

CDE-NIBRS DISCOVERY

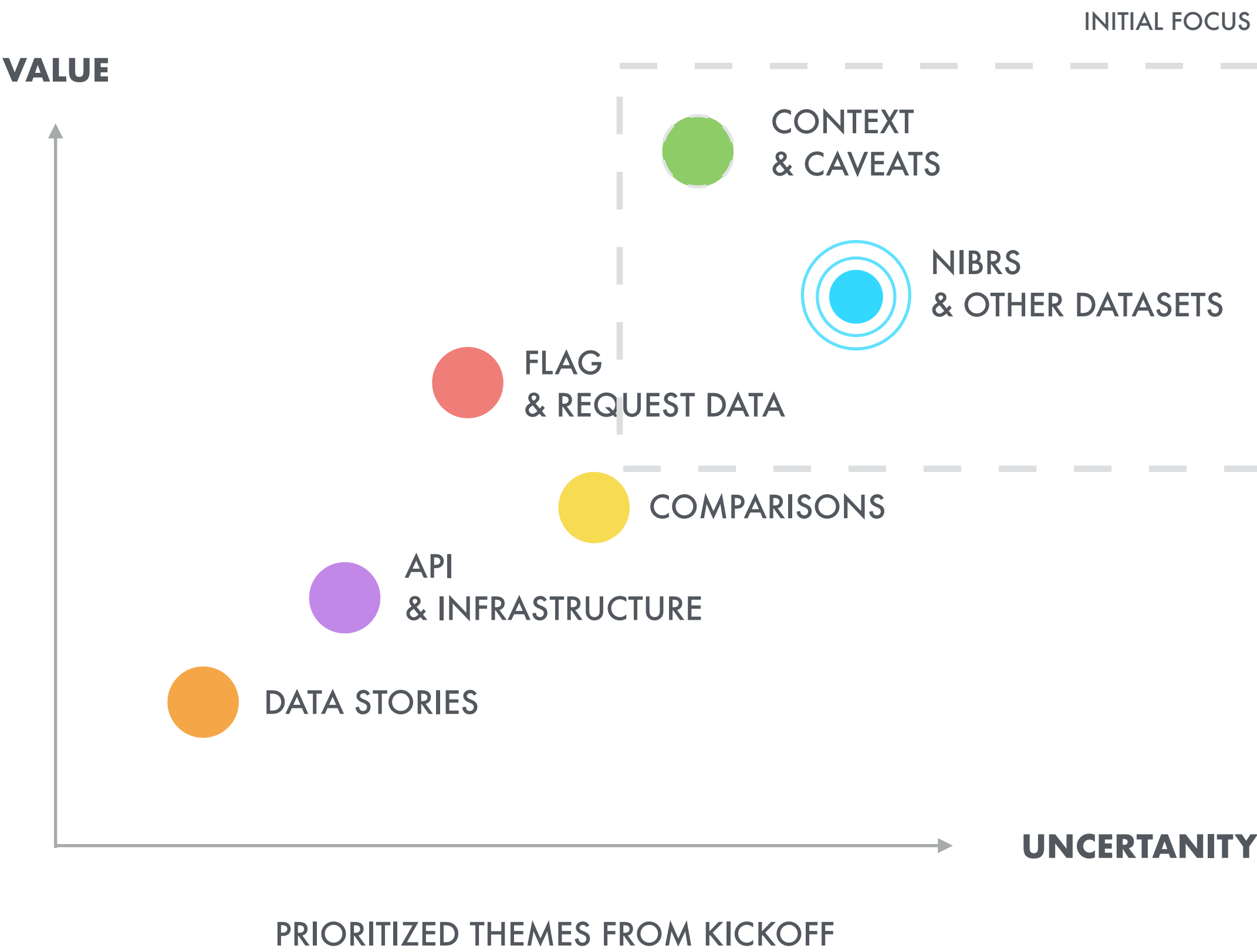
SPRINT 1 RECAP

November 27, 2017

BACKGROUND

During the project kickoff we identified several themes to explore that would help shape the future for the CDE. We also asked participants to prioritize these themes based on their perceived value and uncertainty.

While all of these ideas deserve consideration within the CDE product roadmap we set “expanding the presence of NIBRS” as our initial target for discovery. More specifically, during sprint 1 we sought to understand how NIBRS is used today by both law enforcement and the general public and how the CDE can make this data easier to work with.



HOW CAN THE CDE MAKE NIBRS DATA EASIER TO WORK WITH AND UNDERSTAND?

What are the key barriers to working with NIBRS data?

How can we facilitate analysis using the bulk datasets?

Do users understand how NIBRS data is being tabulated and displayed by the CDE?

HOW CAN THE CDE HIGHLIGHT THE VALUE OF NIBRS?

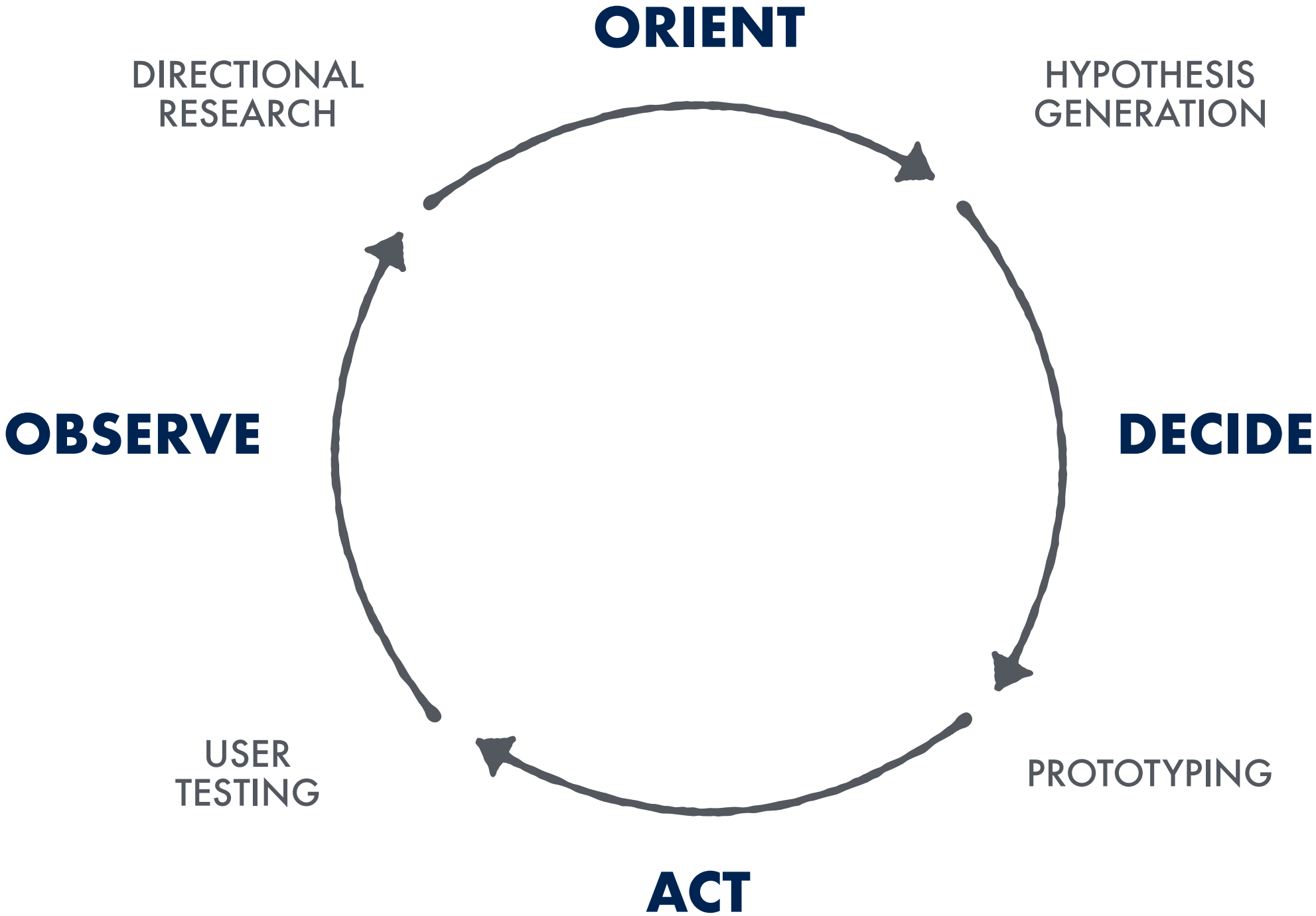
How is NIBRS being used to facilitate analysis or drive decision making today?

What are some common questions about crime that NIBRS can help answer?

To what extent should the CDE be tasked with demonstrating the value of NIBRS?

How might the CDE inform future changes to the NIBRS standard?

APPROACH



7 INTERVIEWS

3 DATA JOURNALISTS
3 UCR REPS

2 PROTOTYPES

REFORMATTED BULK DATASET
DOWNLOAD PREVIEW

KEY INSIGHTS

WORKING WITH BULK DATA

MOST OF OUR AUDIENCE IS EXPERIENCED WORKING WITH LARGE & COMPLEX DATASETS. Joining tables and working across data elements isn't unexpected or perceived as an obstacle to analysis.

USERS VALUE CONTEXT ABOUT THE DATA THAT HELPS THEM UNDERSTAND WHAT THEY'RE WORKING WITH. They want to orient themselves with the data by scanning its contents and assess how factors like "participation" or "population covered" may affect their analysis.

MANY FIND A SINGLE YEAR VIEW OF THE DATA LIMITING. Repackaging this information in a time-series format would provide a broader view of the data; but also raises challenges around file size.

THE CONTENT OF THE BULK FILES NEEDS REVIEW. Our testing revealed that some data elements, like gang related activity and accounting for multiple offenses per incident, were missing from the files. We also learned that including some non-IBR elements, like agency location, was valued by users.

PRESENTING NIBRS DATA

IT IS NOT CLEAR HOW NIBRS TOTALS ARE BEING TABULATED. The UCR staff we spoke with want to know the methodology being used by the CDE and suggest that these methodologies be vetted by the UCR community.

THERE IS A LACK OF TRUST IN NIBRS ACCOUNTING METHODS. Variations in how the UCR community works with NIBRS and the complexity of the data might undermine trust in the CDE.

LAW ENFORCEMENT VALUES ACCURACY IN REPORTING, BUT ALSO EXPECTS MISTAKES. They expect to be able to "flag" data for review and engage with CJIS about corrections.

BULK DOWNLOAD PREVIEW

NIBRS data by state

Not every state reports NIBRS data. For more information see [About](#).

West Virginia

▼

View data preview

West Virginia | 2016 State overview

Agencies participating in NIBRS program
73%

Population covered in reporting
83%

In **2016**, the FBI recieved NIBRS data from **437** law enforcement agencies out of **528** agencies in West Virginia.

2016 State overview

Percent of county participation in NIBRS data reporting to the FBI

Population

1,831,102

Rural households

75%

Urban households

25%

Source: *Census Reporter*, ACS 2016 1-year unless noted

What's in the download

Due to the size of multiyear incident datasets we grouped each NIBRS offense into one of three categories: [crimes against persons](#), [crimes against property](#), and [crimes against society](#).

Choose crime category

▼

DATA TYPE

NIBRS

YEARS

1998-2016

LAST MODIFIED

January 1, 2016

RELEASE DATE

January 1, 2016

VIEWS

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DOWNLOADS

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LICENSE

Open data

FILE SIZE

-- MB

-- MB unzipped

FILES	DESCRIPTION
arrestee.csv	Information about the persons arrested in a reported crime incident and the circumstances of their arrest.
incident.csv	The incidents reported by the participating law enforcement agencies within a state. All NIBRS details can be joined against a unique incident ID.
offender.csv	Information about the reported offenders in an incident.
offense.csv	Information about the types of offenses reported in an incident.
property.csv	information about the types of property reported as stolen in an incident.
victim.csv	Information about the type of victims reported in an incident.
Data dictionary	A document defining related terms.
NIBRS map	a diagram of the NIBRS data structure that shows how various segments & data elements relate.
License	Open data licensing document

OVERVIEW OF FILE STRUCTURE

Download data

LARGE FILES AVAILABLE IN SEGMENTS
(e.g, crimes against people, or offense type)

OVERVIEW OF FILE STRUCTURE

CONFIDENCE INDICATORS

METADATA FOR DOWNLOAD

https://gsa.invisionapp.com/share/6KEKI4GN#/screens/265087631

PREVIEW CONCEPTS APPLIED TO OTHER AREAS

DATA TYPE

Hate Crime

YEARS

1991-2016

LAST MODIFIED

January 1, 2016

RELEASE DATE

January 1, 2016

VIEWS

200

DOWNLOADS

150

LICENSE

Open data

FILE SIZE

54.9 MB

545.3 MB unzipped

Download data

What's in the download

FILES	DESCRIPTION
hate_crime.csv	Information about the persons arrested in a reported crime incident and the circumstances of their arrest.
Data dictionary	A document defining related terms.
License	Open data licensing document

Data preview (first 10 rows)

	STATE_POSTAL_ABBR	YEAR	BIAS_MOTIVATION	COUNT
1	WV	2014	Anti-Asian	1
2	WV	2014	Anti-Bisexual	1
3	WV	2014	Anti-Black or African American	8
4	WV	2014	Anti-Catholic	2
5	WV	2014	Anti-Male Homosexual (Gay)	3
6	WV	2014	Anti-Mental Disability	1
7	WV	2014	Anti-Not Hispanic or Latino	1
8	WV	2014	Anti-Physical Disability	1
9	WV	2014	Anti-White	9
10	WV	2014	Anti-American Indian or Alaska Native	1

SAMPLE PREVIEW FOR HATE CRIME

FEDERAL BUREAU OF INVESTIGATION

Crime Data Explorer

Home

Explorer

Downloads & Documentation

About

Location

Tennessee

Search for an agency

Time Period

2004

to

2014

Type of Crime

Violent Crime

All Violent Crime

Homicide

Rape

Robbery

Aggravated Assault

Property Crime

All Property Crime

Arson

Burglary

Cargo Theft

Larceny Theft

Motor Vehicle Theft

Tennessee

Homicide rates for Tennessee are derived from incident-based (NIBRS) reports voluntarily submitted to the FBI.

In 2014, the FBI estimated crime statistics for Tennessee based on data received from 582 law enforcement agencies out of 585 agencies in the state that year.

Resources

About homicide data

Download participation and population data

Tennessee UCR Program

FBI UCR Program

Percent of population covered by NIBRS reporting by county

0-50% 50-75% 75-100%

6,651,194 66.67% 33.33%

POPULATION LIVE IN URBAN AREAS LIVE IN RURAL AREAS

Source: Census Reporter, ACS 2016 1-year unless noted

Homicide rate in Tennessee, 2004–2014

MAKING BETTER USE OF THE MAP ON THE STATE OVERVIEW

RECOMMENDATIONS & NEXT STEPS

DATA VALIDATION

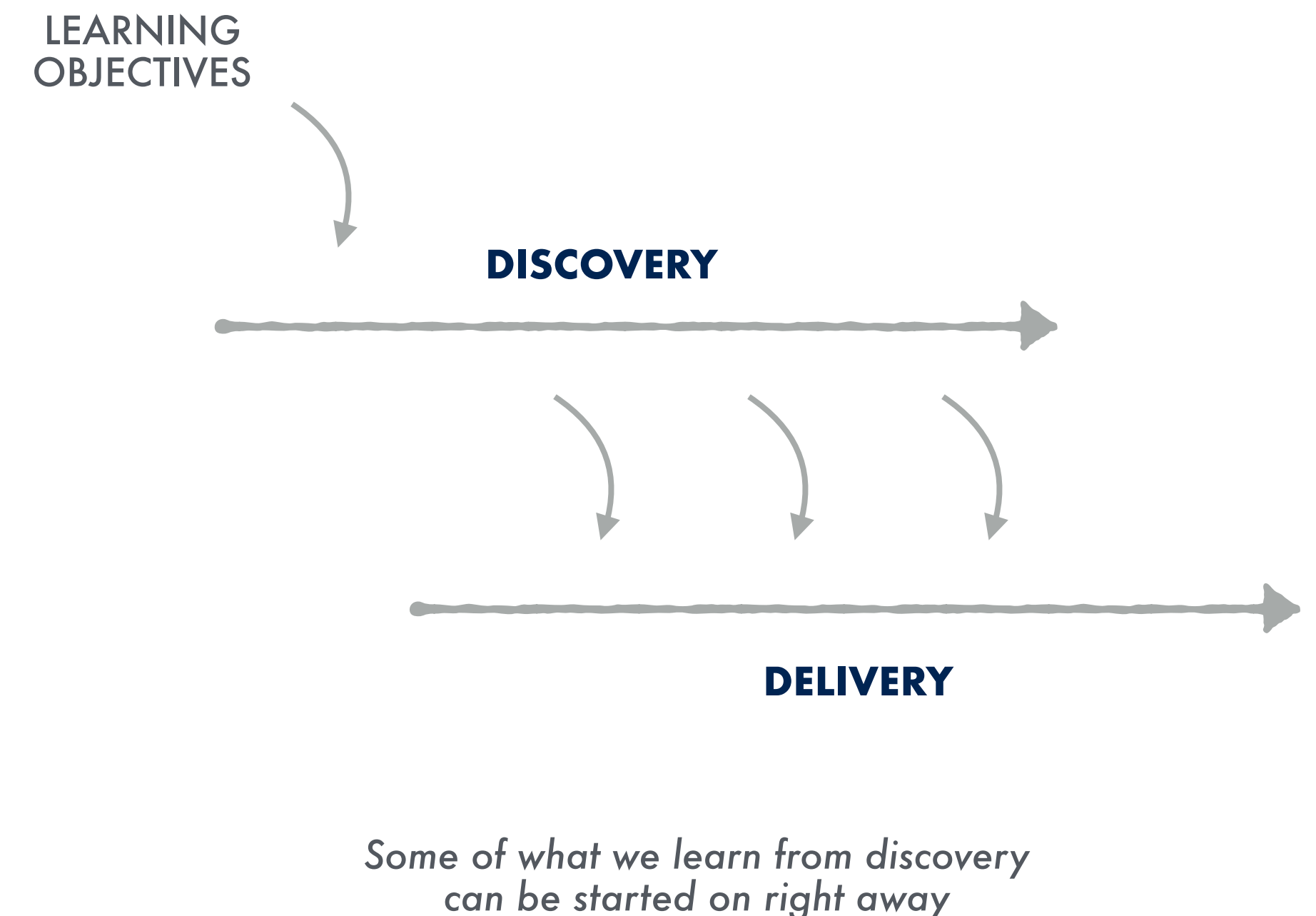
- Review current methodologies for tabulating NIBRS data.
- Explore ways of providing users with easy access to these details (e.g., footnotes or related links).

DATA DEFINITION

- Review the current content & format of the bulk NIBRS downloads and ensure that all necessary data elements are presented correctly.
- Define 3-5 specialized datasets to add to the Download & Documentation page that help demonstrate the value of NIBRS data (i.e., drug possession charges, gun violence, gang related crime, animal cruelty).

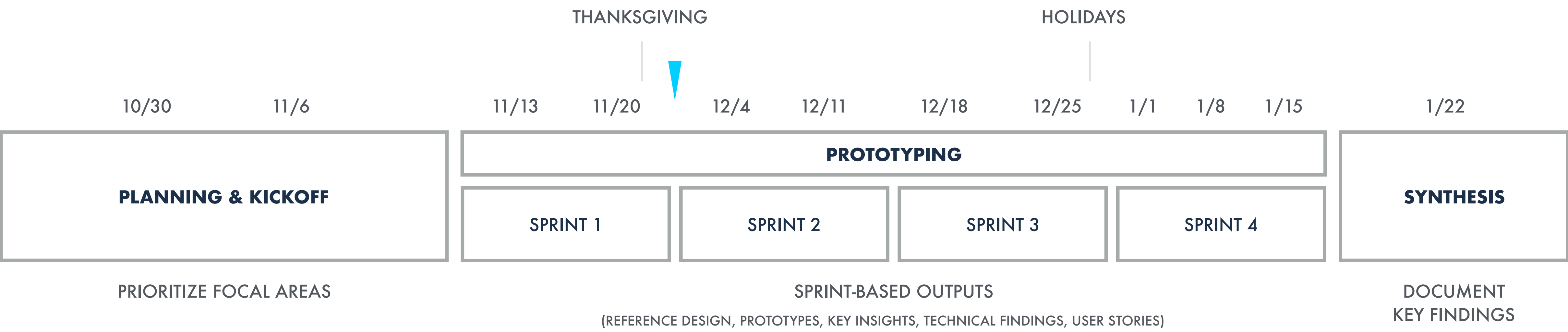
IMPROVE BULK DOWNLOADS

- Consider offering bulk NIBRS data in a time-series format, rather than as a single year. Explore the value/cost of this potential change and the tradeoffs between offering smaller, more numerous files and larger reports that are potentially more difficult to use and maintain.
- Add a preview that provides an at-a-glance view of the data available for download. This could include a preview of the first 10 rows of data available and other metadata that helps orient users to the data.
- Consider including materials like the readme and data dictionary in the downloads themselves, rather than as related links.



APPENDIX

TIMELINE & APPROACH



DURING WEEKS 1-2 WE WILL REVIEW THE VISION & GOALS FOR THE CDE AND DEVELOP AN INITIAL SET OF HYPOTHESES TO GUIDE PROTOTYPING.

WE’LL ALSO DEFINE TEAM ROLES, RESPONSIBILITIES, AND PROCESSES FOR THE ENGAGEMENT.

THE PRODUCT OWNER WILL DIRECT 18F TOWARDS THE MOST VALUABLE LEARNING OPPORTUNITIES BASED ON THE PRIORITIES THAT EMERGE FROM KICKOFF.

THE TEAM WILL DOCUMENT & SHARE WHAT IS LEARNED FROM EACH SPRINT TO INFORM SUBSEQUENT ITERATIONS.

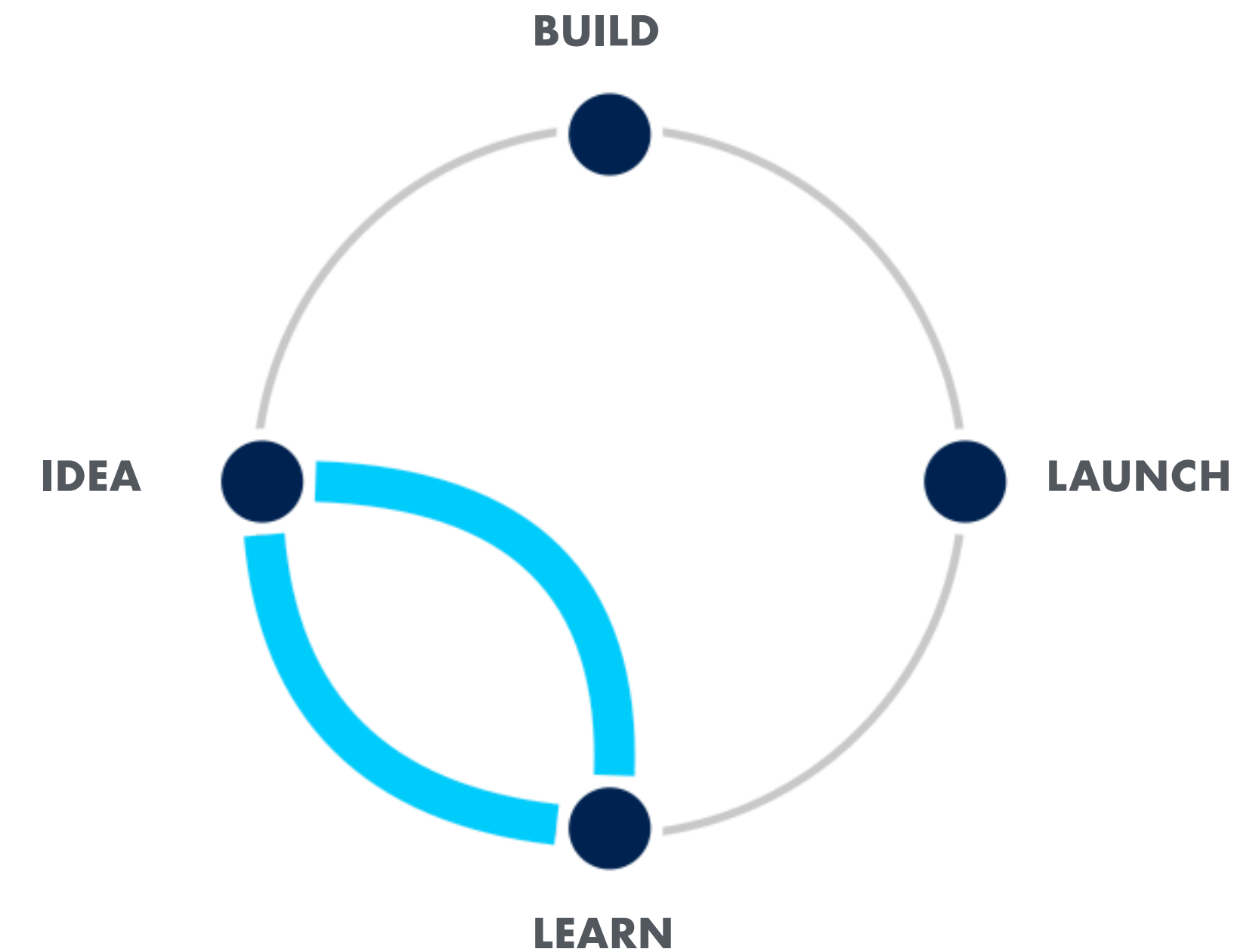
THE PROJECT TEAM WILL SHARE IT’S KEY LEARNINGS FROM PROTOTYPING AND OFFER RECOMMENDATIONS FOR NEXT STEPS. THESE LEARNINGS WILL INFORM A REVISED PRODUCT BACKLOG & ROADMAP FOR THE CDE.

BACKGROUND

THE GOAL OF THIS **DISCOVERY EFFORT IS TO DEFINE HOW THE CDE MAY BE EVOLVED TO MEET STAKEHOLDER & USER NEEDS.**

We will work with our Product Owner to define and prioritize opportunity areas to explore, such as expanding the availability of NIBRS in the CDE, and leverage techniques like design thinking and prototyping to shape solutions.

These activities will result in a revised product vision & roadmap that helps align stakeholders and guides future development efforts at CJIS. Since 18F's focus is "future-oriented" it will not deliver new features as part of this scope of work; however, it will provide coaching, knowledge transfer, and other activities to build capacity within CJIS to own and evolve the CDE.



DISCOVERY ALLOWS US TO EXPLORE IDEAS QUICKLY AND ASSESS VALUE & FEASIBILITY BEFORE COMMITTING TO NEW DIRECTIONS.

18F