

CREATE & APPLY
SHARE
HUMAN
CENTERED
DESIGN KNOWLEDGE



Incorporating Evaluation into Digital Forms: *An Office of Evaluation Sciences case study*

Presentation by:

Stephanie Tepper & Blair Reid

Sept 28, 2023

Housekeeping

- Recording
- Mute
- Questions - Chat
- Resource
 - Chat directly with Amy Castellani
 - Email acastellani@tantustech.com



Evidence-Based Case Study

OES Case Study Presenters:



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Incorporating evaluation into digital forms

CMS HCD Community of Practice

September 28, 2023

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Overview

Office of Evaluation Sciences (OES) overview

How to evaluate the impact of form changes

Case study: Proof of concept evaluation with a model form

Case study: Evaluation of a form change in the field

Takeaways and next steps in form evaluation

Office of Evaluation Sciences

Government-wide evaluation team



Int'l Develop.



Global Health



Education



Design



Ops Mgmt.



Political Sci.



Economics



Public Policy



Int'l Develop.



Political Sci.



Political Sci.



Government



Cynthia Wilkes



Government



Political Sci.



Marketing



Economics



Political Sci.



Epidemiology



Public Policy



Psychology



Political Sci.



Economics



Social Psych.



Political Sci.

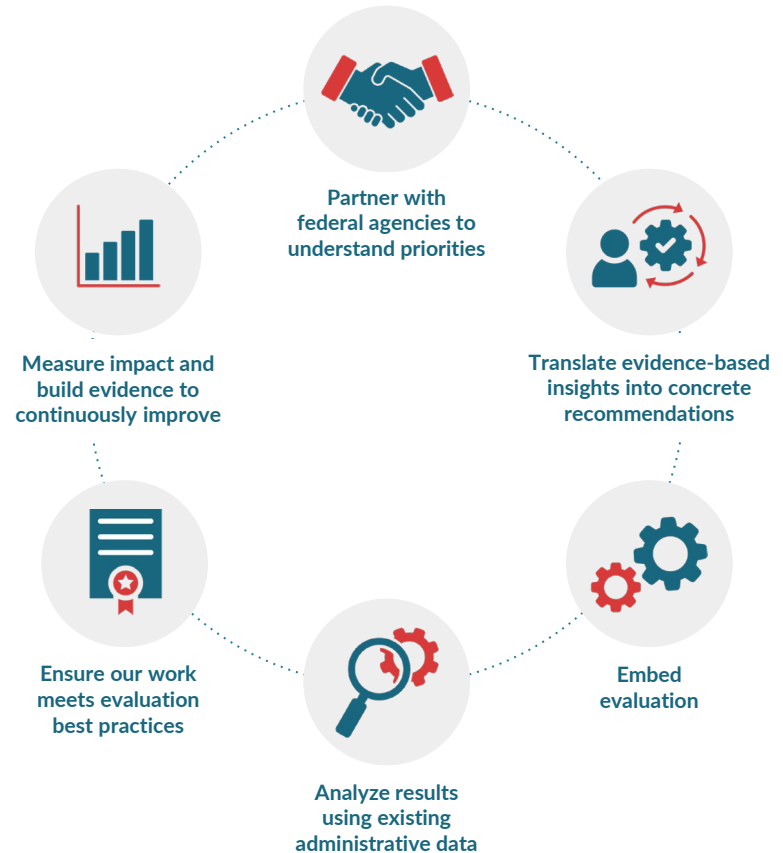


Public Affairs

Note: Staff shown here are 50% time and above

Building and using evidence to better serve the public

OES team members work alongside agency collaborators to design and evaluate program changes



Based at GSA

The United States General Services Administration (**GSA**) exists to support the government in becoming more **effective** and **efficient**



Connections to other government priorities

21st Century Integrated Digital Experience Act

The Act aims to improve the digital experience for government customers.

Foundations for Evidence-Based Policy Making Act of 2018

Supports evaluation and other evidence-building activities across the federal government

Memorandum on Restoring Trust in Government through Scientific Integrity and Evidence-Based Policymaking

Support “evidence-based decisions guided by the best available science and data.”

Executive Order on Transforming Federal Customer Experience and Service Delivery to Rebuild Trust in Government
Evaluate improvements to “design and deliver services that people of all abilities can navigate.”

Presidential Management Agenda Learning Agenda

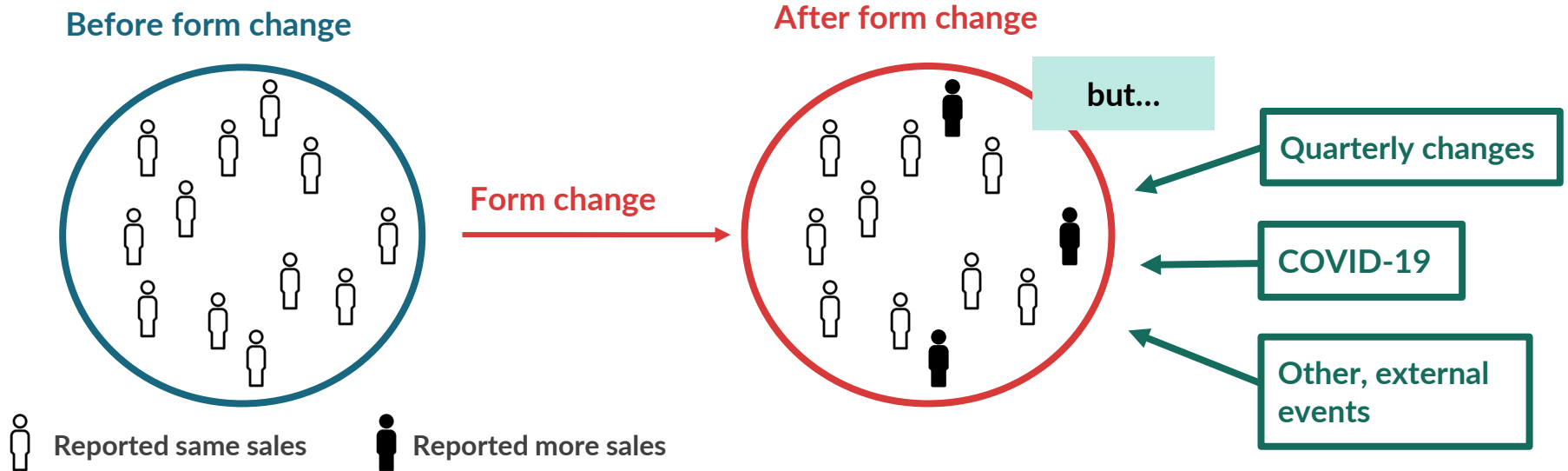
Deliver excellent, equitable, and secure federal services and customer experience

Randomized evaluation design

So you want to measure the impact of a form change...

To understand the impact of a form change, **you need to know what would have happened if you had done nothing**

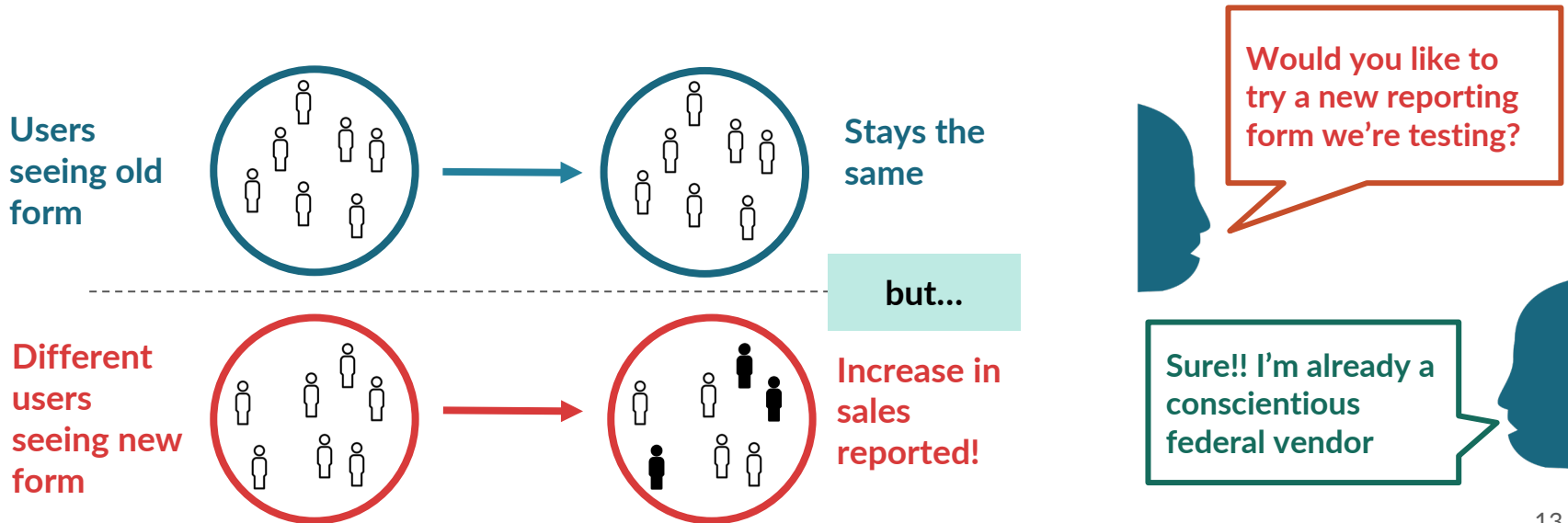
1. By comparing the world *before* to the world *after* the intervention.



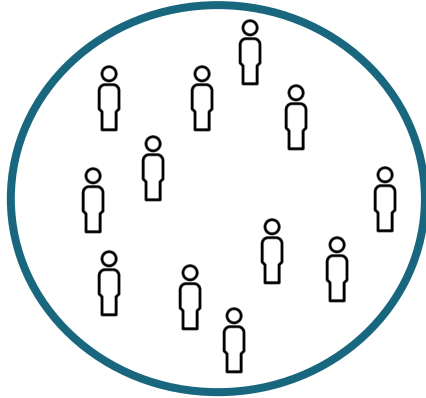
So you want to measure the impact of a form change...

To understand the impact of a form change, **you need to know what would have happened if you had done nothing**

2. By comparing cases (individuals, groups, ...) exposed to the intervention with other cases that are similar

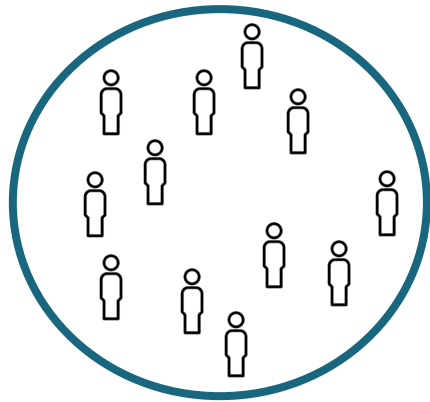


Randomized evaluations



Study sample can be drawn from the total population of federal vendors...

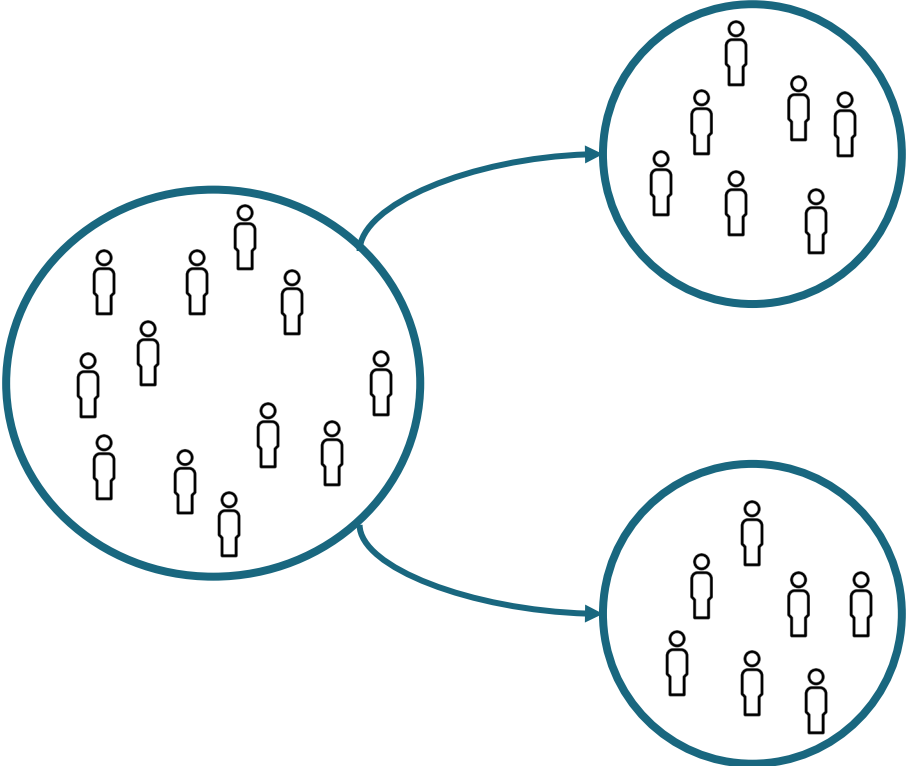
Randomized evaluations 1



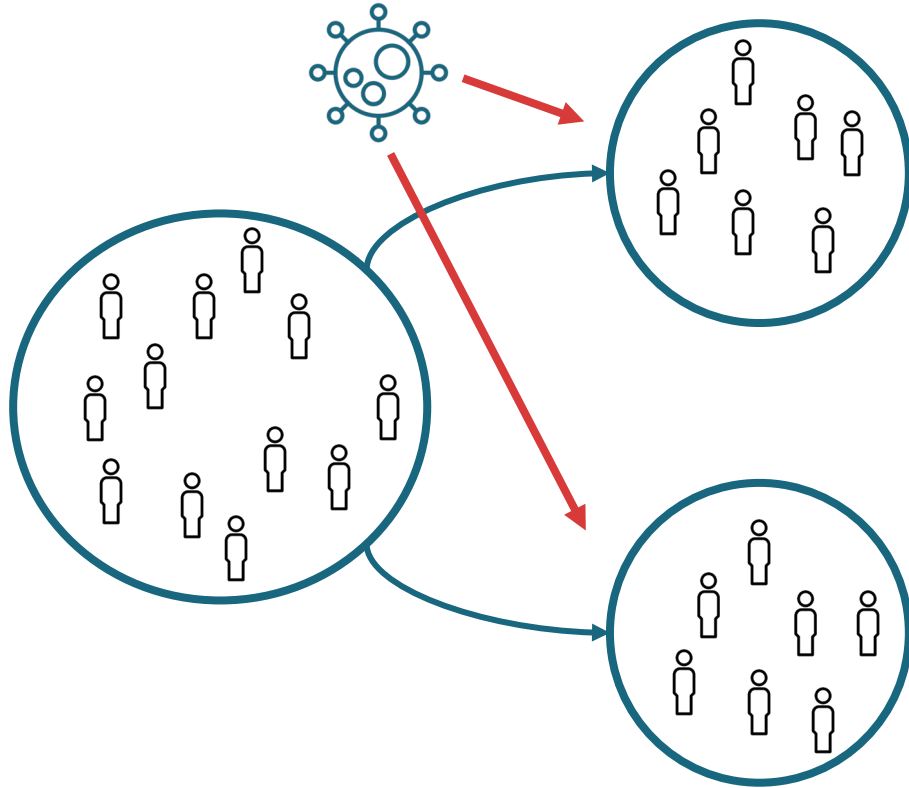
Study sample can be drawn from the total population of federal vendors...

or the subset of federal vendors who improperly reported sales in the past

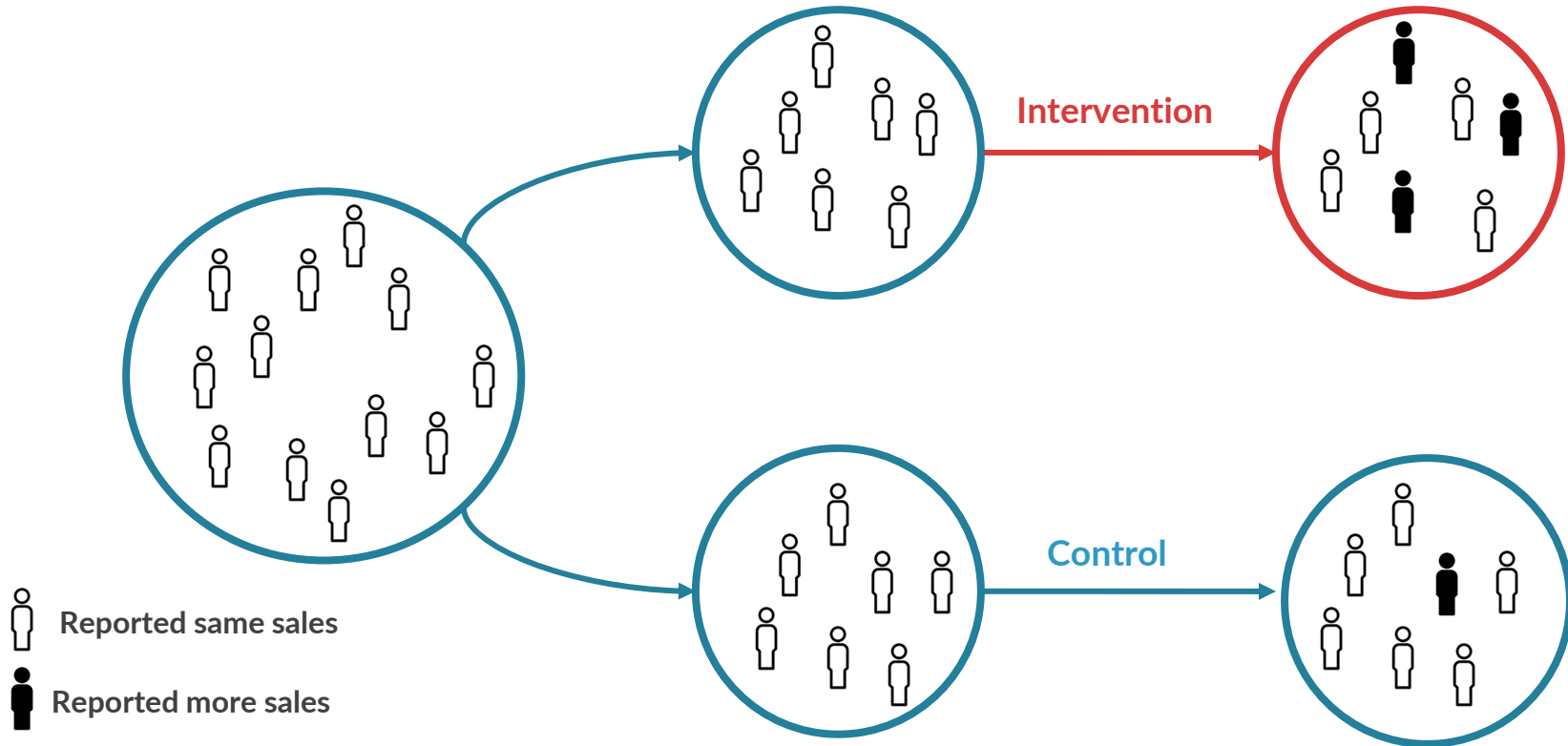
Randomized evaluations 2



Randomized evaluations 3



Randomized evaluations 4



Randomized evaluations 5

- Effect on outcome is caused by intervention
- Measure the size and direction of effect, as well as potential unintended consequences
- Build credible estimates that can be used to measure return on investment (ROI) of intervention
- Without conducting an audit can proxy for payment integrity outcomes

Evaluation of a model form

Model form

The screenshot shows the top of a website for the Office of Evaluation Sciences (OES). The header includes the OES logo and the text 'Office of Evaluation Sciences'. A navigation menu contains 'About', 'Our work', 'Resources', and 'Connect'. Below the header is a dark teal banner with the title 'Help Us Improve Digital Forms' in white. The main content area has a white background with the following text: 'People in the US spend over 10 billion hours each year completing government forms. We are working to reduce this burden and make digital forms easier and more accessible.' followed by 'You can help by filling out a short typical form. It will take less than five minutes!' and a dark teal button labeled 'Fill Out the Form'. A note below the button states: 'Note: This form performs best using Chrome or Firefox in an incognito or private session. You may encounter errors while using Microsoft Edge that will prevent the form from functioning. The information submitted will only be used to improve federal forms, and will not be stored or used for other purposes.' The footer features the GSA and OES logos on the left and a grid of links on the right.

Office of Evaluation Sciences

About | Our work | Resources | Connect

Help Us Improve Digital Forms

People in the US spend over 10 billion hours each year completing government forms. We are working to reduce this burden and make digital forms easier and more accessible.

You can help by filling out a short typical form. It will take less than five minutes!

[Fill Out the Form](#)

Note: This form performs best using Chrome or Firefox in an incognito or private session. You may encounter errors while using Microsoft Edge that will prevent the form from functioning. The information submitted will only be used to improve federal forms, and will not be stored or used for other purposes.

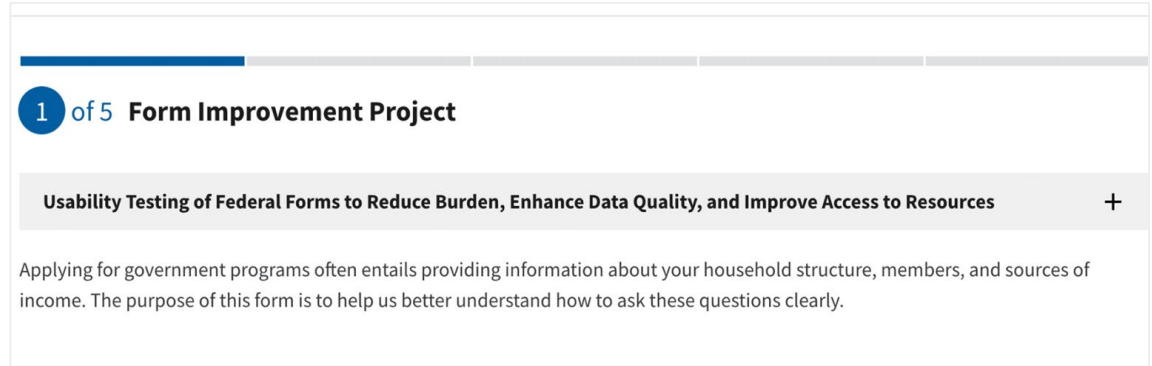
GSA OES

About	Our work	Connect	Links	Policies
Mission	Evaluations	Resources	@OESatGSA	Accessibility
Team	Portfolios	Fellowships	oes@gsa.gov	Privacy

Incorporating evaluation into digital forms

What was the challenge?

- The American public spends ~11.5 billion hours per year filling out complex federal government forms.
- OES evaluated two versions of a brief digital form with questions typical of federal forms.



The screenshot shows a digital form interface. At the top, there is a progress bar with a blue segment on the left, followed by three grey segments. Below the progress bar, the text '1 of 5 Form Improvement Project' is displayed, with the number '1' inside a blue circle. Underneath, a grey header bar contains the text 'Usability Testing of Federal Forms to Reduce Burden, Enhance Data Quality, and Improve Access to Resources' followed by a plus sign. The main content area contains the text: 'Applying for government programs often entails providing information about your household structure, members, and sources of income. The purpose of this form is to help us better understand how to ask these questions clearly.'

What was the program change?

- One version included the form instructions on the first page, while the other version embedded the form instructions within each page of the form.

Form location and design

Form A: Instructions at front

2 of 5 Instructions

Part A

- Complete Part A for everyone who lives in your household for at least one month each year, including children age 18 or under. Make sure to include infants, as well as any children who may live part-time in your household (e.g., college students, shared custody arrangements).
- Common definitions:
 - Dependents: A dependent is a qualifying child under age 19 (or under 24 if a full-time student) or qualifying relative who makes less than \$4,300 per year who is claimed on the tax return of a taxpayer who provides more than half of their annual support.
 - Buying and preparing food together: Adults who live in the same house and purchase and prepare their food together, or children who live in the house with an adult who purchases and prepares their food.
 - Sharing expenses: Adults who live in the same house and share the cost of most purchases, or children who live in the house with an adult who supports them.

Part B

- Complete Part B for everyone who lives in your household for at least one month each year and has any source of earned or unearned income. Make sure to include yourself, as well as children age 18 or under with part time jobs. If an individual has no earned or unearned income, please enter "0."
- Common definitions:
 - Earned income includes any wages that come from hourly or salaried employment, as well as self-employment.
 - Unearned income includes child support payments, unemployment benefits, other social service benefits, interest payments, capital gains, inheritance, and dividends.

[Next](#) [Previous](#)

Form B: Embedded instructions

2 of 4 Part A: Household Structure

Specific Instructions

List everyone who lives with you. List yourself first

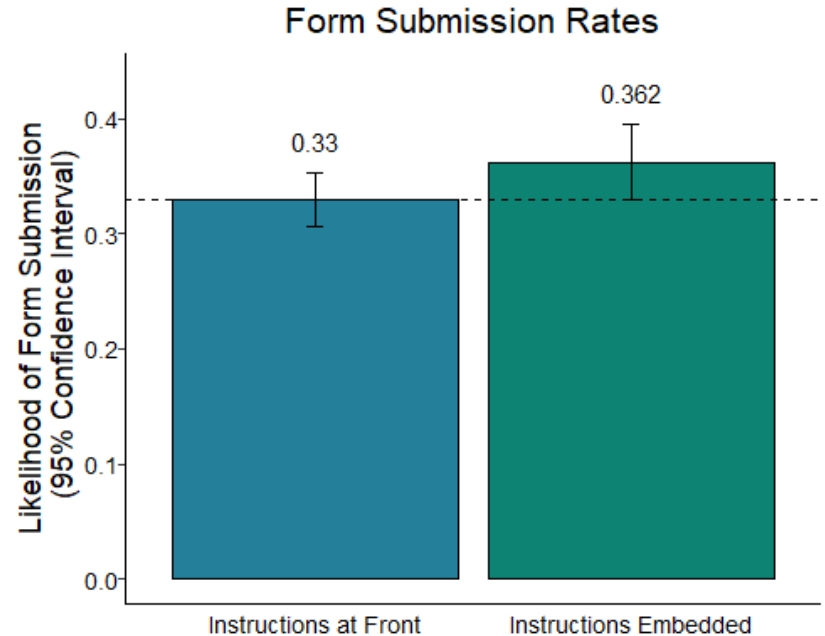
Relationship to you	Gender	Age
+ Add person		

[Next](#) [Previous](#)

Incorporating evaluation into digital forms 1

What was the outcome?

- Initial evidence that form completion is affected by instruction placement.
- Individuals randomly assigned to the form with embedded instructions were 3.2 percentage points (36.2% versus 33.0%) more likely to submit ($p=0.054$, 95% CI [-0.001, 0.065]) than individual assigned to the form with instructions at the front.



Incorporating evaluation into digital forms 2

How did the evaluation work?

To generate a sample of users, OES conducted outreach among the general public and federal employees. Through this outreach, 3,203 individuals were randomly assigned to the two versions of the form between July 19 and August 19, 2022.

How did the outreach work?

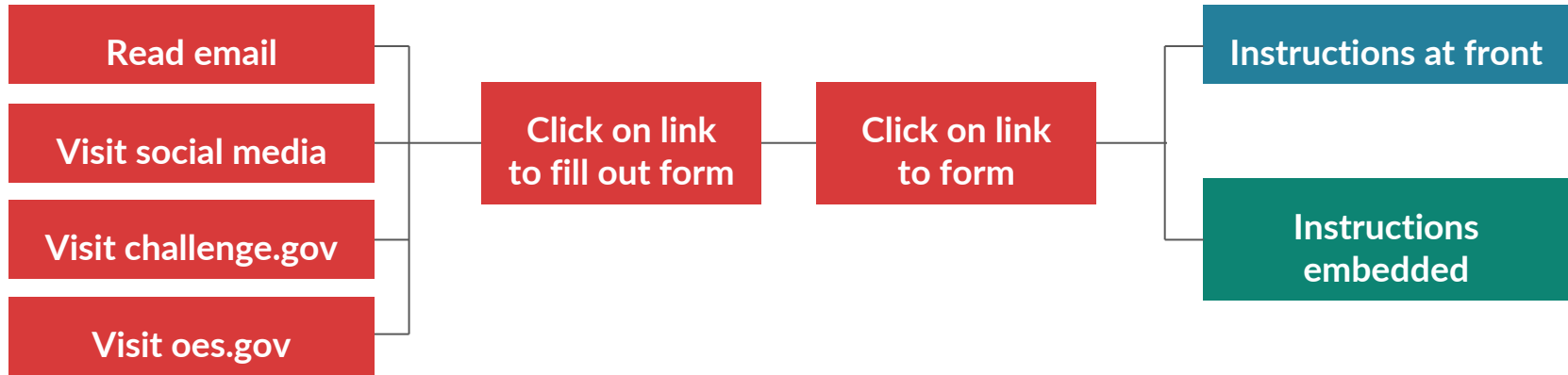
- Outreach collaboration between OES, GSA, USAGov, Challenge.gov, and Digital.gov CX COP
- Multi-platform approach including social media, newsletters, listservs, and websites



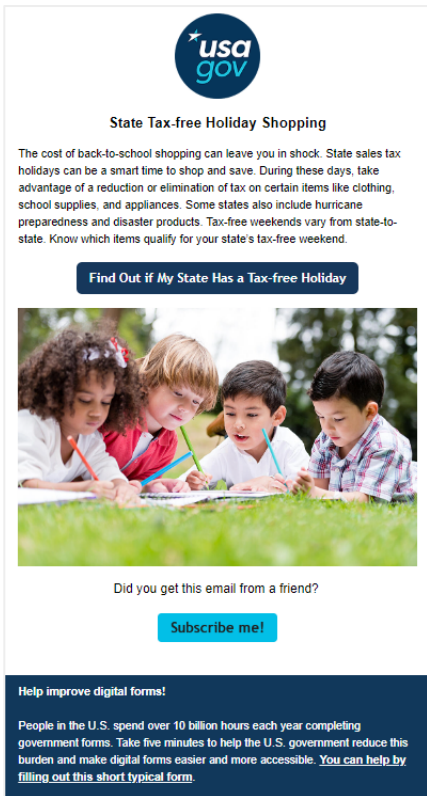
CHALLENGE.GOV



Process



USAGov email outreach




The screenshot shows an email from USA.gov. At the top is the USA.gov logo. Below it is the title "State Tax-free Holiday Shopping". The main text explains that back-to-school shopping can be expensive and that state sales tax holidays offer a chance to save on clothing, school supplies, and appliances. It also mentions hurricane preparedness and disaster products. A button labeled "Find Out if My State Has a Tax-free Holiday" is positioned below the text. Underneath is a photograph of four children sitting on the grass and writing in notebooks. Below the photo is the question "Did you get this email from a friend?" and a "Subscribe me!" button. At the bottom of the email is a dark blue banner with the text "Help improve digital forms!" followed by a paragraph about the burden of government forms and a link to "filling out this short typical form".

usa gov

State Tax-free Holiday Shopping

The cost of back-to-school shopping can leave you in shock. State sales tax holidays can be a smart time to shop and save. During these days, take advantage of a reduction or elimination of tax on certain items like clothing, school supplies, and appliances. Some states also include hurricane preparedness and disaster products. Tax-free weekends vary from state-to-state. Know which items qualify for your state's tax-free weekend.

[Find Out if My State Has a Tax-free Holiday](#)



Did you get this email from a friend?

[Subscribe me!](#)

Help improve digital forms!

People in the U.S. spend over 10 billion hours each year completing government forms. Take five minutes to help the U.S. government reduce this burden and make digital forms easier and more accessible. [You can help by filling out this short typical form.](#)

Call to help improve digital forms added to bottom banner of 16 USAGov emails sent in July and August 2022

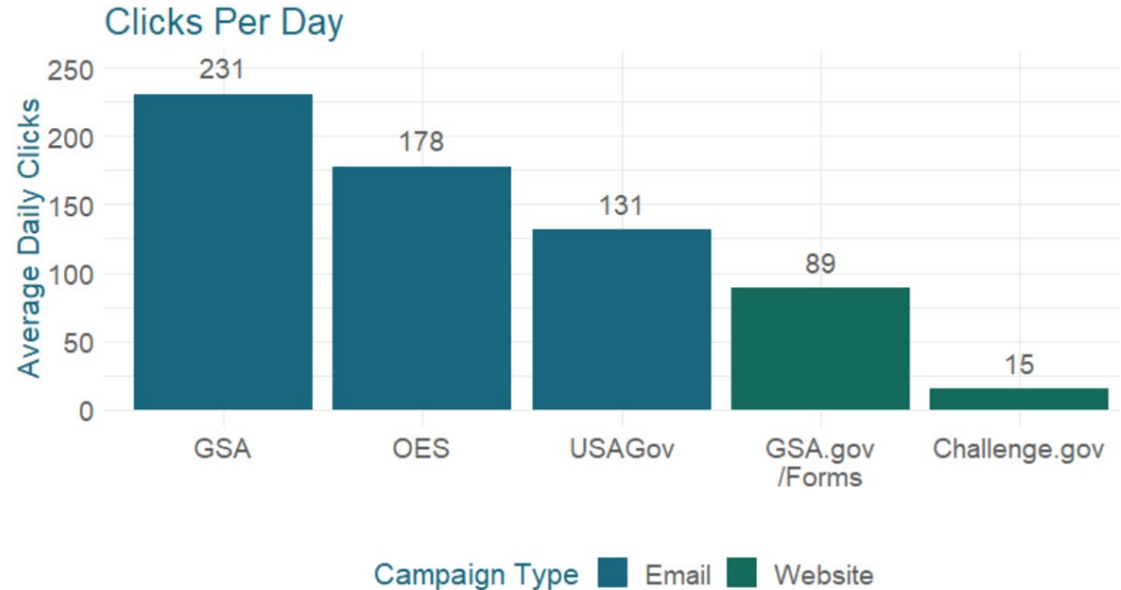
Help improve digital forms!

People in the U.S. spend over 10 billion hours each year completing government forms. Take five minutes to help the U.S. government reduce this burden and make digital forms easier and more accessible. [You can help by filling out this short typical form.](#)

Outreach performance

Outreach by source

- Average daily clicks ranges from 15-231.
- Each day of displaying a website banner yielded fewer clicks than each email campaign we sent.
- 0.9% of impressions yielded clicks and 0.5% yielded survey sessions



What did we learn?

What did we learn from the evaluation?

- Where instructions are placed impacts form submission.

What did we learn about outreach?

- First of its kind in the federal government that brought together multiple GSA offices and the American public.
- The American public is interested in improving federal forms.
- Low-cost, general outreach through federal websites, ongoing email campaigns, and social media generates an adequate sample of users.
- Outreach campaigns may need to last several weeks to generate a meaningful sample.

Evaluation of a form change in the field

Reducing self-reporting errors by IFF form users

What was the challenge?

Federal vendors making sales through the Federal Supply Schedules are required to pay a fee—the industrial funding fee (IFF)—that covers program operations costs. IFF payments owed are a fraction of the total sales made. To accurately determine how much vendors sold, and thus the correct IFF amount, the government **uses a website where vendors are asked to self-report the quantity of total sales.**

What was the program change?

At no material cost, **OES designed an electronic signature box** included at the beginning of GSA's online reporting portal to promote vigilant and accurate self-reporting of sales and reduce errors.

How did the evaluation work?

Vendors were randomly assigned to use one of two options: 1) the existing reporting system (control); or 2) a modified interface (treatment) with the redesigned electronic signature box.

Introducing a confirmation prompt at the beginning of a self-report form 1

Existing electronic reporting system

Schedule	SIN	Control No.	Quarter Ending	Sales Amount
072	722 05RC Disaster Recovery	200929888491	09/30/2013	\$ 500 <input type="text"/>
072	722 06	200929888721	09/30/2013	\$ 400 <input type="text"/>
072	722 08RC Disaster Recovery	200929888490	09/30/2013	\$ 200 <input type="text"/>
072	722 98	200929888720	09/30/2013	\$ 3111 <input type="text"/>
072	722 98RC Disaster Recovery	200929888489	09/30/2013	\$ 250 <input type="text"/>

[Submit Sales](#)

Introducing a confirmation prompt at the beginning of a self-report form 2

Program change introduced a confirmation prompt at the beginning of the form:

The screenshot shows a table with columns: Schedule, SII, Confirmation Code, Quarter Ending, and Sales Amount. A red box highlights a confirmation prompt: "I promise that the information I am providing is true and accurate" followed by a text input field containing "Doug Powell" and the label "(typed signature)". A "Submit Sales" button is located at the bottom right.

Schedule	SII	Confirmation Code	Quarter Ending	Sales Amount
072	722 05RC Disaster Recovery	20092988849	09/30/2013	<input type="text"/>
I promise that the information I am providing is true and accurate <input type="text" value="Doug Powell"/> (typed signature)				
072	722 98	200929888720	09/30/2013	\$3111 <input type="text"/>
072	722 98RC Disaster Recovery	200929888489	09/30/2013	\$250 <input type="text"/>

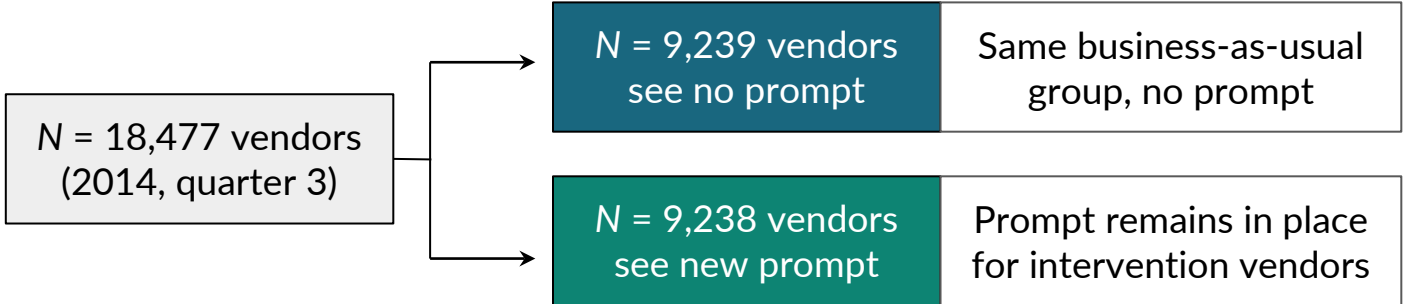
Introducing a confirmation prompt at the beginning of a self-report form 3

Program change introduced a confirmation prompt at the beginning of the form:

Schedule	SIN	Control No	Quarter Ending	Sales Amount
072	722 05RC Disaster Recovery	200929888491	09/30/2013	\$ 500
072	722 08	200929888721	09/30/2013	\$ 400
I promise that the information I am providing is true and accurate				Doug Powell (typed signature)
072	722 98RC Disaster Recovery	200929888489	09/30/2013	\$ 250

Submit sales

Does the confirmation prompt reduce reporting errors (versus no prompt)?



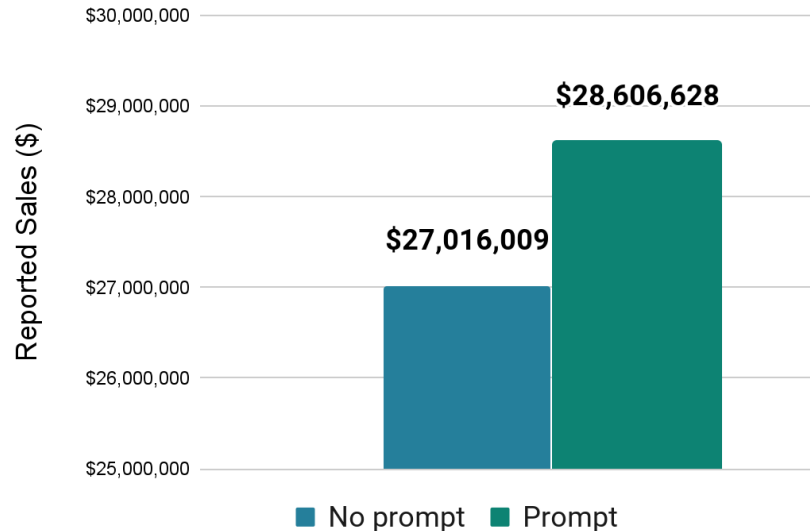
Introducing a confirmation prompt at the beginning of a self-report form 4

What was the impact?

As a result of the evaluation, the median self-reported sales amount was \$445 higher for vendors signing at the top of the form, translating into an **extra \$1.59 million in IFF paid to the government in a single quarter.**

In subsequent quarters, self-reported sales were still higher for treatment group vendors than for those in the control group, but the difference in these quarters was not statistically significant.

Reported sales amount in first quarter



Takeaways and next steps

Evaluation on high-burden federal forms

Identify high-burden forms

Work with agencies to identify federal forms that pose high burdens for citizens.

A/B test forms improvements

Design A/B tests to evaluate the effectiveness of improvements to burdensome forms.

For further information on working with us to improve federal programs and policies: oes@gsa.gov

oes.gsa.gov

[@OESatGSA](https://twitter.com/OESatGSA) and [#OESatGSA](https://twitter.com/OESatGSA)

News

What's Coming Up



Foundational Learning Path Certificate

NEW

- Onboard group-specific training
- Complete core curriculum: Agility Foundations, Better Together and Introduction to HCD.
- Gain foundational understanding of HCD, Lean & Agile frameworks

NEW

CENTER FOR
CLINICAL
STANDARDS
AND QUALITY

CERTIFICATE OF COMPLETION



On behalf of Centers of Excellence of CCSQ we are recognizing

MIKE DELOGE

for the successful completion of all

CCSQ Foundational Learning Path training courses.

This Certification illustrates your dedication and expanded self-knowledge of HCD and Lean & Agile skills. We commend you and are excited to see how you will apply this knowledge in your future endeavors.



A handwritten signature in black ink that reads 'Brandy Barnette'.

BRANDY BARNETTE
ISG HCD, LACE & QNET COMMUNICATIONS LEAD



OFFICE HOURS

Save the date: October 26th @ noon ET


Look for an email soon

NEW



COLLABORATION & COOPERATION

CCSQ World Usability Day



Wednesday, November 8, 2023

SAVE THE DATE

UPCOMING TRAINING EVENTS:

Nov 14th & 15th @ 10am-3pm
Foundational Learning Path course

Dec 13th @ 10am-3pm

AN INTRODUCTION TO
**HUMAN-
CENTERED
DESIGN**
Register Now!

HCD 104:
**Customer
Empathy
Through
Journey
Mapping**



Tell Us What You Think

Please complete a brief survey to help us make the community of practice better.

Our Gratitude

OES Case Study Presenters:



STEPHANIE TEPPER
Associate Fellow,
Office of Evaluation
Sciences



BLAIR READ
Associate Fellow,
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Sciences

Thank you!

