

FBI CDE

Sprint 9 Recap & Sprint 10 Plan

April 13, 2017

AGENDA

- **Sprint 9 recap**
- **Approach for moving forward**
- **Sprint 10 plan**
- **Open issues, action items**

Sprint 9 recap

IMPROVING THE GRANULARITY OF THE CDE EXPERIENCE

Evaluate the value and feasibility of presenting crime data from an agency and city perspective. The goal of this effort was to surface key considerations to inform decision making.

Prototype links:

[Homepage](#)

[City Perspective](#)

[County perspective](#)

View our release notes here:

[API release notes \(v2017-04-12\)](#)

[Front end release notes \(v1.2.0\)](#)

View our latest progress here:

<https://crime-data-explorer-demo.fr.cloud.gov/>

Key Activities

- Conducted **8 research sessions** with potential consumers of the CDE to explore and advance the agency and city perspectives.
- **Built prototypes** for assessing new navigation paths from the homepage and an alternative approach for displaying “all violent/property” crimes in a single view.
- Began laying the **technical foundation** for an agency-based perspective.
- Continued to **improve the accessibility of the API** by adding an overview that more clearly explains what to expect from the service and how to use it.
- Selected bug fixes & UI/UX enhancements.

Who we Spoke with...

To assess the value and feasibility of enabling either a city or agency perspective we spoke to 8 participants. These included product designers that have worked with crime data, a data scientist, CJIS staff, and several UCR program staff.

We conducted qualitative research to gather feedback on the user experience for 2 distinct prototypes to better understand needs and expectations.



Crime data product designers

Data Scientist

CJIS Statistician and SA

UCR State Representatives

Key Insights

- Consumers are interested in crime near them and think about crime in terms of cities, towns, and neighborhoods.
- Despite a shared interest in granularity, consumers don't have a shared mental model about the geographical boundaries of cities.
- More granular perspectives can be perceived as “precise”, and can be misleading without proper context. This has implications for how we approach granularity going forward.
- Users want to understand what agencies are covered in the data they are viewing.
- Additional information on the homepage distracts users from the navigational aspect of the map and the explorer view. Although valuable, the current design is confusing.
- State UCR programs see the CDE as a useful tool for submitting data and in some cases, expect real-time updates.
- UCR data experts are in a unique position to provide feedback about the accuracy of the data presented by the CDE and where we need to improve.

HOMEPAGE PROTOTYPE

When additional data is presented on the map it transforms it from a simple navigational element to a tool for comparison.

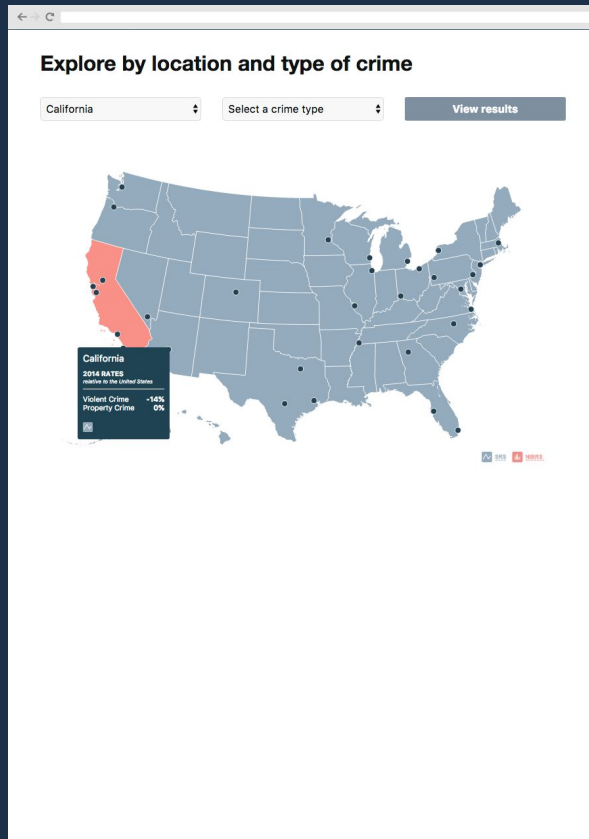
Consumers wanted to know what the dots meant. If the dots represented cities and why those cities.

UCR representatives that understand NIBRS and SRS data wanted to elevate that information to the homepage.

The icons and legend were not associated with NIBRS or SRS data.

Are the dots where crime is really bad in the US?

I know what I need — I'm not someone that is going to go out there and browse around.



Consumers struggled after selecting a location and interpreted the “or” in the button to mean either a crime type or location. Help text was not noticed or helpful in understanding what to do next.

The fact that I have to roll around in order to see individual states/numbers is a bit limiting.

Consumers struggled after selecting a location and interpreted the “or” in the button to mean either a crime type or location. Help text was not noticed or helpful in understanding what to do next.

“I don’t know what a summary (SRS) is...”

“This seems like a high-level statistical tool, rather than an incident tool.”

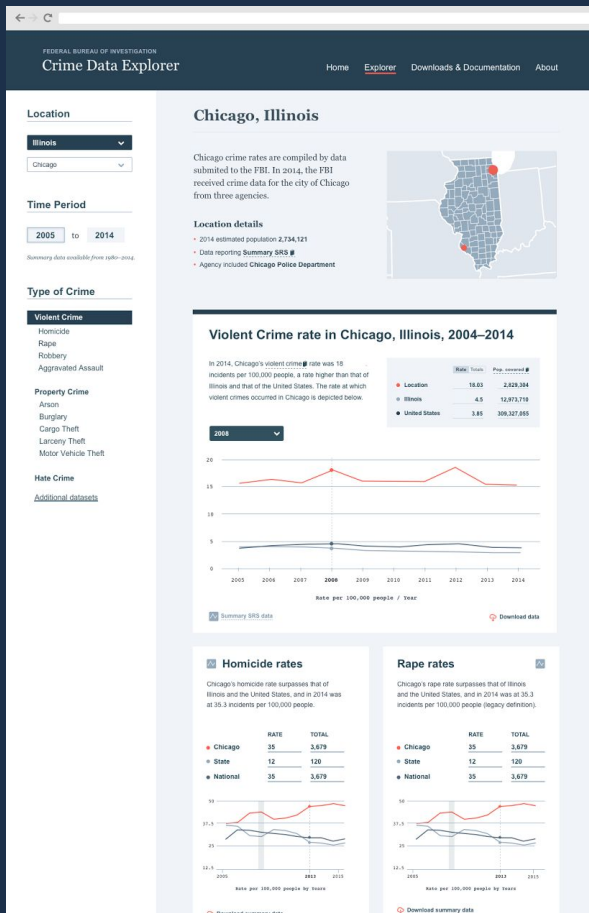
CITY LEVEL VIEW EXPLORATION

Our role is to provide access to UCR data, but there are limitations and risks to visualizing various level of geographical granularity.

When you think of crime you think of it as an environmental factor - without the broader picture/context, it's hard to think about and talk about responsibly. [...] When people see really precise crime dots, they make inferences about what is happening in those areas. That's a danger of mapping.

Users don't have a shared view of city boundaries. This can mean different things for different people — metropolitan area, city police department, etc.

When I think about city boundaries in the US, they tend to be somewhat arbitrary. The choice of boundary can have a big effect on the numbers.



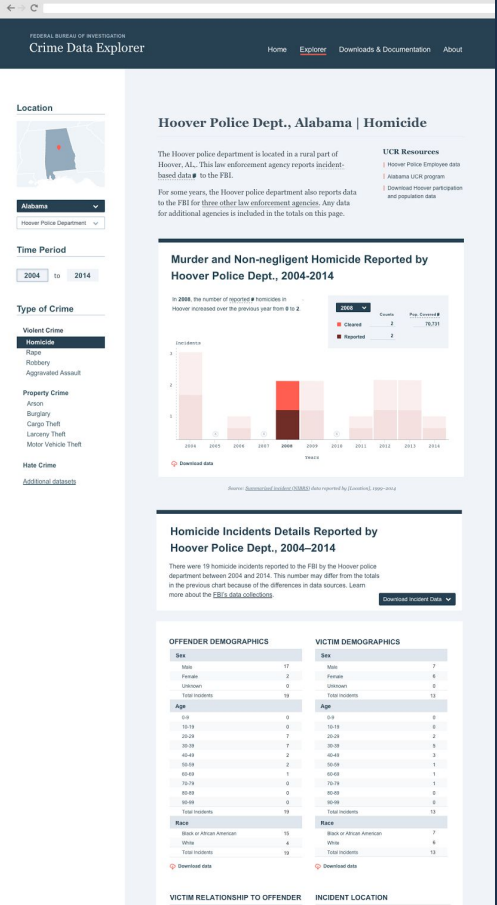
Some users want/expect features from the CDE that we can't provide, like direct comparisons between reporting locations, how local demographics affect crime, how crime is broken down by neighborhood.

I want to know the supporting context behind the data you're showing me - what are the demographics of the area I'm looking at? [...] are people rich or poor, what ethnicity are they [...] What's the general picture of the place I'm looking at and how does that compare with the surrounding area and the nation?"

Consumers found an overview of violent crime with interactive charts valuable.

I'm wondering how granular the data available is: will I be able to see just summary statistics, or individual incident details? Also, are there differences in how the data is reported between states? If so, I want to know that so I can make fair comparisons.

AGENCY LEVEL VIEW EXPLORATION



Consumers expect to navigate to agencies from the side navigation.

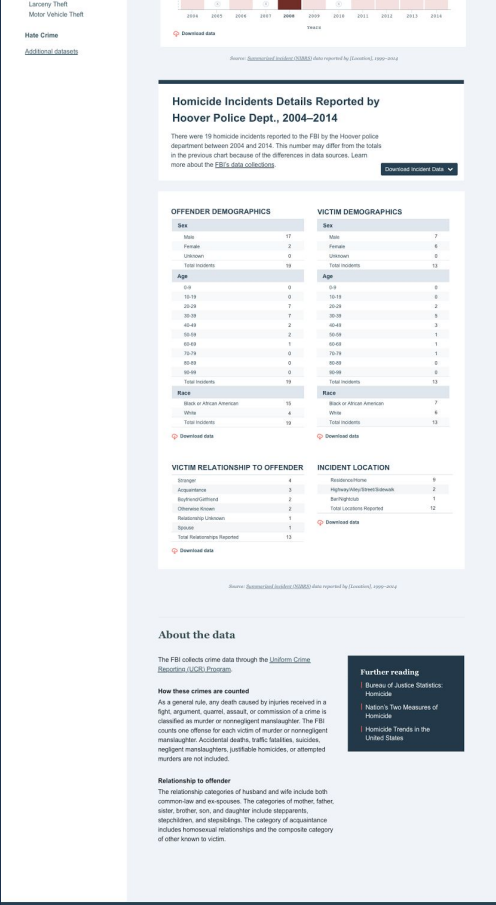
The first thing people do with an interactive map is look for their house.

Consumers want to understand source of the data they are viewing.

Clearance rates are valuable context but need to be defined for consumers.

There is still confusion about the visualization of NIBRS attributes. How these tables are generated needs to be validated by CJIS.

You can't have more offenses than victims.



It's important for consumers to understand when they can make apples to apples comparisons.

[I'm] wondering how granular the data available is - will I be able to see just summary statistics, or individual incident details? Also, are there differences in how the data is reported between states? If so, I want to know that so I can make fair comparisons.

State UCR representatives have concerns about how the data is going to be updated.

Understanding how crime varies by county location is interesting because we know that crime isn't distributed evenly across a state.

Considerations for improving granularity

An agency perspective:

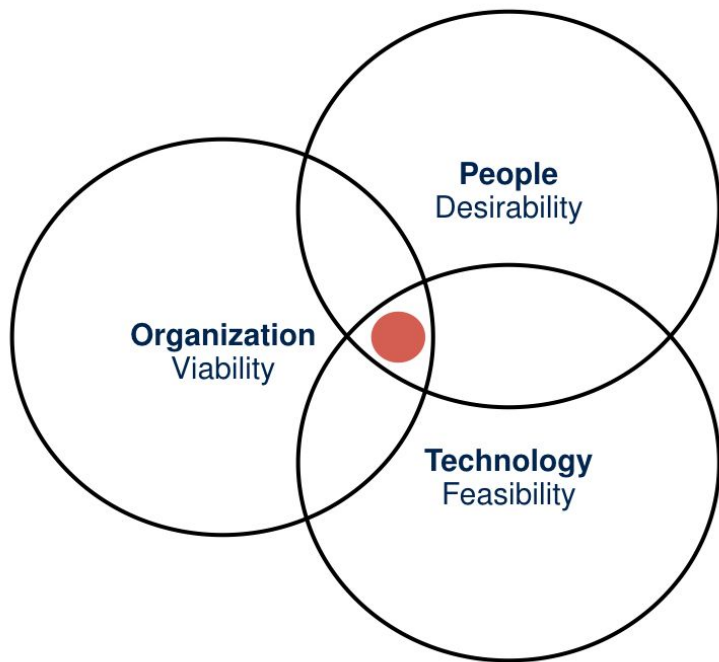
- Agencies provide the most granular view of data but the data is of varying quality and subject to greater volatility
- The onus is on data analysts to aggregate data into meaningful groupings
- Users don't know local agencies
- Some agencies have a population of 0 or are too low to calculate rates
- Agencies may report crimes in through other agencies
- Consumers expect FBI data to contain more details or geocodes for crimes that are unavailable in the UCR data

Additional (and future) opportunities:

- Using crosswalk files to link agencies to census population and zip codes
- Enable search and visualization of counties in the explorer view.
- Enable search and visualization of cities in the explorer view.
- Display NIBRS attributes that vary by crime type.

Approach

MINDSET FOR MOVING FORWARD



Recognize that we are designing for a wide range of needs and constraints, but prioritize **access to the data above all else.**

CDE PRODUCT ROADMAP

We won't get to everything, so what's highest value to pursue in the time we have & how might this roadmap change over time?

Now

Add estimated data
for state & national

Plan & conduct pilot testing

Enable agency perspective

Expand access to the data via
the API

Soon

Add tribal lands & territories to
the CDE experience

Improve the bulk download
experience

Later

Add new geographical
perspectives (cities, counties)

Add new crime types
to the explorer

Add new data layers to enrich
the explorer experience

UCR integration & push
updates

Sprint 10 plan

SPRINT PRIORITIES

Move forward with enabling the agency perspective

Include estimated data in the Explorer

Expand access to the data via the API

DESCRIPTION

Start providing the ability to search for agencies and view SRS and NIBRS data in the explorer view.

Update trend charts to reflect estimated data for state and national perspectives. Add content to explain estimates. Consider the value of participation at the state and national level.

Develop new endpoints to enable broad access to the data via the API and to set the stage for additional perspectives - such as municipal agencies (cities), MSAs, and counties.

KEY QUESTIONS

- How will users react to variations in the data at the agency level?
- What methods of search are most effective for identifying agencies?
- How will we accurately represent “coverage” and state-based participation?
- Will the new estimated data make the CDE match the CIUS reports? If not, why not?
- What do we do with arson?
- Considering that this is an open data project, can we provide access to both estimated and non-estimated data via the API?
- What does the future direction of the CDE look like? Which new endpoints should be prioritized?
- How can we continue to make the API easier to use?

See our sprint 10 planning guide here:

<https://github.com/18F/crime-data-api/projects/11>

Open issues

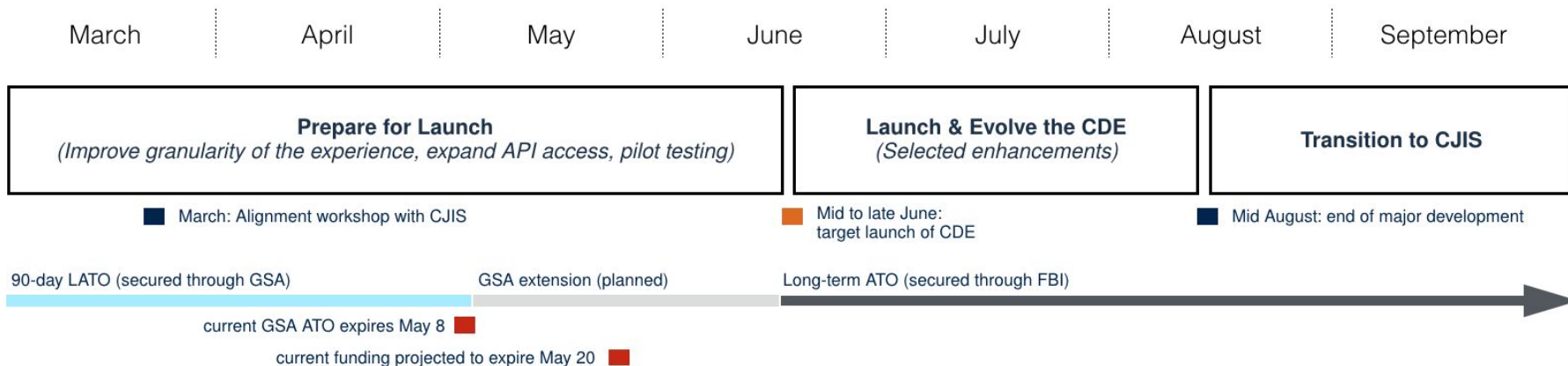
ACTION ITEMS

- Still waiting on the new CNAME mapping for crime-data-api.gov to point to crime-data-api.fbi.gov.domains.api.data.gov. This has been a key blocker for the 18F team for at least a month.
- Cynthia to work with 18F to better understand how changes in agency coverage are tracked by the UCR program and how these changes affect state participation rates.
- Jeremia to work with Mark & Ed to submit the remaining ATO documentation; Mike to monitor and manage the review process as a dependency to launching the CDE.
- Larry & Amber to work with Sammy on developing a timeline and an initial set of participants for pilot testing.
- 18F operations (Anna) to work with Roberta on extending the team past May to support the transition of the CDE to CJIS

Appendix

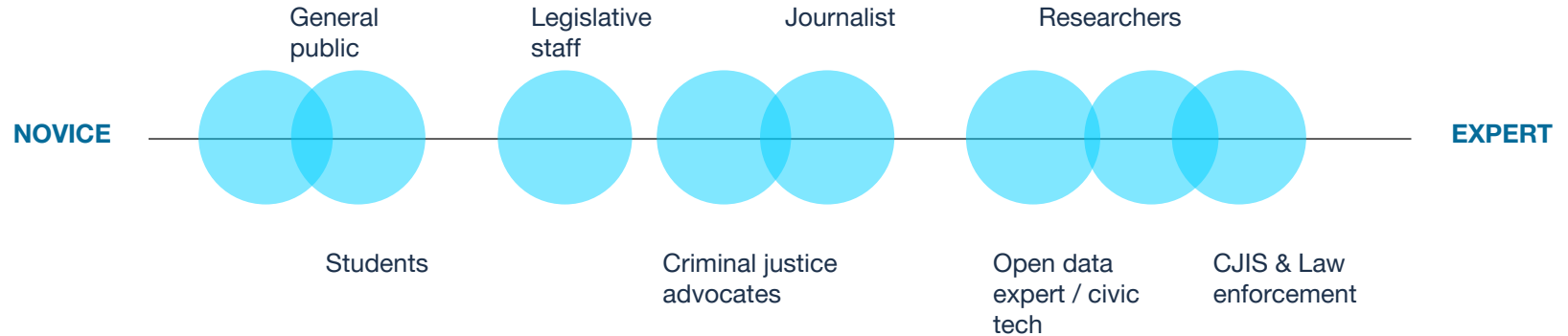
LOOKING AHEAD

The approach for the next few months consists of two main stages - preparing for and launching the CDE and transitioning ownership of the CDE to CJIS.



Who are we solving for?

Designing for a spectrum of needs



SPRINT 9 OVERVIEW

ENGINEERING



DESIGN

Visualizations reflect project priority, not duration. Items may be undertaken concurrently.