



# RECOMMENDATIONS

ENGAGING USERS WITH FEDERAL SPENDING DATA

DPI 663 Demo Day  
April 28, 2017

# Treasury context

## Project to date

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Federal legislation required that government spending data be made fully available online

### **Treasury tasked with leading the way**

Responsible for collecting, validating and publishing the data

## Our advisors

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### **Christina Ho**

Deputy Assistant Secretary for Accounting Policy and Financial Transparency



### **Amy Edwards**

Senior Advisor, Financial Transparency

# Problem statement



**How can federal spending data be useful?**

**Specifically, what are innovative applications of the data - for whom, in what context, with what features?**

# Our team



**Will Long**

Computer science  
+ government



**Maya Perl**

Strategy, operations  
+ project  
management



**Anna Ponting**

Policy + digital  
initiatives in global  
cities



**Ni Xu**

Software  
engineering +  
business



**Cindy Yang**

Start-ups, business  
development +  
finance

# USER RESEARCH



# We talked to users across four major segments...



## Government vendors



alteryx



## Data firms



govini



## Researchers



DATA COALITION



J.P.Morgan



## State and local governments



# ... and selected two to focus on



## Government vendors



## Data firms



# USER INSIGHTS

OVERWHELMING  
NUMBER OF  
PROCUREMENT  
~~INFO~~ SOURCES

Search government  
projects by keywords.

Validate their <sup>qualitative</sup>  
analysis against  
data

about  
...ing control  
opportunities in  
gov't before  
they become public

and talk with  
agency contacts to  
get "off the record"  
info

Connect with  
individuals in  
gov't agencies  
to understand their  
IT needs

Design & sell  
media software  
to client -  
Some of







# Vendors: scrappy, time-crunched business owners



## SARAH

- Laundry & dry cleaning business
- Based in San Diego
- 11 employees (part-time)
- \$850K annual revenue

## MOTIVATED BY

- New revenue opportunities
- “ I create the outcomes I want. I’m always on the lookout
- Comparison to competitors
- “ I want to be the best in this field

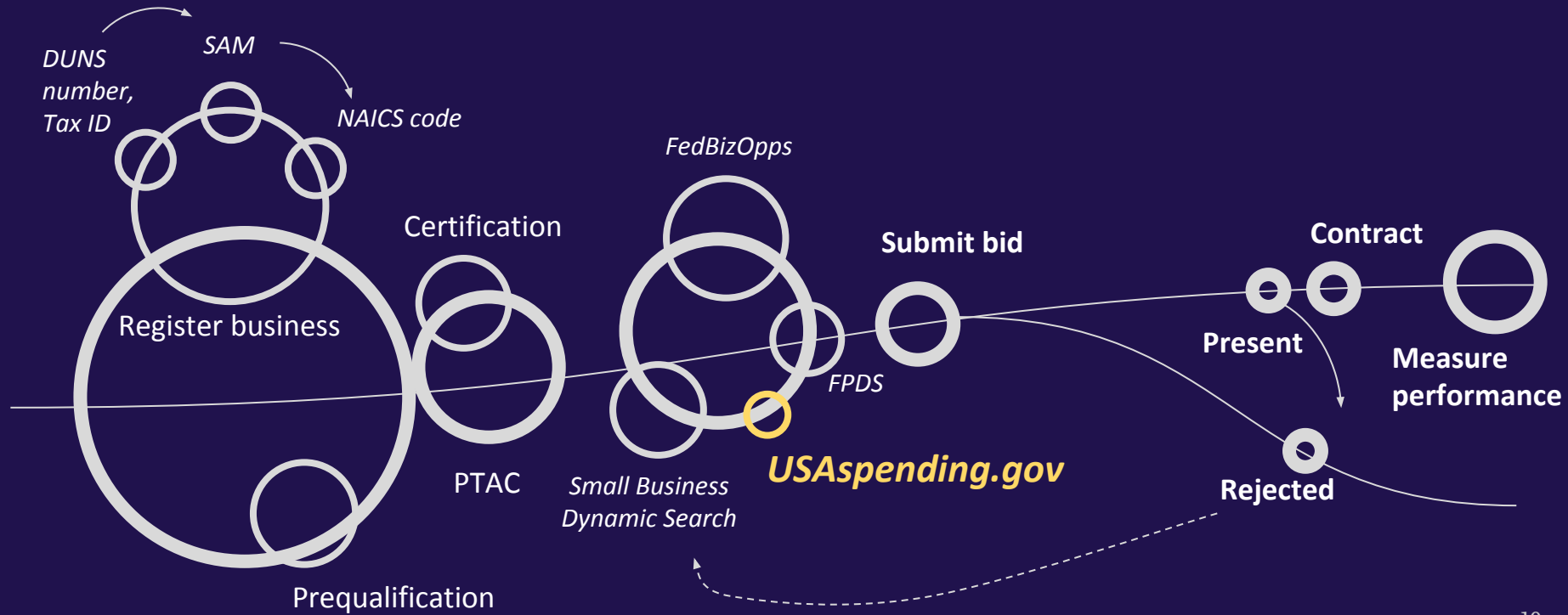
## CONSTRAINED BY

- Time
- Expertise

## STAKEHOLDERS

- Employees
- Customers
- Vendors
- Advisors (e.g. SBA, PTAC)
- Accountant

# Sarah faces an opaque & complex procurement journey





# Sarah's questions as she seeks new opportunities

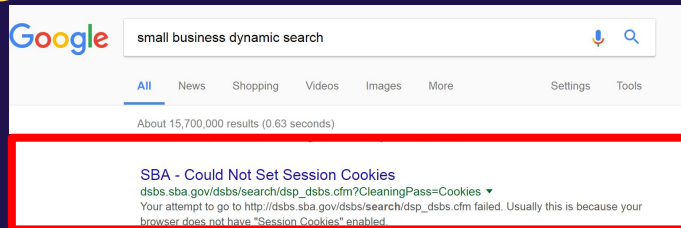
- “ What direct government contracting opportunities have businesses like me taken advantage of?
- “ What subcontracting opportunities are there?
- “ Is it worth it to get government certifications?





# Today, finding answers is not easy

## 1 Small Business Dynamic Search



Google search results for "small business dynamic search". The search bar shows the query and the Google logo. Below the search bar, there are tabs for "All", "News", "Shopping", "Videos", "Images", "More", "Settings", and "Tools". The search results show "About 15,700,000 results (0.63 seconds)". A red box highlights the first search result:

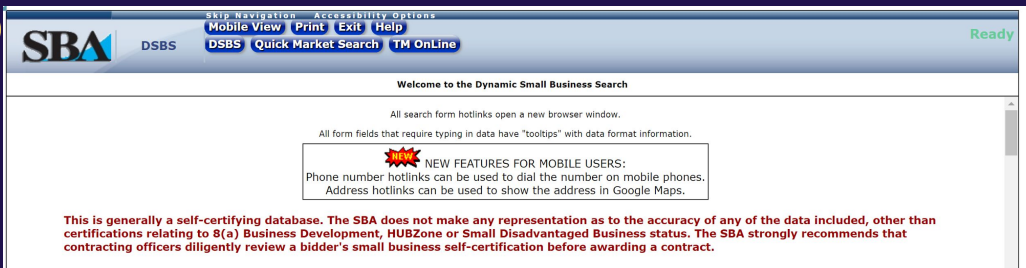
**SBA - Could Not Set Session Cookies**  
 dsbs.sba.gov/dsbs/search/dsp\_dsbs.cfm?CleaningPass=Cookies  
 Your attempt to go to [http://dsbs.sba.gov/dsbs/search/dsp\\_dsbs.cfm](http://dsbs.sba.gov/dsbs/search/dsp_dsbs.cfm) failed. Usually this is because your browser does not have "Session Cookies" enabled.

2

**SBA - Could Not Set Session Cookies**

[http://dsbs.sba.gov/dsbs/search/dsp\\_dsbs.cfm](http://dsbs.sba.gov/dsbs/search/dsp_dsbs.cfm) failed. Usually this is because your browser does not have "Session Cookies" enabled. You may have chosen to disallow the cookie(s) requested. In either case, you must allow the SBA to set Session Cookies in your browser. Try again using the hotlink above.

3



SBA DSBS website header with navigation links: Skip Navigation, Accessibility Options, Mobile View, Print, Exit, Help, DSBS, Quick Market Search, TM OnLine. A green "Ready" indicator is visible in the top right corner.

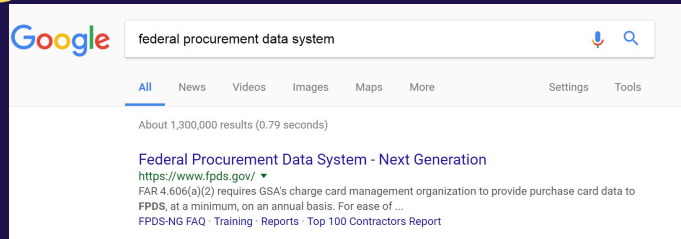
Welcome to the Dynamic Small Business Search

All search form hotlinks open a new browser window.  
 All form fields that require typing in data have "tooltips" with data format information.

**NEW FEATURES FOR MOBILE USERS:**  
 Phone number hotlinks can be used to dial the number on mobile phones.  
 Address hotlinks can be used to show the address in Google Maps.

**This is generally a self-certifying database. The SBA does not make any representation as to the accuracy of any of the data included, other than certifications relating to 8(a) Business Development, HUBZone or Small Disadvantaged Business status. The SBA strongly recommends that contracting officers diligently review a bidder's small business self-certification before awarding a contract.**

## 4 Federal Procurement Data System



Google search results for "federal procurement data system". The search bar shows the query and the Google logo. Below the search bar, there are tabs for "All", "News", "Videos", "Images", "Maps", "More", "Settings", and "Tools". The search results show "About 1,300,000 results (0.79 seconds)".

**Federal Procurement Data System - Next Generation**  
<https://www.fpds.gov/>  
 FAR 4.606(a)(2) requires GSA's charge card management organization to provide purchase card data to FPDS, at a minimum, on an annual basis. For ease of ...  
 FPDS-NG FAQ · Training · Reports · Top 100 Contractors Report

5



Federal Procurement Data System - Next Generation

Navigation: Home, Newsroom, Reports, Status, Worksite, Archives, Training, Help

Login

Log-In:   
 Password:   
 Login

ezSearch

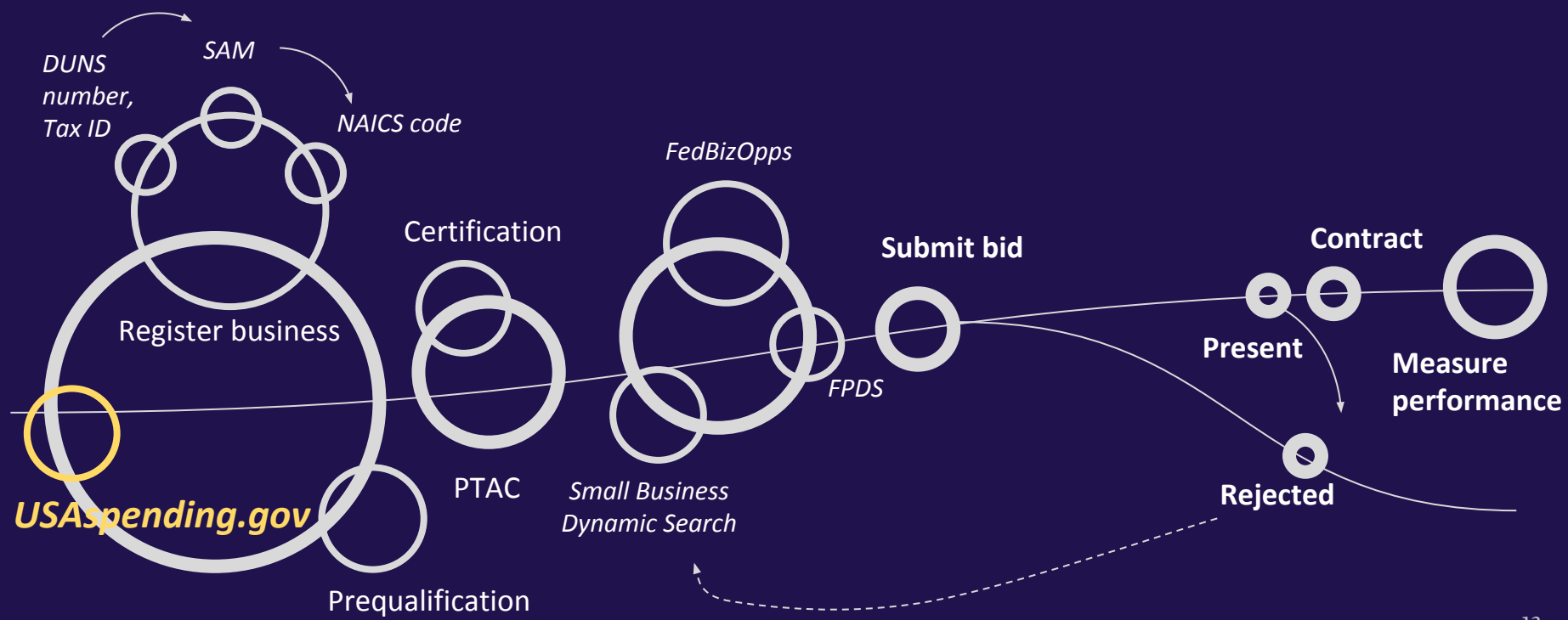
Google-like search to help you find federal contracts...  
 ezSearch contains procurement data as well as additional NASA data (for example, financial assistance actions).

Top Requests

- Recovery Report
- Recovery Data (Recipient-Reported, Cumulative Summary)
- Recovery Data (Recipient-Reported, FY2013Q4)
- Hurricane Sandy Report

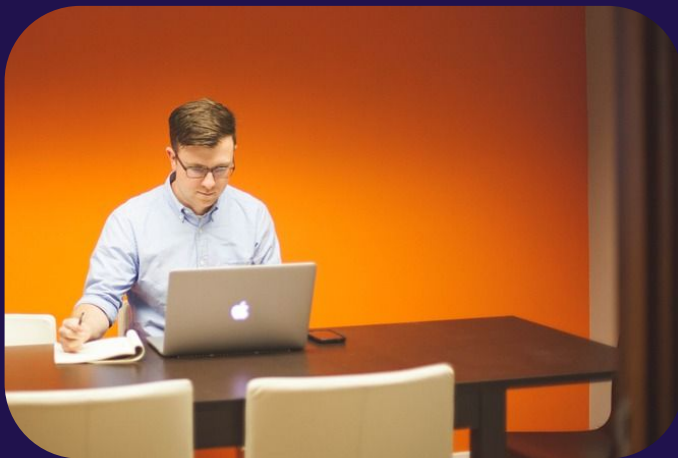
October is CYBER SECURITY AWARENESS month!

# Imagine: Effective planning through USAspending





# Data firms need consistent, timely data



## JAMES

- Chief Product Officer at business intelligence firm
- Based in Washington D.C.
- 520 employees
- \$10M annual revenue

## MOTIVATED BY

- Differentiated offering to attract new clients
- Satisfaction & retention of existing clients



We want to offer our clients every lead that is applicable to them

## CONSTRAINED BY

- Data quality, consistency & timeliness



The data must be correct!

## STAKEHOLDERS

- Clients
- Internal engineering/ product teams
- Data providers/ vendors



# Businesses Like Me

Business Type

Small Business

Location

Savannah GA

Industry (NAICS code)

Graphic Design Services

Certification

Women Owned Small Business

Year

2016

Clark Creative  
 \$154,000 from 4 contracts in FY 2016  
 Top Awarding Agency: Department of Health and Human Services  
 Number of employees: 5

Rethink Design Studio  
 \$1,489,000 from 7 contracts in FY 2016  
 Top Awarding Agency: Department of Homeland Security  
 Number of employees: 67

Applegate Design  
 \$45,000 from 1 contract in FY 2016  
 Top Awarding Agency: Department of Education  
 Number of employees: 13

Focus Lab, LLC  
 \$732,000 from 5 contracts in FY 2016  
 Top Awarding Agency: Department of Health and Human Services  
 Number of employees: 20

# PROTOTYPING

## Prime Contracting Trends

National

State: GA

City: Savannah

Zip Code: 31302

At a Glance

\$12.9 million

Government Market Size

6

Average length of contract in months

2

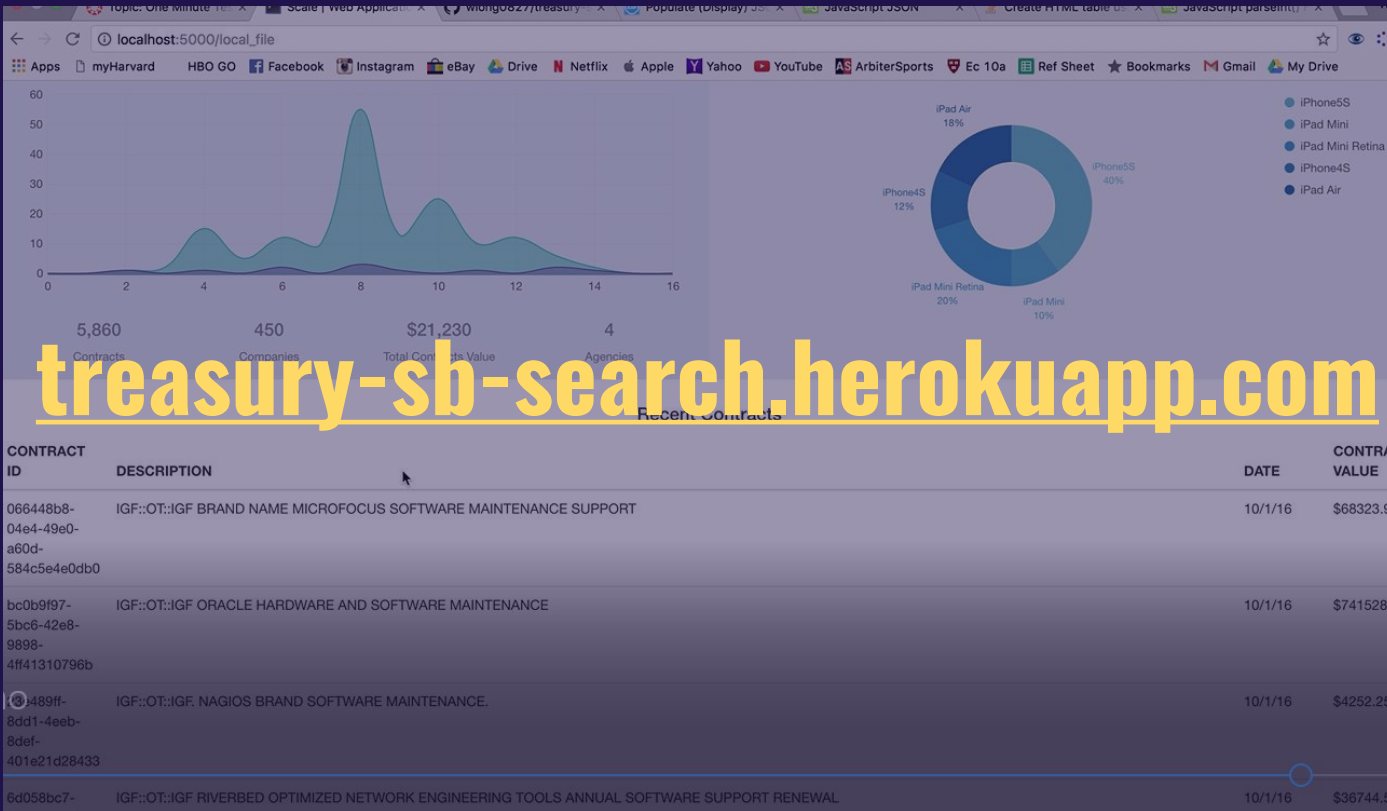
Average number of offers per competitive contract

3.3%

Growth rate in product category in past year

See these contracts

# Businesses Like Me: explore historical govt opportunities



[treasury-sb-search.herokuapp.com](http://treasury-sb-search.herokuapp.com)







# Quorum: predicting Congressional efficiency

## Company

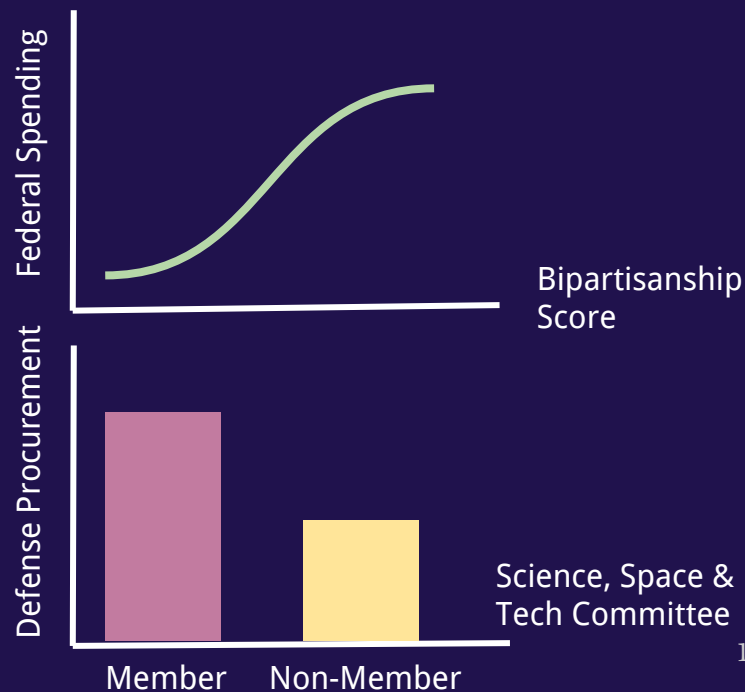


## User Insight/Need

Understanding linkages between Congress members' behavior and federal spending trends in their districts (e.g. committee membership, bi-partisanship voting etc')



## Product





# Thomson Reuters: finding unknown linkages

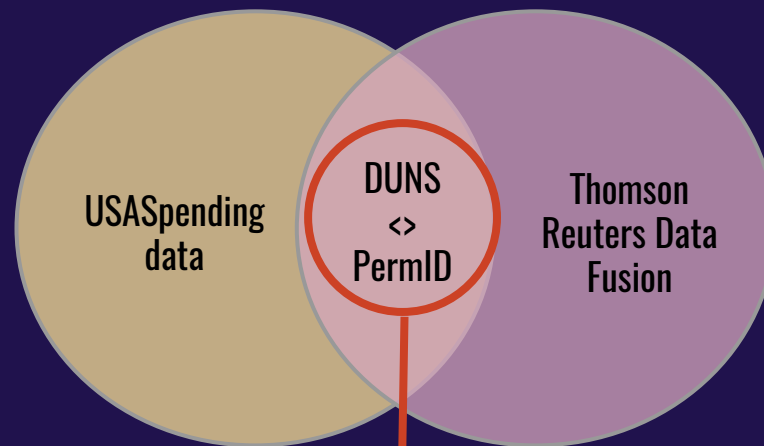
## Company



## User Insight/Need

Need consistent, single entity identifier across all public data sources to tie to companies effectively

## Product



A central repository of cross-references between Legal Entity Identifiers, DUNS and PermID



# Fannie Mae: pricing mortgages more accurately

## Company

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## User Insight/Need

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Federal spending data, as an indicator of overall investment in an area, may inform mortgage pricing model

## Product

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$$\text{Price}_t = P ( X_t, t, \text{USAspending} )$$

# RECOMMENDATIONS





# Integrate past spending and forward-looking procurement

## Insight

Businesses want actionable information that can help them plan

## Near-Term Immediate Actions

- Add fields to the data schema to tie expenditure to agency plans:
  - OMB Exhibit 300s
  - GSA Schedule
  - Line-items from budget

## Long Term Vision

- Create single platform for:
  - Past expenditures
  - Forward-looking opportunities



# Offer analyses and visualizations in addition to raw data

## Insight

Businesses and data firms want insights and second-order takeaways beyond the raw data

## Near Term Immediate Actions

- Add filters for industry, product, certification and sub-contracting
- Easier visualization of time-series data
- Macro-level summaries

## Long Term Vision

- Create data schema for grantees and contractors



# Cross-platform data usage via single identifier

## Insight

Data firms need open source, standardized entity identifiers to enhance interoperability across data and to show business categorizations

## Near Term Immediate Actions

- Add Legal Entity Identifier to Treasury's financial data
  - May still include DUNS
- Thomson Reuters collaboration on cross-referencing PermID

## Long Term Vision

- Roll-out Legal Entity Identifier as default identifier across all government agencies

**THANK YOU**

