the hydrology or movement of water above and balow ground. Finally, we used a Drought Searity and Coverage load within Els. Drought hourts statuse on a weekly basis using a scale from zero to 500 for any county, summarizing drought searity and coverage ower time through a weighted to use opposed.

Our dataset describes 2866 water systems over two years, from 2021 to 2023. We use filteren features and one outcome to describe acie hystems Auto community water systems in our sample, 90%, ware realisent to drought. Four percent experienced some effects: these systems rand out waters, sustained themselves on bottled or haude water, experienced a drought violation, or requested continued use of a source that was legally waters.

Consists of:

- Write up of project in case study and blog post
- Client department and ODI comms approval

Your role:

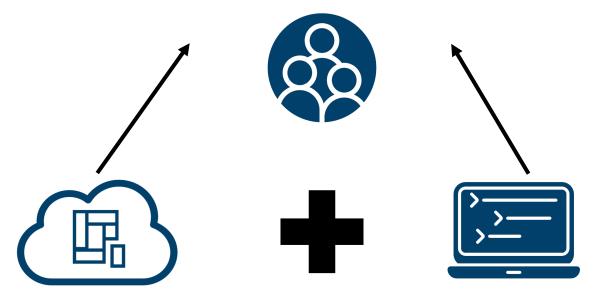
- Provide feedback/edits on write ups and/or slide deck
- Accelerator Demo Day presentation



Modern Data Stack Accelerator What is it?



Compelling business problem



Modular cloud data platforms

Data and analytics engineering best practices

Expected outcomes

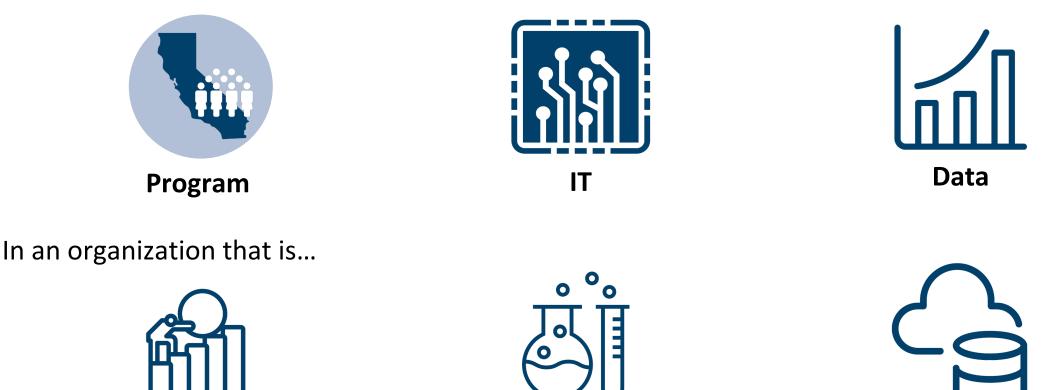
Improved capacity and staff development

Analysis-ready datasets tied to a business problem

Documented architectural patterns for your organization's use

Pathway and plan to go from demonstration project to production in your organization Modern Data Stack Accelerator Who is this for?

A partnership among an organization's...



Struggling to develop trustworthy sources of data

Open to trying new things and consciously experimenting

Interested in or already invested in a cloud data warehouse

Modern Data Stack Accelerator

What problems can the MDSA solve?



Combining multiple datasets efficiently and automatically for analysis and reporting



Automating manual data quality efforts for high visibility analyses or reporting

Moving, querying, and analyzing large datasets



Assessing or trying new data tools before making an investment

Modern Data Stack Accelerator What should I expect?



Modern Data Stack Accelerator

Document, disseminate, and present

Cov Official website of the State of Califi	Calls Official website of the State of California		
State of California Innovation Hub			
How to use the Hub Human-c	entered design × Content design × Data × Product management ×		
CA.gov / Innovation Hub / Data /	Forecasting community water system outages		
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Authors			

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5. Next steps

Office of Data and Innovation Your next steps

Review our presentation recordings

• <u>docs.data.ca.gov/odi-data-services-dif/presentation-recordings</u>

Sign up for an office hour session with us the week of 4/22*

• <u>bit.ly/odi-data-office-hours</u>

Questions? Email us at

• <u>dif@innovation.ca.gov</u>





Linda Tracy

Senior Digital Accessibility Specialist California Department of Technology





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Web Content Accessibility Guidelines (WCAG) 2.2

What's new with WCAG 2.2 ?

- WCAG 2.2 includes 9 additional success criteria
 - For state agencies 6 additional success criteria that are conformance level A or AA
- WCAG 2.2 has removed 1 success criteria

6 Additional Success Criteria (1/2)

Guideline 2.4 Navigable

• 2.4.1 Focus Not Obscured (Minimum) (AA)

Guideline 2.5 Input Modalities

- 2.5.7 Dragging Movements (AA)
- 2.5.8 Target Size (Minimum) (AA)

6 Additional Success Criteria (2/2)

Guideline 3.2 Predictable

• 3.2.6 Consistent Help (A)

Guideline 3.3 Input Assistance

- 3.3.7 Redundant Entry (A)
- 3.3.8 Accessible Authentication (Minimum) (AA)

Removed Success Criteria

Guideline 4.1 Compatible

• 4.1.1 Parsing (Obsolete and removed)

World Wide Web Consortium Resources

- Web Content Accessibility Guidelines (WCAG) 2.2
- What's New in WCAG 2.2
- WCAG 2 FAQ How and why is success criteria 4.1.1 Parsing obsolete?

Policy Updates

Current Accessibility Policy

We are working on updating:

- <u>State Administrative Manual (SAM) 4833: Information Technology</u>
 <u>Accessibility Policy</u>
- <u>SAM 4833.1: Exceptions to Accessibility</u>
- <u>Statewide Information Management Manual (SIMM) 25A:</u>
 <u>Information Technology Accessibility Resource Guide</u>



Metadata and government websites

Luke Fretwell Elias Fretwell Civic Hacking Agency





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Metadata and government websites

How we got here (and where we're going)

- Elias/Luke began civic hacking together (<u>Civic Hacking Agency</u>) during COVID.
- 2. Built 'gov metadata' project.
- 3. Expanded to URL, sitemap, robots (now <u>ScanGov</u>).
- 4. Future developments include schema, accessibility, sustainability, etc.

State of government web metadata

STATESCOOP AISCOOP FEDSCOOP DEFENSESCOOP CYBERSCOOP EDSCOOP	Advertise Q Search	
STATESCOOP Topics V Special Reports Events Podcasts Videos Insights St	FEDSCOOP AISCOOP DEFENSESCOOP CYBERSCOOP STATESCOOP EDSCOOP	Advertise Q Search
STATE	FEDSCOOP Topics V Special Reports V Events Podcasts Videos Insights Fe	dScoop 50 ⊠ SUBSCRIBE
State governments average 'F' grade on website- metadata tracker	TECH	
A new online tracker for government websites reveals that most state websites fail to provide basic metadata for their users. BY <u>KEELY QUINLAN</u> - FEBRUARY 14, 2024	On some basic metadata practices, US government gets an 'F,' per new online tracker	More Like This
	While OMB acknowledged issues raised by the Civic Hacking Agency's gov metadata project, there are also real signs of progress. BY <u>REBECCA HEILWEIL</u> - FEBRUARY 8, 2024	related to controversial phone location data
<head></head>		House Modernization panel advances bill to improve CRS's data access in first-ever markup
<meta http:="" th="" www.aneta.<="" www.aneta.http:=""/> <th><pre>chead> <meta contrast="" name="revisit-after" of="" sec<="" second="" th="" the=""/><th>BY MADISON ALDER</th></pre></th>	<pre>chead> <meta contrast="" name="revisit-after" of="" sec<="" second="" th="" the=""/><th>BY MADISON ALDER</th></pre>	BY MADISON ALDER
	<pre>imeta name="description" communication imeta http-equiv="Compatible" compatible" communication imeta http-equiv="Compatible" compatible" compatible imeta http-equiv="Compatible" compatible" compatible</pre>	Login.gov pilot to include option for biometric verification

Federal government metadata status



State government metadata status



Digital experience and metadata

Metadata plays an important role in the web experience, including how page information displays in:

- Search engine results
- Social media posts
- Accessibility-oriented readers
- Browser tabs/bookmarks
- Bots (Al, etc.)

Metadata

Website metadata refers to:

- information embedded in a web page HTML code
- in the <head> section of the page
- not visible on the web page
- provides additional details about the web page
- used by web services to understand, categorize content

Example metadata tags

- title: Defines a page title
- description: Describes the page content
- keywords: A list of keywords related to the page content
- viewport: Tells how to display the page on different devices
- canonical: Unique page URL to avoid search results duplicates
- og:image: Image to display on social media
- twitter:card: Image specific to Twitter posts

Protocol

- HTML Standard
- Open Graph (Google, Facebook, LinkedIn, etc.)
- Dublin Core
- X (Twitter)

Metadata code

<meta name='robots' content='index, follow, max-image-preview:large, max-snippet:-1, max-video-preview:-1' />

<title>The White House</title> <meta name="description" content="President Biden and Vice President Harris promised to move quickly to deliver results for working families. That's what they've done." /> <link rel="canonical" href="https://www.whitehouse.gov/" /> <meta property="og:locale" content="en_US" /> <meta property="og:type" content="website" /> <meta property="og:title" content="The White House" /> <meta property="og:description" content="President Biden and Vice President Harris promised to move quickly to deliver results for working families. That's what they've done." /> <meta property="og:url" content="https://www.whitehouse.gov/" /> <meta property="og:site name" content="The White House" /> <meta property="article:publisher" content="https://www.facebook.com/WhiteHouse/" /> <meta property="article:modified time" content="2022-01-31T03:46:42+00:00" /> > <meta property="og:image:width" content="1200" /> <meta property="og:image:height" content="630" /> <meta property="og:image:type" content="image/png" /> <meta name="twitter:card" content="summary large image" /> <meta name="twitter:site" content="@whitehouse" />

Search engines and metadata

https://www.whitehouse.gov

The White House

Get the latest news and updates from the **White House**, including executive orders, actions, and events. Learn about the Biden-Harris administration's agenda, policies, and achievements on topics such as infrastructure, health care, clean energy, and more.

Contact Us Contact Us - The White House Live Live - The White House

Remarks by President Remarks by President - The White House

Office of Management and Budg... Office of Management and Budget - The White House Briefing Room Briefing Room - The White House

Get Involved Get Involved - The White House

Social media and metadata (before/after)

Create a post X	Posts
Luke Fretwell 👻 🕲 Anyone 👻	Joshua Mater • 1st Director of Management Services for the Bureau of Diplom 4d • S
https://www.usajobs.gov/job/661158500	The Bureau of Diplomatic Security is looking for highly qualified program management specialists to join our ranks. Check out the advertisement on USAJobs at: https://lnkd.in/etsT_qGbsee more
	USAJOBS
Executive Director of Customer Experience Image: Comparison of Customer Experience usajobs.gov • 3 min read Image: Comparison of Customer Experience DHS is recruiting for the Executive Director of the DHS Office of the Chief Inform	
Add hashtag	
🕰 🗈 📮 🚔 🏥 🚥 🗣 Anyone 🛛 Post	Project Management Specialist usajobs.gov • 1 min read

Beyond web metadata

Think 'structured data'.

- Dynamic (vs. static) information
- Machine-readable
- Structured data markup (<u>schema.org</u>)
- Rich results (JSON-LD, microdata, RDFa)

Data mindset

- Supercharges government digital service experience
- Helps teams understand and adopt a data culture
- Moves content design beyond 'page' thinking
- Supports emerging tech (AI, interoperability)
- Builds for the future

Design with (structured) data

Principle 5 Design with data

Use research and analytics to understand how people use your services and products. This keeps us focused on their needs, not preconceived solutions.

Design System components work seamlessly with Google Analytics. This gathers information about the people who use your services and their needs.

Demo

- What we validate and why
- State of California state websites
- How to collaborate

Resources

- <u>ScanGov</u>
- Google Search Console
- Facebook sharing debugger
- <u>Twitter validator</u>
- <u>Structured data markup</u>
- <u>Schema markup validator</u>
- <u>Rich text results test</u>



Suggested Future Topics Closing Remarks

Koji Kumpulainien

State Web Services Manager California Department of Technology



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Post conference materials will be published on the <u>DWSN Website</u>.

For questions, please write to: DigitalWebServicesNetwork@state.ca.gov



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Next DWSN Quarterly Forum Thursday, July 18, 2024



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