California ODI

CALIFORNIA ODI

From 25% behind to 57% ahead, for California's least advantaged communities.

California's Office of Digital Innovation used Syntasa and Google Cloud to turn survey responses on ca.gov websites into zip-code-level vaccine sentiment, guiding where the state put pop-up and mobile clinics.

SECTOR
Public sector

INDUSTRY
State government, digital services

REGION
California: 58 counties and more than 1,700 zip codes

DEPLOYMENT
Syntasa with Google Cloud

PARTNERS
California Department of Public Health, Cal OES and other state stakeholders

USE CASES
Sentiment analytics, Survey analytics, Natural language processing, Zip-code targeting

EQUITY GAP
57%
higher vaccination rate for the least advantaged by August 2021, from 25% lower

POP-UP CLINICS
70%
of vaccinations in the least advantaged areas at mobile and pop-up sites

RESPONSES
170K+
survey responses by late 2021, 90,000 structured and 80,000 free text

SITES
12
of the busiest ca.gov websites carrying the survey

> **California's Office of Digital Innovation, in partnership with California Department of Public Health, California Office of Emergency Services, and other stakeholders, is driving an effort to promote vaccination, particularly among underserved communities.**
>
> JP Petrucione, Director, ODI Insights

CONTEXT

Vaccinate All 58, equitably.

The California Office of Digital Innovation (ODI) uses digital tools and human-centered design to deliver more equitable, effective services, and to bring Californians' voices into policy and decision-making.

As COVID-19 vaccines became available in late 2020, California launched its Vaccinate All 58 campaign to distribute vaccines safely and equitably to as many residents as possible. ODI took a pivotal role in providing insight into vaccine hesitancy and digital engagement, with a focus on equity.

The goal was two-fold: find zip codes with low hesitancy and low vaccination and remove barriers to access there, and find zip codes with higher hesitancy and target persuasion campaigns to them.

CONSTRAINT

An equity gap that existing data couldn't explain.

- **A 25% gap.** Between January and May 2021, the least advantaged Californians were vaccinated at a rate 25% lower than the most advantaged, despite mass sites in less advantaged areas.
- **No local view.** Existing data sources couldn't pinpoint the places with low hesitancy and low vaccination across 39.5 million residents and 1,700+ zip codes.
- **Polling falls short.** Polling is expensive, captures one moment in time, and can't show sentiment at a local level.
- **A new approach needed.** The vaccination effort had to move from logistics-driven to needs-based, meeting Californians where they are.

TIMELINE

How the work grew.

LATE 2020

Vaccinate All 58

California launches its campaign for safe, equitable vaccine distribution.

JAN–MAY 2021

A 25% gap

The least advantaged are vaccinated at a rate 25% lower than the most advantaged.

MAY 2021

Sentiment in use

Zip-code sentiment starts guiding where pop-up and mobile clinics go.

AUG 2021

57% higher

With sentiment data as a key driver alongside advertising and community efforts, the least advantaged are vaccinated at a rate 57% higher.

ABOUT CALIFORNIA ODI

The California Office of Digital Innovation (ODI) works with state agencies and departments to use human-centered design and technology to reimagine and redesign processes, systems and services, and to deliver more equitable, effective services to all Californians.

DEPLOYMENT

From survey answers to a zip-code map of need.

ODI placed an opt-in survey on 12 of the busiest ca.gov websites, which see nearly 10 million visits a week, and engaged Syntasa to analyze and productize the data.

01

Correct for bias

Syntasa corrected for selection bias across age, gender, race, ethnicity and income, and found hidden biases too, such as one site whose visitors skewed far more willing, which was left out.

02

Read the free text

Natural language processing, sentiment analysis and topic modeling turned free-form answers into the topics on Californians' minds, tracked over time.

03

Estimate by zip code

Survey results joined with other data sources gave hesitancy and willingness estimates for each zip code, refreshed as new responses came in.

04

Share a living product

A regularly updated dashboard served ad agencies, community organizations, universities and local health jurisdictions.

ARCHITECTURE

From ca.gov to the field

ca.gov survey
12 sites, structured and free-text answers

→

Syntasa with Google Cloud
Bias correction and data joins

→

Language models
Sentiment and topic modeling

→

Zip-code estimates
Hesitancy and willingness, updated continuously

→

State partners
Clinics, advertising and community outreach

HOW IT WORKS

How sentiment became a zip-code map

The question for every zip code: is the barrier access, or hesitancy?

1 **Collect**
An opt-in survey on 12 busy ca.gov sites gathers structured and free-text answers about the vaccine.

2 **Correct**
Responses are reweighted for age, gender, race, ethnicity and income, and skewed sources are removed.

3 **Read**
Natural language processing and topic modeling turn free text into the concerns on residents' minds.

4 **Locate**
Results joined with other data estimate hesitancy and willingness for each zip code.

RESULTS

The numbers.

MEASURE	BEFORE	WITH SYNTASA
Vaccination rate, least vs most advantaged	25% lower	**57% higher**
Least advantaged vaccinations at pop-up and mobile sites	–	**70%**
Survey responses by late 2021	–	**170,000+**
Sentiment detail	Statewide polls	**Zip code**

WHY SYNTASA

What made the difference.

- **Digital behavior expertise.** Experience turning web traffic and big data into insight at scale.
- **Free text, not just checkboxes.** Natural language processing quantified what residents wrote in their own words.
- **Productized for partners.** A shared dashboard that agencies, community groups and health jurisdictions could act on.
- **Rigorous methodology.** Bias correction made an opt-in survey representative of the population.
- **Continuous, local and lower cost.** Zip-code insight that updates, at a fraction of the cost of polling.

About Syntasa

Syntasa is the data and AI platform that runs inside your own cloud, turning first-party data into models, audiences and real-time decisions without copying it anywhere else.

Talk with our team
syntasa.com/contact