FBI CDE

Executive team alignment

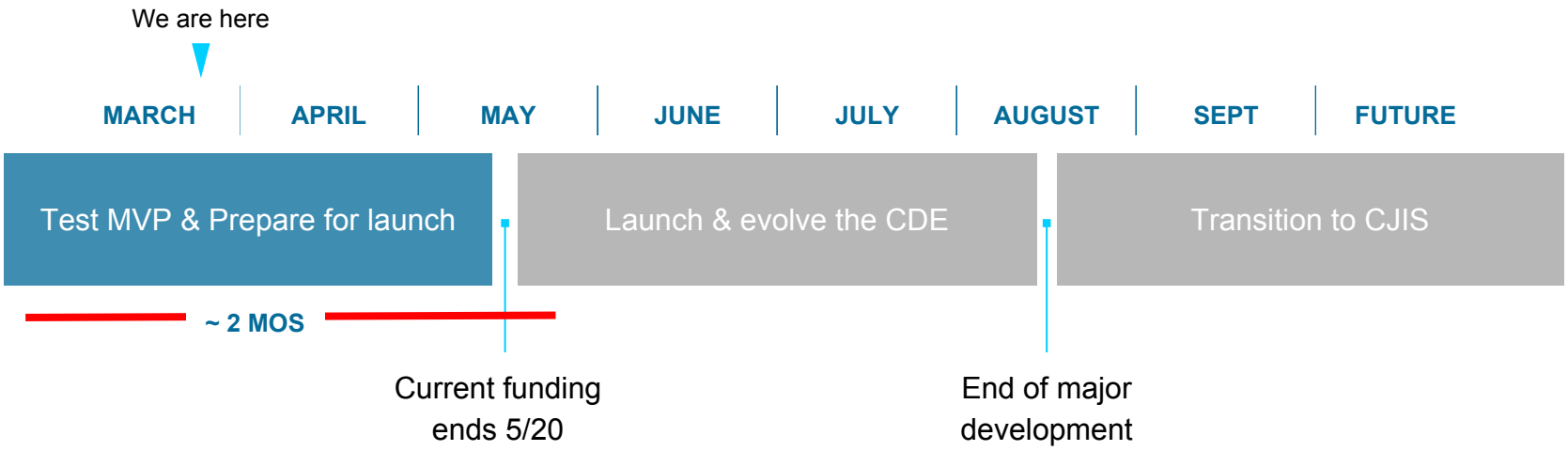
March 21, 2017

18F

AGENDA

- Key considerations for expanding the visualization of crime data
- Set priorities for the next 60 days
- Agree on approach & next steps

THE DISTANCE TO GO



PERSPECTIVE

We've built something that resonates with users and has the potential to change the public's perception of crime. It also represents a major win for CJIS & the FBI.

Let's make it work.

Factors to consider

UCR participation varies at different levels of granularity.

Accurately representing the data down to the agency level is **complex** and requires further investigation.

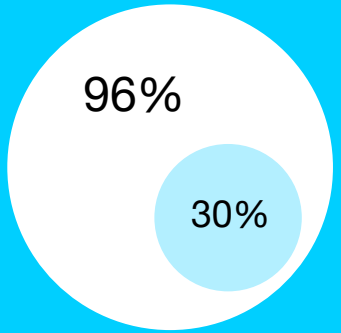
The integrity of the data has not been validated and raises concerns around reporting, workflows, and processing

User needs around a more granular experience are uncertain & pursuing them carries an **opportunity cost.**

Participation

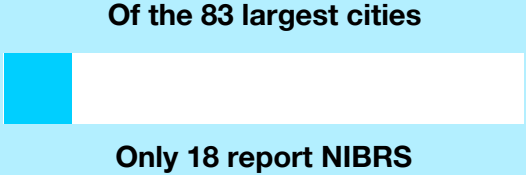
A lack of data not only affects the user experience, but may negatively impact the perceived value & brand of the UCR program.

NATIONAL / STATE



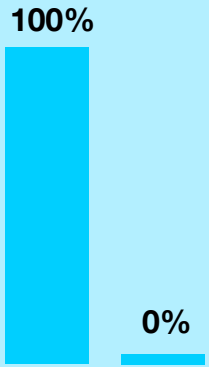
96% of the population is represented by the UCR program, but only **30%** is covered by NIBRS

CITIES



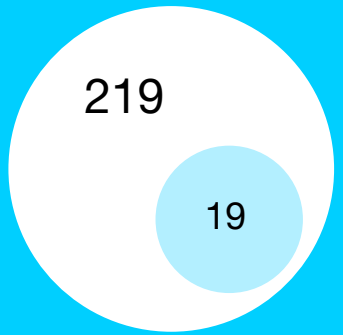
The largest city that reports NIBRS is #19 Columbus, OH. NIBRS at the city level covers only 3% of the national population.

COUNTIES



NIBRS participation at the county level tends to be **all or nothing**. Agencies & cities can span counties.

TRIBAL LANDS & US TERRITORIES



Just **9%** of tribal agencies report NIBRS. Territory reporting is sparse.

FEDERAL BUREAU OF INVESTIGATION

Crime Data Explorer

Home | Explorer | Downloads & Documentation | About

Location

Illinois

Chicago

Time Period

2005 to 2014

Summary data available from [1961–2015]
Incident data available from [1996–2015]

Type of Crime

Violent Crime
- Homicide
- Rape
- Robbery
- Aggravated Assault

Property Crime
- Arson
- Burglary
- Cargo Theft
- Larceny Theft
- Motor Vehicle Theft

Hate Crime

Additional datasets

Chicago, Illinois | Homicide

Chicago, Illinois reports summary (SRS) data to the FBI.

In **2014**, **751** Illinois law enforcement agencies reported data to the FBI, out of a total of **1,048**. For that year, these statistics cover **72%** of the state's agencies or about **12,506,461** people.

Chicago is an urban area, with a population of **2,724,121** being **covered by UCR** in **2014**.

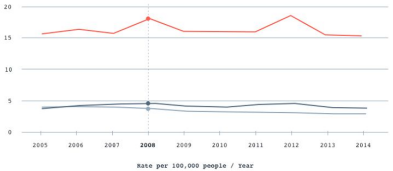
UCR Resources
- Chicago Police Employee data
- Illinois UCR program
- Download participation and population data

Homicide rate in Chicago, Illinois, 2004–2014

2008

Chicago's homicide rate was significantly higher than that of Illinois, and in **2008** was **18.03** incidents per 100,000 people. These statistics are reported by the Chicago Police Department and cover about **2,829,304** people.

	Rate	Totals	Pop. covered
Chicago	18.03		2,829,304
Illinois	4.5		12,973,710
United States	3.85		309,327,055



Download data

Source: Summary (SRS) data reported by Chicago, 2005–2014

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, quarrel, assault, or commission of a crime is classified as murder or nonnegligent manslaughter. The FBI counts one offense for each victim of murder or nonnegligent manslaughter. Accidental deaths, traffic fatalities, suicides, negligent manslaughters, justifiable homicides, or attempted murders are not included.

Further reading
- Bureau of Justice Statistics: Homicide
- Nation's Two Measures of Homicide
- Homicide Trends in the United States

Homicide incident details in District Of Columbia, 2000–2014

There were 4 individual homicide incidents reported to the FBI in District Of Columbia between 2000 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 4
- Female 0
- Unknown 0

Age of offender

INCIDENTS

There were 4 incidents.

Race of offender

4 Black or African American

There were 4 reported offenders.

View by # %

Download data

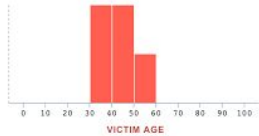
Victim demographics

Sex of victim

INCIDENTS
- Male 4
- Female 1
- Unknown 0

Age of victim

INCIDENTS



There were 5 incidents.

Race of victim

4 White
1 Black or African American

There were 5 reported victims.

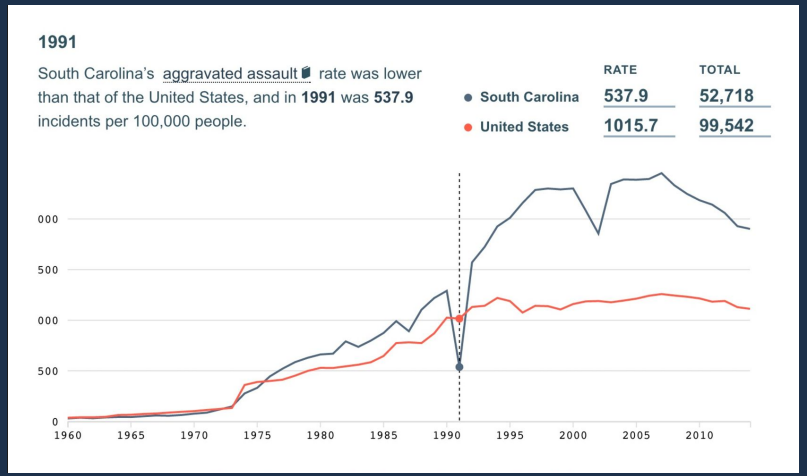
View by # %

Download data

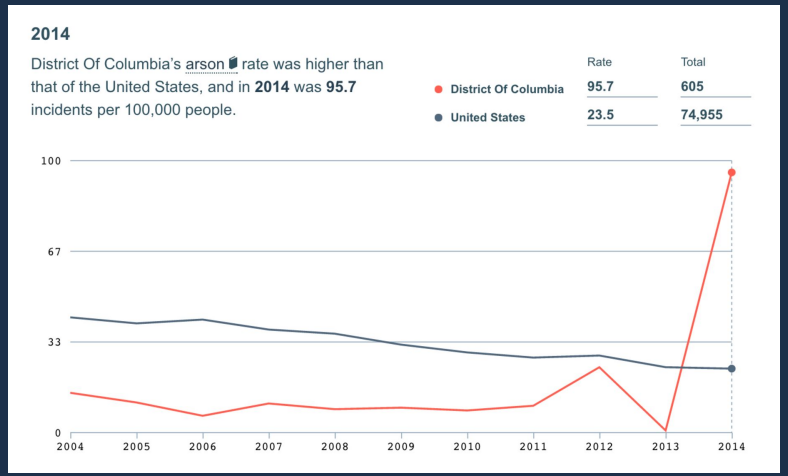
Data integrity

- **Missing or unexpectedly low values** for some states or types of crimes
- Columns like population are sometimes **out of sync across tables**
- Counts might include some records that should not be reported
- Totals might be made from fields that are not meant for that purpose
- Some links across different types of reports aren't there

- What will be the impact of displaying raw or unestimated data that doesn't match CIUS reports?
- The CDE improves visibility into the UCR program and reveals complex, messy, and sometimes incomplete data. How does this align with larger objectives?
- Is the CDE data appropriately caveated to discourage users from viewing it as a "proxy" for crime in America?



Missing or low data



Spikes in the data

Complexity

- **There is no clear way of defining cities** in the UCR database.
- **Cities and agencies can span multiple counties.** In these cases, we have to proportionally allocate crimes across counties by population.
- **Incident data** is large, and complex, which makes it difficult to strike a balance between optimization, and flexibility.
- **“NOT SPECIFIED”** data is used for placing entitles like the highway state patrol. Cities that span counties, like NYC, are mapped as a NOT SPECIFIED county, as are most tribal agencies.
- More research is needed to understand users expectations and the feasibility of specific solutions.

User needs

- If the CDE provides a granular view of the data down to the agency level, can it still demonstrate the value of NIBRS reporting considering the lack of that reporting type?
- If a city-level view is provided, will users be frustrated by the lack of location details for crime statistics? Without adequate context, will we encourage unfair comparisons of cities?
- How will agencies react if they believe that the data represents them unfairly?
- Are there data quantity thresholds we should implement to avoid displaying misleading visualizations?
- How will CJIS/FBI respond to ongoing questions around data quality and integrity?
- How will the CDE impact the FBI brand?

Key decisions for setting direction

- Should we focus on displaying summary data below the state level until the volume of NIBRS reporting improves?
- How should the CDE define cities?
- How should we count agencies that span multiple counties?
- Data quality and availability is both an opportunity and a risk. What is the FBI's position? How will we prepare for increased scrutiny of the data?

Recommendations

- Focus on visualizing summary data at a local level until NIBRS reporting improves.
- Prioritize city data and providing contextual information to highlight limitations of the data.
- Collect feedback to better understand what questions users have and prioritize new development based on requests.
- Start small and expand based on feedback. Pilot API and CDE as soon as possible to validate direction and pivot when necessary.

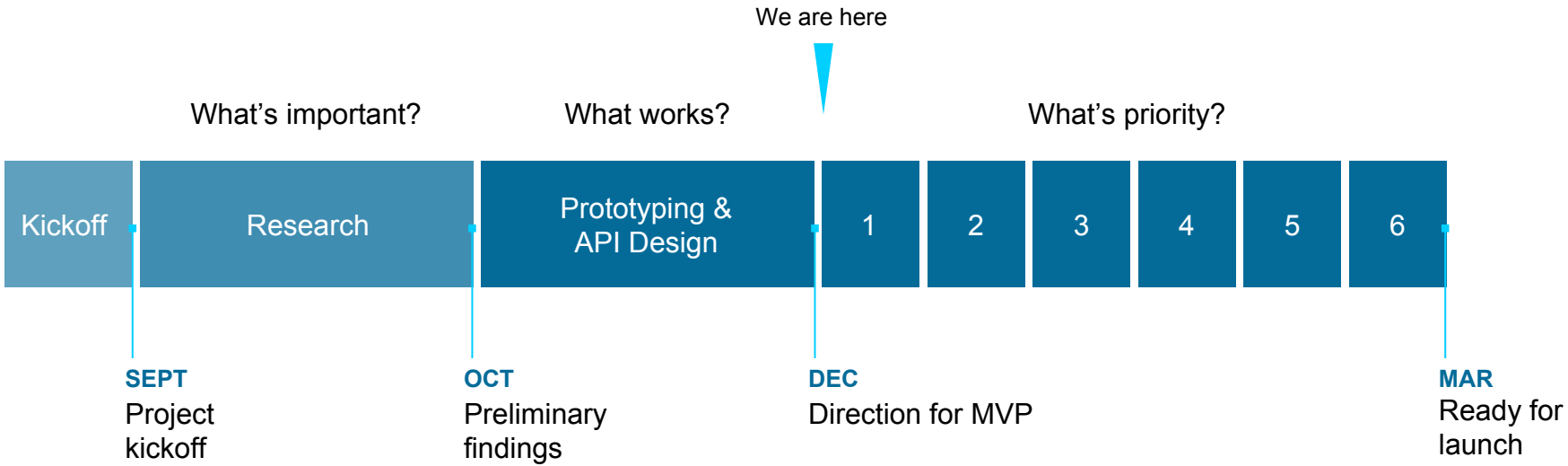
Appendix

BACKGROUND

Deliver a first iteration of the CDE (an MVP) that allows law enforcement and the general public to view and interact with uniform crime data.

"We need more transparency in law enforcement. We also need better, more informed conversations about crime. To get there, we are improving the way this nation collects, analyzes, and uses crime statistics" – DIRECTOR COMEY, 2015

TIMELINE & APPROACH



WHAT WE DELIVERED

The CDE MVP enables users to explore high-level crime trends and incident data by time and location, while providing access to more granular perspectives through downloads and an open API.

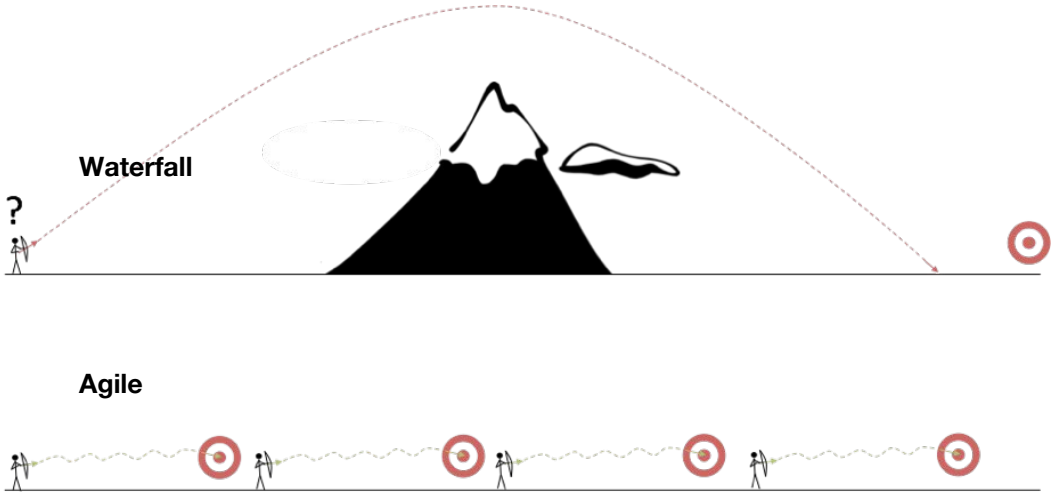
The MVP is a start, not an end. It is meant to be tested in order to validate direction and inform product direction.

You can view our progress at: https://crime-data-explorer-demo.fr.cloud.gov/#/

Key features & capabilities:

- View summary trends and NIBRS data by crime type, timeframe, and location. The “explorer view” is currently limited to state and national perspectives.
- View related UCR participation and police/census data for a given location.
- View programmatically-generated content & caveats that help explain results.
- Download trend and incident data displayed in the explorer view as a CSV.
- Download bulk incident data by state and year as a CSV.
- Download available hate crime, LEOKA, cargo theft, and human trafficking as a CSV.
- Leverage an open API that allows users to derive insights from available UCR data.
- Access the explorer experience on a mobile device.

WHY WORK THIS WAY



Align around what's important

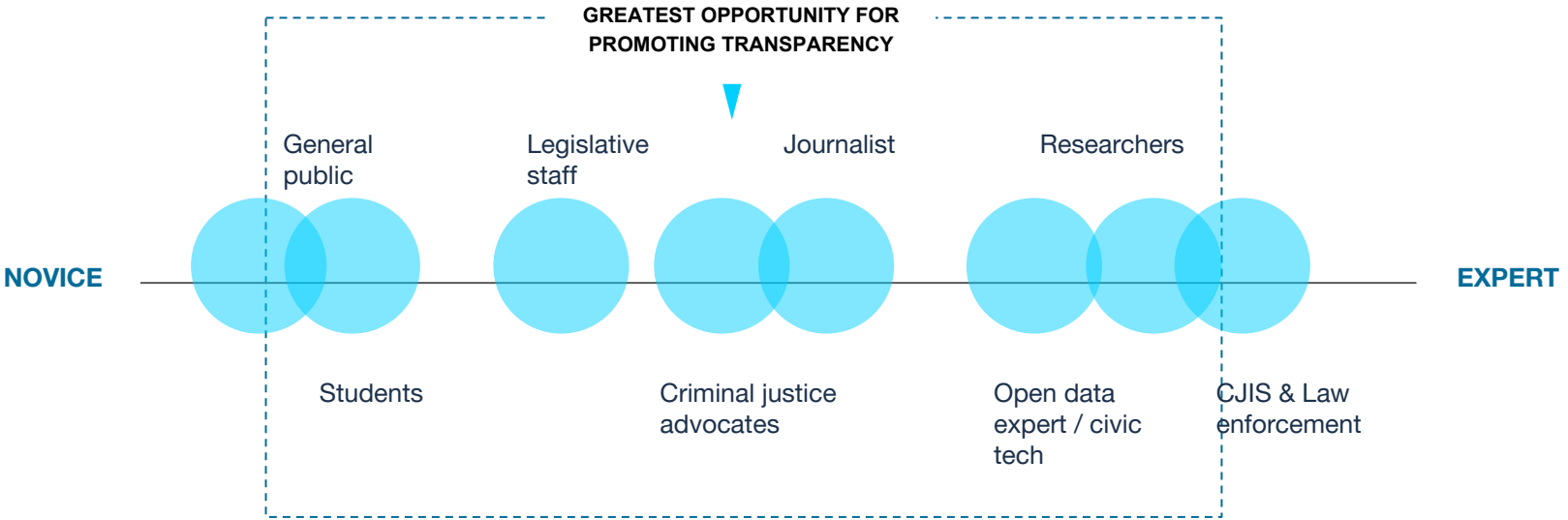
Deliver the best possible product by creating the space to challenge assumptions and explore new ideas

Reduce risk by "failing fast" prior to committing to a direction

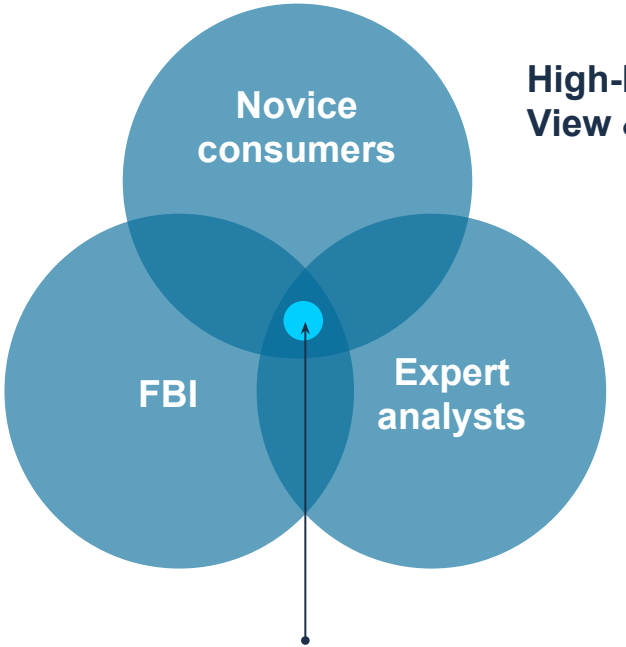
Build capacity and awareness to **more effectively respond to change**

WHO WE ARE SOLVING FOR

Challenge: Develop a tool that is robust enough for analysts and experts, but yet accessible to anyone.



SPECTRUM OF NEEDS



High-level summaries & trends.
View & search results by location

Promote transparency & value of UCR program

Quick access to the data and the ability to dive into the details

FOCUS FOR MVP

WHAT?

The first iteration of the CDE is aimed at orienting and guiding users through the data—it's not a dedicated tool for analysis.

WHO?

Aim for consumers with influence over the public's perception of crime, but make it approachable and accessible for everyone.

HOW?

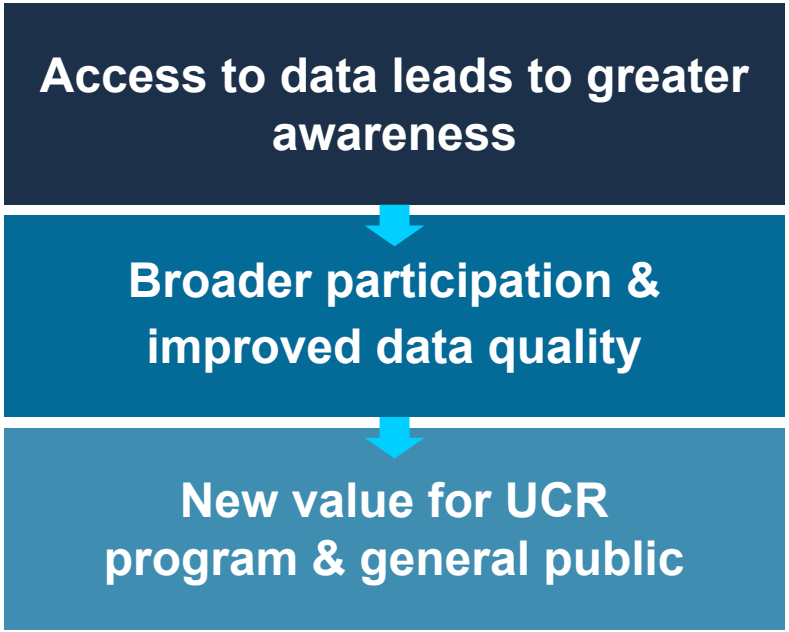
Provide multiple pathways to the data—visualization of high-level trends, CSV downloads of SRS and NIBRS, and an open API. *

** The MVP will be limited to a single data transfer from new UCR*

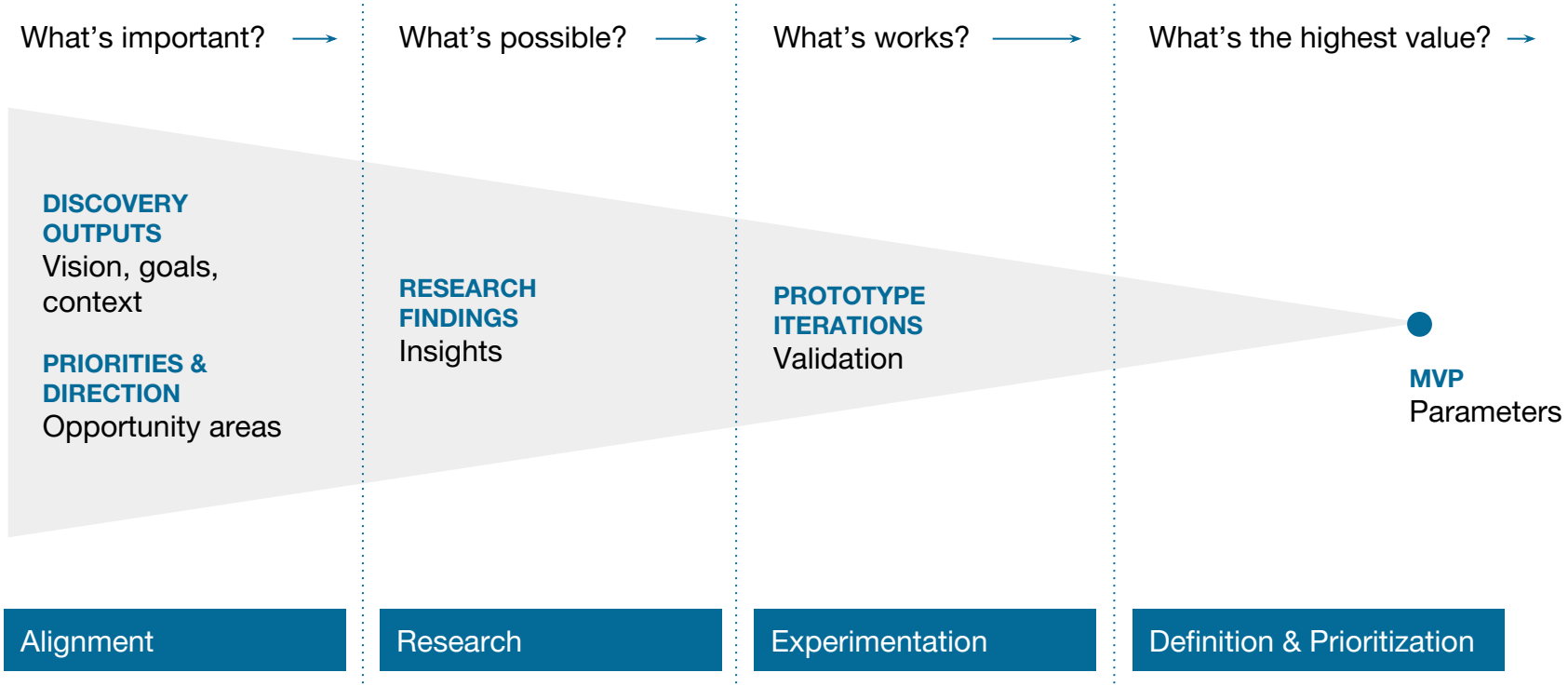
POST DISCOVERY

HYPOTHESIS

The CDE is a digital solution that enables law enforcement and the general public to more easily access and understand UCR data.



BUILDING CONFIDENCE



TECHNICAL APPROACH