

COVID-19 AT-ANYWHERE DIAGNOSTICS



Design-a-thon

Developing digital solutions for data capture, harmonization, and reporting from diagnostic tests

Phase 2 of the Design-a-thon: public-facing, open-innovation technology sprint with industry that aims to develop device-integrated software for automatic data capture and wireless transmission directly from in vitro diagnostic devices (IVDs).

January 19, 2020

"COVID-19 TOPx" Technology Sprint for At-Anywhere Diagnostics

Overview of the Design-a-thon process

Kick-off and Speakers	Project Sprint, WATERS Basic Build	Capstone Project Submission	WATERS Presentation	Judging and Winners Announced	Tech sprint
Speakers kicked- off event and goals articulated	Teams created, projects developed, and WATERS prototype designed	Projects submitted with explanations to address judging criteria	WATERS prototype database and API built and presented	Judges submit scores and winners announced	Project winners move to TOPx sprint (phase 2)
12 speakers	645+ participants	31 capstone projects	4 major API capabilities	16 judges	16 winners announced
Nov 16	Nov 17-29	Nov 29	Nov 30	Nov 30-Dec 8	Dec 15

COVID-19 At-Anywhere Diagnostics Design-a-thon (DAT)

- ➤ 645 Participants
- ➤ 31 Final Capstone Submissions
- ➤ 16 External, high-level judges
- ➤ Winners to be announced Dec 15
- ➤ Winners in multiple technology "tracks" will advance to 6week TOPx sprint with Census, HHS, FDA in January 2021



Categories for the Design-a-thon Capstone Projects

Category 1:

Test individuals for Covid-19 (2 submissions)

Category 2:

Capture test data from applied tests (4 submissions)

Category 3:

Aggregate data from multiple sources and transmit to target destination (11 submissions)

Category 4:

Enable secure and traceable data exchange, storage, and ownership (3 submissions)

Category 5:

Track patient tests, provides health passport, orchestrates patient care (8 submissions)

Category 6:

Analyze and present data for actionable insights
(2 submissions)

Category 7:

Provide feedback from individuals on the performance of specific tests and clinical outcomes

(1 submission)



Capstone project participants medal winners

Test individuals for COVID-19

Capture test data from applied tests

Aggregate data from multiple sources and transmit to target destination

Enable secure and traceable data exchange, storage, and ownership Track patient tests, provides health passport, orchestrates patient care

Analyze and present data for actionable insights

Provide feedback from individuals on the performance of specific tests and clinical outcomes

- AIE Technology Solutions
- Stony Brook University

- Southwest Texas Regional Advisory Council (STRAC)
- 2. U.S. Pharmacopeia
- 3. Net Medical Xpress Solutions
- 4. DynamiCare Health& InfoWerks

1. Safe Health Systems

2. NetApp

- 3. DLC-Delta
- 4. Tibco & Axon Connected
- 5. Lifepoint
- 6. Skyflow
- 7. UDoTest
- 8. Dale Hsu
- 9. Trendalyze
- 10. Symptomatic
- 11. GlobalHealthC3

1. Oracle

- 2. IBM
- 3. Project NameTag

1. Dovel Technologies

- 2. CareSpace
- 3. NYU
- 4. VirusIQ (Great Britain)
- 5. Whooster Inc
- 6. U.S. Pharmacopeia
- 7. iCAREHuB & E25Bio
- 8. CURA Patient

 NC State University Institute for Advanced Analytics

2. Oasys Inc

1 Interpret-Covid

Legend:

Medal Winners

People's Choice

Capstone project winners and honorable mentions will participate in TOPx (The Opportunity Project)

Purpose

Develop capabilities for SARS-CoV-2 diagnostic tests:

- That alleviate data collection and reporting burdens for patients, providers, anyone administering/using tests, labs through which data is routed
- For data capture and reporting when at-home, non-prescription, and over-the-counter tests are authorized and begin saturating the market. On December 15, 2020, the FDA authorized an antigen test as the first over-the-counter fully at-home diagnostic test for COVID-19

Description

- Design-a-thon winners and honorable mentions participate in a virtual tech sprint (TOPx) to expedite development of SARS-CoV-2 diagnostic tests that have built-in, automated, harmonized data capture and wireless transmission capabilities
- Data will be transmitted to the WATERS prototype

Timing / Activities

- 6-week sprint starting in January 2021
- Culminates in a public-facing "Demo Day," which will showcase many potential solutions and products from different organizations



The Opportunity Project (TOP) brings together technologists, government, and communities to rapidly prototype digital products—powered by federal open data—that solve real-world problems for people across the country.

opportunity.census.gov

TOPx Sprints

TOPx sprints allow federal agencies to address national challenges by adapting the TOP process to their own timelines and topics.

This TOPx sprint will focus on enabling COVID-19 diagnostic tools, on an expedited 6-8 week timeline, so that tools can get into American's hands as soon as possible, while still benefiting from the networks, collaboration, and data access of a TOP sprint.



COVID-19 TOPx Sprint Sprint for At-Anywhere Diagnostics

COVID-19 TOPx TECHNOLOGY SPRINT Developing digital solutions for data capture, harmonization, and reporting from diagnostic tests

#TOPxCOVID





- **Tech Teams:** 16 design-a-thon winners
- Goal: Expedite development to ensure that SARS-CoV-2 diagnostic tests have builtin, automated, harmonized data capture and wireless transmission capabilities
- Timeline: 6 weeks
 - Milestone calls on Zoom will be opportunities to show progress and get feedback/questions
 - Milestones will be open to the public in listen-mode

Government Framework

Our "COVID-19 TOPx" technology sprint will use the methods of The Opportunity Project (TOP), which is a **fast-paced technology development sprint** that bring technologists, communities, and government together to solve key national challenges using open data.

Agile Development Sprints with Biweekly Demos

COVID-19	Teams	1st Demo	2nd Demo	Final Demo and Launch	
TOPx Kickoff	launch				CO
loopline	•	•	•	•	
1/19/21	1/26/21	2/9/21	2/23/21	3/9/21	Ş

COVID-19 TOPx

DEMO DAY

Sprint 2021

COVID-19 TOPx Tech Sprint

Participating teams will embrace three TOPx best practices

TOPx Rule #1: Each team will use federal open data standards



- Data.gov
- HealthData.gov
- COVID-19 Diagnostics Data Standards and FAQs:

https://www.hhs.gov/sites/default/files/ hhs-diagnostic-data-faqs.pdf

COVID-19 TOPx Tech Sprint

Participating teams will embrace three TOPx best practices

TOPx Rule #2: Each team will engage with users, receive feedback in demos, and respond to user-centered feedback



- TOP website:
 - https://opportunity.census.gov/
- TOPx Toolbox:

https://www.hhs.gov/sites/default/files/

hhs-diagnostic-data-faqs.pdf

COVID-19 TOPx Tech Sprint

Participating teams will embrace three TOPx best practices

TOPx Rule #3: Agile, collaborative iterations, now in the open!



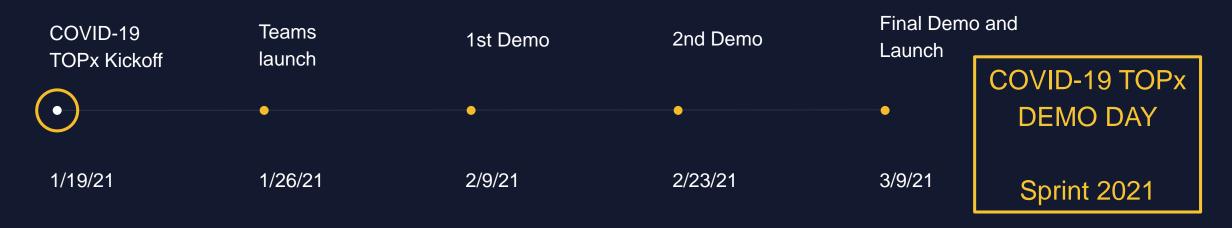
- TOP website:
 - https://opportunity.census.gov/
- TOPx Toolbox:

https://www.hhs.gov/sites/default/files/

hhs-diagnostic-data-faqs.pdf

COVID-19 TOPx Schedule

Participate in biweekly demos to share progress and feedback



Calendar Invites to come

Updates will be posted to Waters. Crowdicity.com

COVID-19 TOPx TECHNOLOGY SPRINT Developing digital solutions for data capture, harmonization, and reporting from diagnostic tests

#TOPxCOVID





* * *

COVID-19 TOPx Sprint

Sprint for At-Anywhere Diagnostics

