FBI CDE

Sprint 8 Recap & Sprint 9 Plan

March 30, 2017

18F

AGENDA

- Sprint 8 recap
- Big picture considerations
- Sprint 9 plan
- Open issues, action items

Sprint 8 recap

OBJECTIVE

Sprint 8 was aimed at aligning around goals & expectations for the CDE and setting direction for the next 60 days.

Specifically, 18F was asked to assess the value and feasibility of visualizing ORI-level data. Our research over the last 2 weeks focused on assessing the accessibility of our API and exploring approaches for surfacing ORI-level data.

View our latest progress here:
https://crime-data-explorer-demo.fr.cloud.gov/

View our release notes here:
API release notes (v2017-03-29)
Front end release notes (v1.1.0)

KEY ACTIVITIES

- Held a workshop at CJIS on March 21, 2017 to align around priorities for the launch of the CDE.
- Built and tested a prototype for selecting ORI-level data within a state: https://crime-data-prototypes.fr.cloud.gov/demos/ori2/
- Added documentation to make the API easier to work with.
- Developed a “data dictionary” and descriptions for the datasets made available by the CDE to improve the download experience.
- Selected bug fixes and UI/UX polish.

Who we Spoke with...

To assess the usability of the API we spoke with 3 participants, which included a member of the media and technical staff from CJIS and 18F.

To understand the value and feasibility of visualizing ORI-level data we spoke with 2 types of participants — state UCR staff and a developer and data visualization specialist from the private sector.

Open data and API experts

State and private sector consumers

Key Learnings

API Usability

The current level of documentation is not sufficient for enabling broad access to the data via the API — more work is needed to better explain what the API can do and how it's structured, especially for those that are unfamiliar with the UCR program.

ORI level navigation

UCR staff we spoke with receive requests from a broad spectrum of consumers that are similar to our target audience for the CDE.

The general public tends to think about crime in terms of "towns and cities", not ORI.

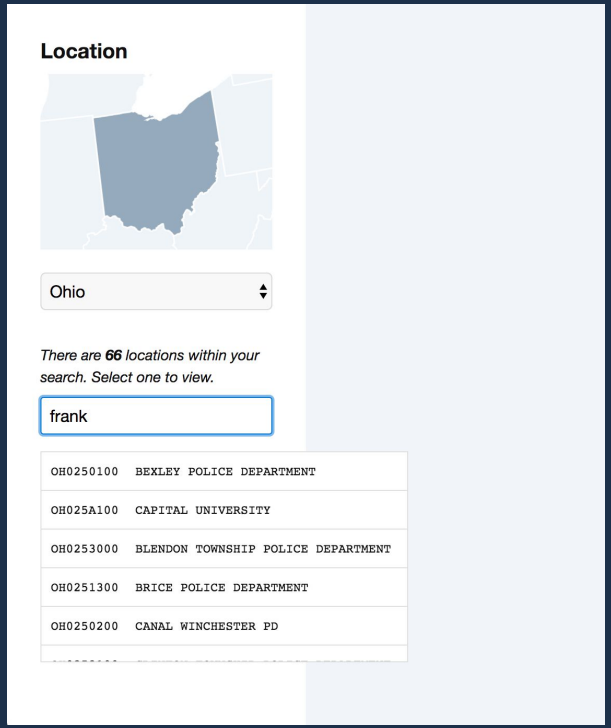
When visualized, low amounts of data raise concerns about the integrity of the data.

ORI LEVEL NAVIGATION

To people who have UCR familiarity, ORI codes are helpful—to those who don't, they are confusing.

Consumers expect to search for granularity: county, city, or neighborhood/specific location.

"I'm probably interested in cities and counties, not necessarily individual agencies [...] Ideally, I would want cities and sub-city granularity, as in how does crime compare across Oakland and where is it on the rise?"



Need to design a solution for agency/location overlap and lack of granularity that will come from rural places getting lumped in with larger reporting agencies areas.

"Here in Iowa, we have lots of small towns, so many of those agencies don't report to us, they report to the sheriff. We can't disaggregate these totals. We'll never know how the crime breaks down across these small towns.

Consumers expect the map to be interactive.

"I would expect to be able to interact with the map to find the areas I care about."

ORI LEVEL NAVIGATION

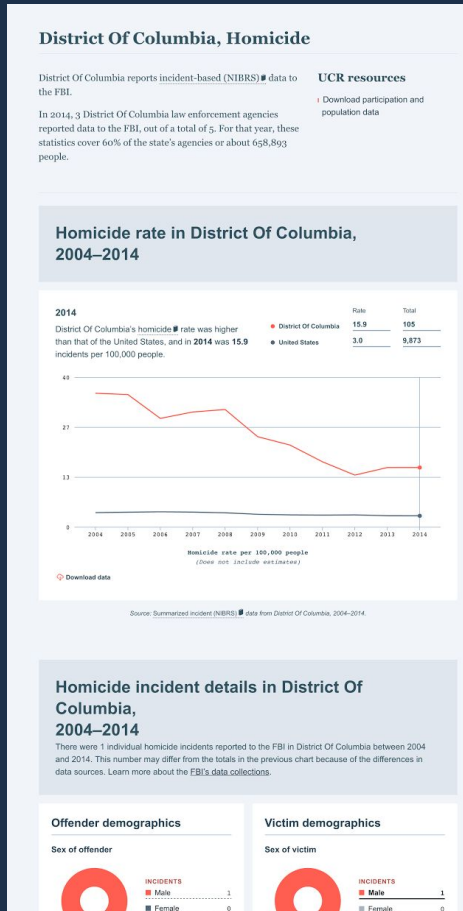
Context and narrative with the data are paramount — especially when it comes to more novice users.

"[...] really like the context that you provide — when we send out the data we have to include a narrative that helps them understand what we're giving them, this makes it much easier."

"Make it abundantly clear what you're looking at."

Consumers want to be able to compare locations.

"I spend a lot of my time helping different agencies/members of the public understand the differences between jurisdictions."



District Of Columbia, Homicide

District Of Columbia reports incident-based (NIBRS) data to the FBI.

In 2014, 3 District Of Columbia law enforcement agencies reported data to the FBI, out of a total of 5. For that year, these statistics cover 60% of the state's agencies or about 658,893 people.

UCR resources

Download participation and population data

Homicide rate in District Of Columbia, 2004–2014

2014

District Of Columbia's homicide rate was higher than that of the United States, and in 2014 was 15.9 incidents per 100,000 people.

	Rate	Total
District Of Columbia	15.9	105
United States	3.0	9,873

Homicide rate per 100,000 people
(Does not include estimates)

Download data

Source: Summarized incident (NIBRS) data from District Of Columbia, 2004–2014.

Homicide incident details in District Of Columbia, 2004–2014

There were 1 individual homicide incidents reported to the FBI in District Of Columbia between 2004 and 2014. This number may differ from the totals in the previous chart because of the differences in data sources. Learn more about the FBI's data collections.

Offender demographics

Sex of offender

INCIDENTS
Male 1
Female 0
Unknown 0

Victim demographics

Sex of victim

INCIDENTS
Male 1
Female 0

Offender demographics

Sex of offender

INCIDENTS
Male 1
Female 0
Unknown 0

Age of offender

INCIDENTS

OFFENDER AGE

There was 1 incident.

Race of offender

1 Black or African American

There were 1 reported offenders.

Download data

Victim demographics

Sex of victim

INCIDENTS
Male 1
Female 0
Unknown 0

Age of victim

INCIDENTS

VICTIM AGE

There was 1 incident.

Race of victim

1 Black or African American

There were 1 reported victims.

Download data

Victim's relationship to the offender

1 Stranger

There were 1 reported relationships.

Download data

Location type

1 Highway/Alley/Street/Sidewalk

There were 1 reported locations.

Download data

Source: Reported incident-based (NIBRS) data from District Of Columbia, 2004–2014.

About the data

The FBI collects crime data through the Uniform Crime Reporting (UCR) Program.

How these crimes are counted

As a general rule, any death caused by injuries received in a fight, argument, assault, or commission of a crime is classified as murder or nonnegligent manslaughter. The FBI counts one homicide offense for each victim of murder or nonnegligent manslaughter. Accidental deaths, traffic fatalities, suicides, negligent manslaughters, justifiable homicides, and attempted murders are not included.

Avoid rankings or comparisons

Since crime is a sociological phenomenon influenced by a variety of factors, the FBI discourages ranking locations or making comparisons as a way of measuring law enforcement effectiveness. Some of this data may not be comparable to

Further reading

- FBI: Uniform Crime Reporting Publications
- Bureau of Justice Statistics: Homicide
- The Nation's Two Measures of Homicide
- Homicide Trends in the United States

Limited data highlights the need to include contextual information about the agency reporting or it looks like a mistake.

"When I see limited/low data, it looks like something is wrong, so tell me why the data is the way that it is."

Tables are helpful but there is desire for more control or interactivity over them.

"[I] really like tables — the fact that it shows population, along with ORI, and data over time."

Big picture

Prevalence of low data scenarios

Over 65% of agencies that report NIBRS are cities of under 10,000 or non-MSA counties.

Population size	% of NIBRS
All cities 250,000 or over	**0**
Cities from 100,000 thru 249,000	**.3%**
Cities from 50,000 thru 99,000	**1.1%**
Cities from 25,000 thru 49,999	**2.55%**
Cities from 10,000 thru 24,999	**5.27%**
Cities from 2,500 thru 9,999	**10.79%**
Cities under 2,500	**24.36%**
Non-MSA Counties	**32.68%**
MSA Counties	**22.94%**

year	state_name	agency_	nibrs	population	offense	reported
2014	Arkansas	Earle	12	2317	Murder and Nonnegligent Homicide	0
2013	Arkansas	Earle	12	2342	Murder and Nonnegligent Homicide	0
2012	Arkansas	Earle	12	2405	Murder and Nonnegligent Homicide	0
2011	Arkansas	Earle	12	2432	Murder and Nonnegligent Homicide	0
2010	Arkansas	Earle	12	2414	Murder and Nonnegligent Homicide	0
2009	Arkansas	Earle	12	2704	Murder and Nonnegligent Homicide	0
2008	Arkansas	Earle	12	2763	Murder and Nonnegligent Homicide	0
2007	Arkansas	Earle	12	2835	Murder and Nonnegligent Homicide	0
2006	Arkansas	Earle	12	2928	Murder and Nonnegligent Homicide	0
2005	Arkansas	Earle	2	2942	Murder and Nonnegligent Homicide	0
2004	Arkansas	Earle	0	2967	Murder and Nonnegligent Homicide	0
2003	Arkansas	Earle	0	2997	Murder and Nonnegligent Homicide	0
2002	Arkansas	Earle	0	3077	Murder and Nonnegligent Homicide	0
2001	Arkansas	Earle	0	3057	Murder and Nonnegligent Homicide	0
2000	Arkansas	Earle	0	3036	Murder and Nonnegligent Homicide	0
1999	Arkansas	Earle	0	3262	Murder and Nonnegligent Homicide	0
1998	Arkans				cide	0
1997	Arkans				cide	0
1996	Arkans				cide	0
1995	Arkans				cide	0
1994	Arkansas	Earle	0	3295	Murder and Nonnegligent Homicide	1
1993	Arkansas	Earle	0	3257	Murder and Nonnegligent Homicide	0
1992	Arkansas	Earle	0	3461	Murder and Nonnegligent Homicide	0
1991	Arkansas	Earle	0	3423	Murder and Nonnegligent Homicide	0
1990	Arkansas	Earle	0	3393	Murder and Nonnegligent Homicide	0

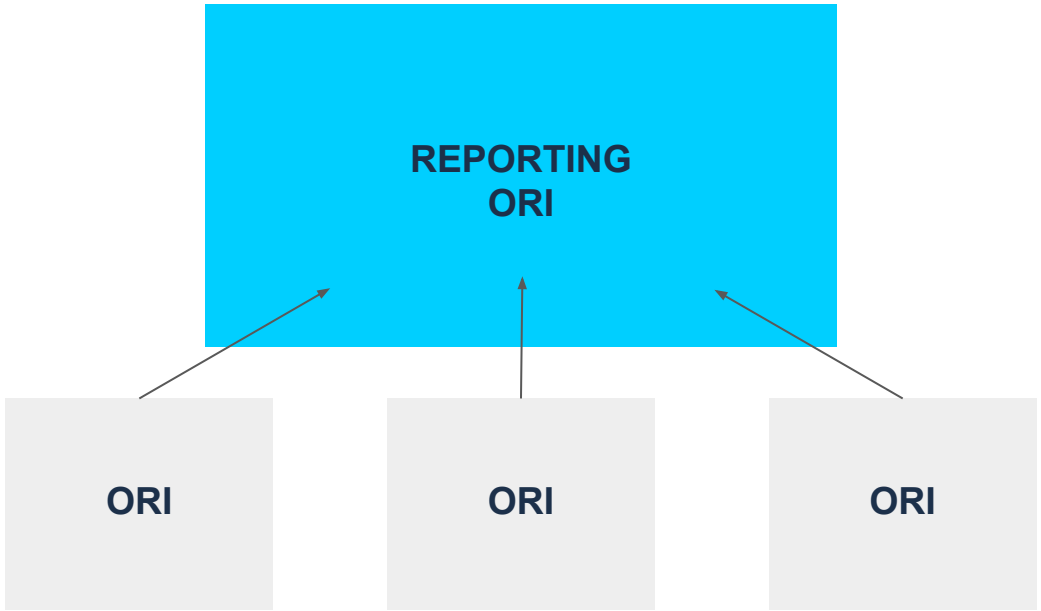
Example of rural Arkansas town reporting 1 homicide in 24 years.

Implications of UCR population data

- Rates can’t be derived without population data. Experts have cautioned against showing trends without rates.
- The lack of population data becomes more problematic the more granular the location because of how the UCR program distributes population across ORIs.
- Our research highlights the importance of context when interpreting UCR data—consumers want to know when they can’t make an “apples to apples” comparison.

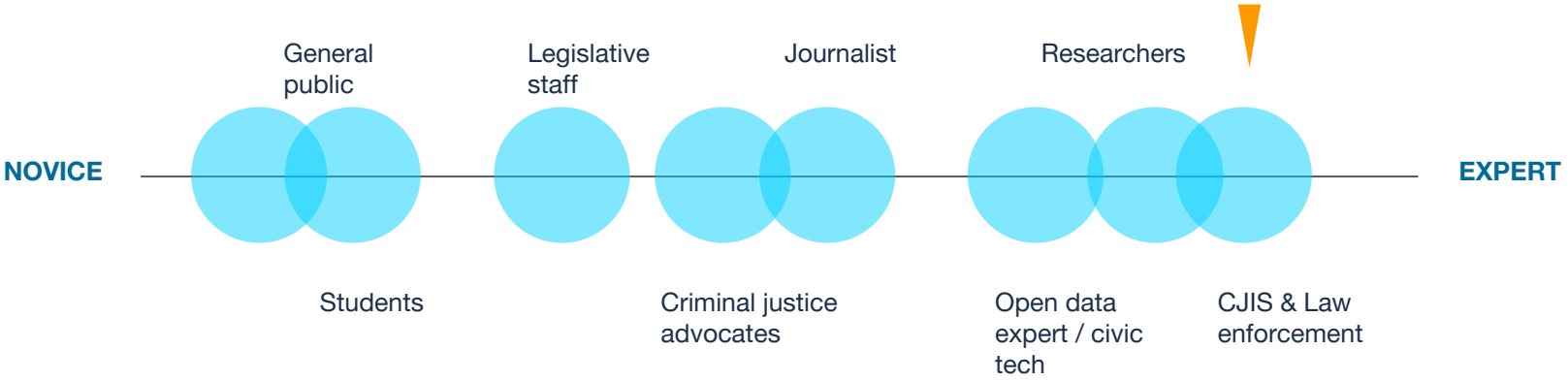
Some ORIs are covered by others

In 2014, 17% of agencies reported their crimes through another agency.



Visualizing ORI data presents complexities

Will we be meeting the needs of a wide range of users?



CONSUMER QUOTES

“The charts and graphs are nice, but just give me the data.”

“We typically don’t use the FBI’s site, we have our own (state-based) data to benchmark against.”

“ORI doesn’t mean anything to me. I tend to think about cities and towns.”

“Low amounts of data make me think something is wrong.”

Recommendations

- **Provide access to ORI-level data via the API and downloads, but *pivot towards visualizing cities instead.***
- **Focus on America's largest cities to start.**
- **If ORI-level data remains the priority, avoid displaying the data as a trend.**

Sprint 9 plan

PRIORITIES

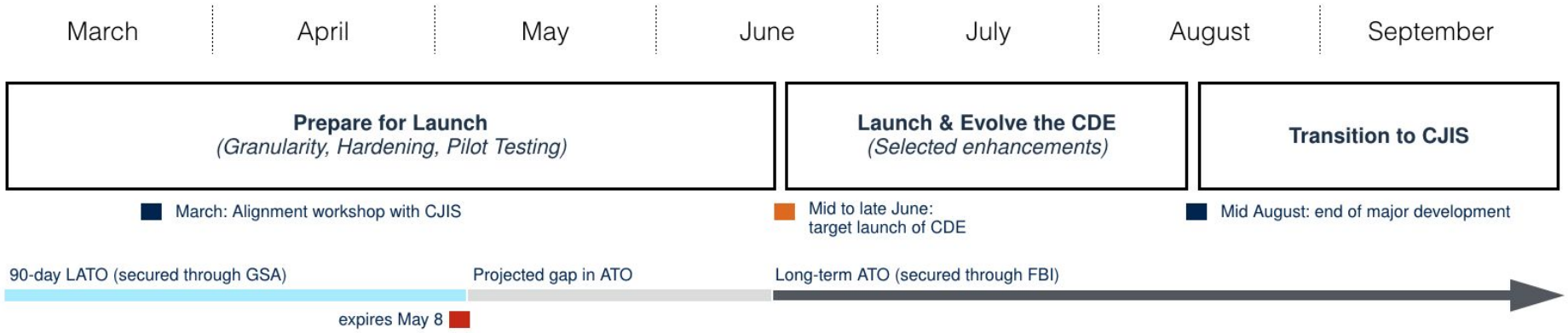
Sprint 9 will focus on evolving opportunities for improving the granularity of the CDE experience.

18F will also conduct activities in parallel that help prepare the site for launch, such as planning for pilot testing.

Focal areas

- Prototype options for displaying ORI-level data (unestimated, non-trend based)
- Expand the API to support ORI-level requests of the data.
- Start incorporating estimated data for national and state trends as it becomes available.
- Explore how we will “filter out” ORIs in the explorer view with less than 12 months of data.
- Assess the extent to which ORIs have a population of 0 and or are covered by another entity and the impact of these factors on the UI/UX.
- Develop a timeline and approach for pilot testing.
- Selected enhancements and bug fixes.

LOOKING AHEAD



Update: 18F plans to extend the current 90-day LATO through June.

Open issues

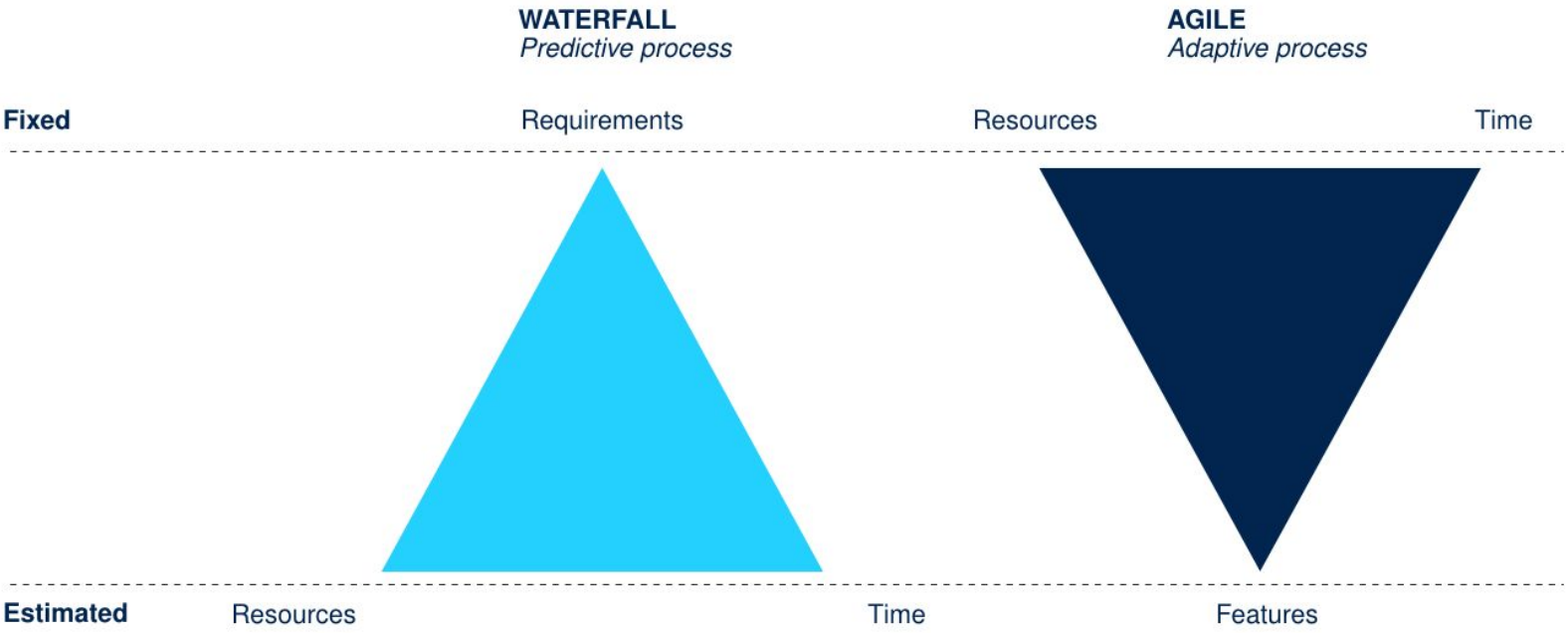
ACTION ITEMS

- Mike P. to coordinate the CNAME mapping for crime-data-api.gov to point to crime-data-api.fbi.gov.domains.api.data.gov.
- Larry to schedule a call with Cynthia & related SMEs to discuss questions around visualizing ORI-level data & how estimates are formulated, as outlined here: https://github.com/18F/crime-data-api/projects/10.
- Loretta to provide 18F with national & state-level estimates (including DC) for the last 20 years.
- Sammy to clarify whether or not we should use estimated data for tribal lands and US territories. Sammy to also assess the feasibility of including more than 20 years of estimated data in the CDE.
- Larry to work with Sammy on developing a timeline and an initial set of participants for pilot testing.
- Larry to work with Roberta on modifying the agreement to extend the team past May.

Appendix

AGILE CONSTRAINTS

With an agile project our resources and time are fixed - so we need to shape the solution accordingly. Unlike a waterfall approach, where the feature set is fixed.



SPRINT CADENCE