

# CDE-NIBRS DISCOVERY

SPRINT 2 RECAP & MIDPOINT CHECK-IN

December 13, 2017

WEDNESDAY, DECEMBER 13  
**EVOLVING THE CDE**

EXECUTIVE BRIEFING (8:00-9AM)

DEFINING THE NIBRS ROADMAP (9:00-11AM)

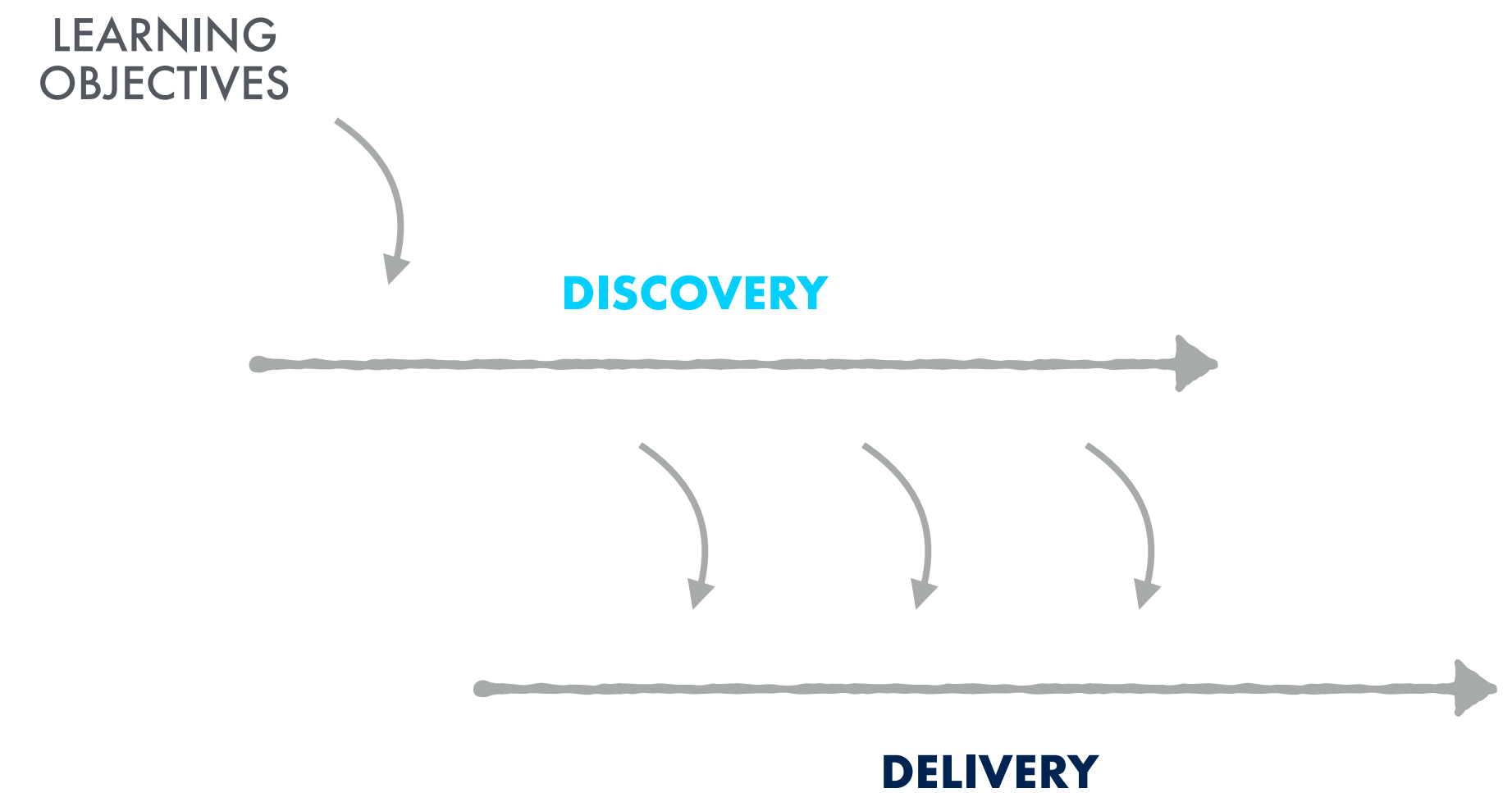
COMPARISONS, MAPPING, & OTHER OPPORTUNITIES (11:00-12:30PM)

BREAK (12:30-1:30PM)

ALLOWING FOR MORE REGULAR UPDATES (1:30-2:30PM)

FOOTNOTES & CAVEATS (2:30-3:30PM)

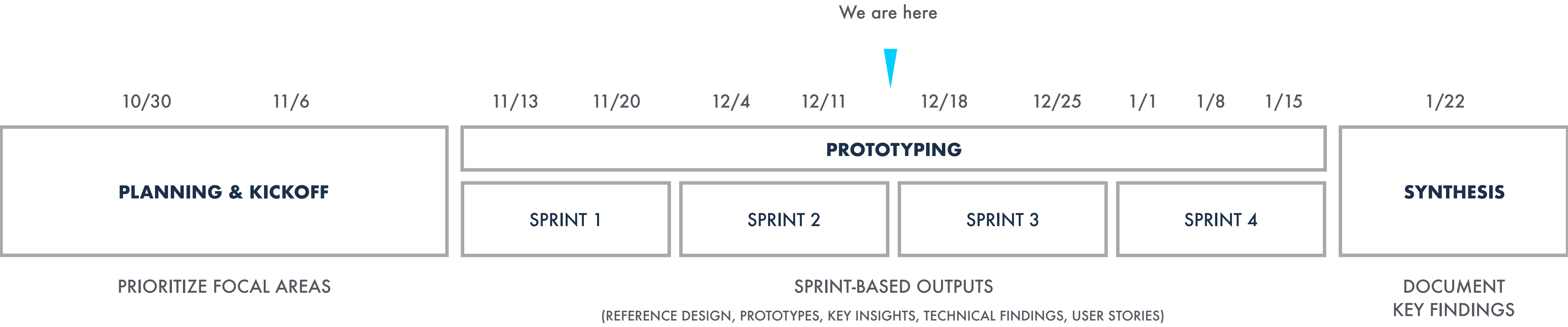
**THE GOAL FOR THIS  
DISCOVERY EFFORT IS TO  
DEVELOP A STRATEGY FOR  
EVOLVING THE CDE.**



KEY OUTPUTS:

- Shared product vision
- Revised product roadmap
- Preliminary product backlog
- Reference design & documentation

TIMELINE



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.

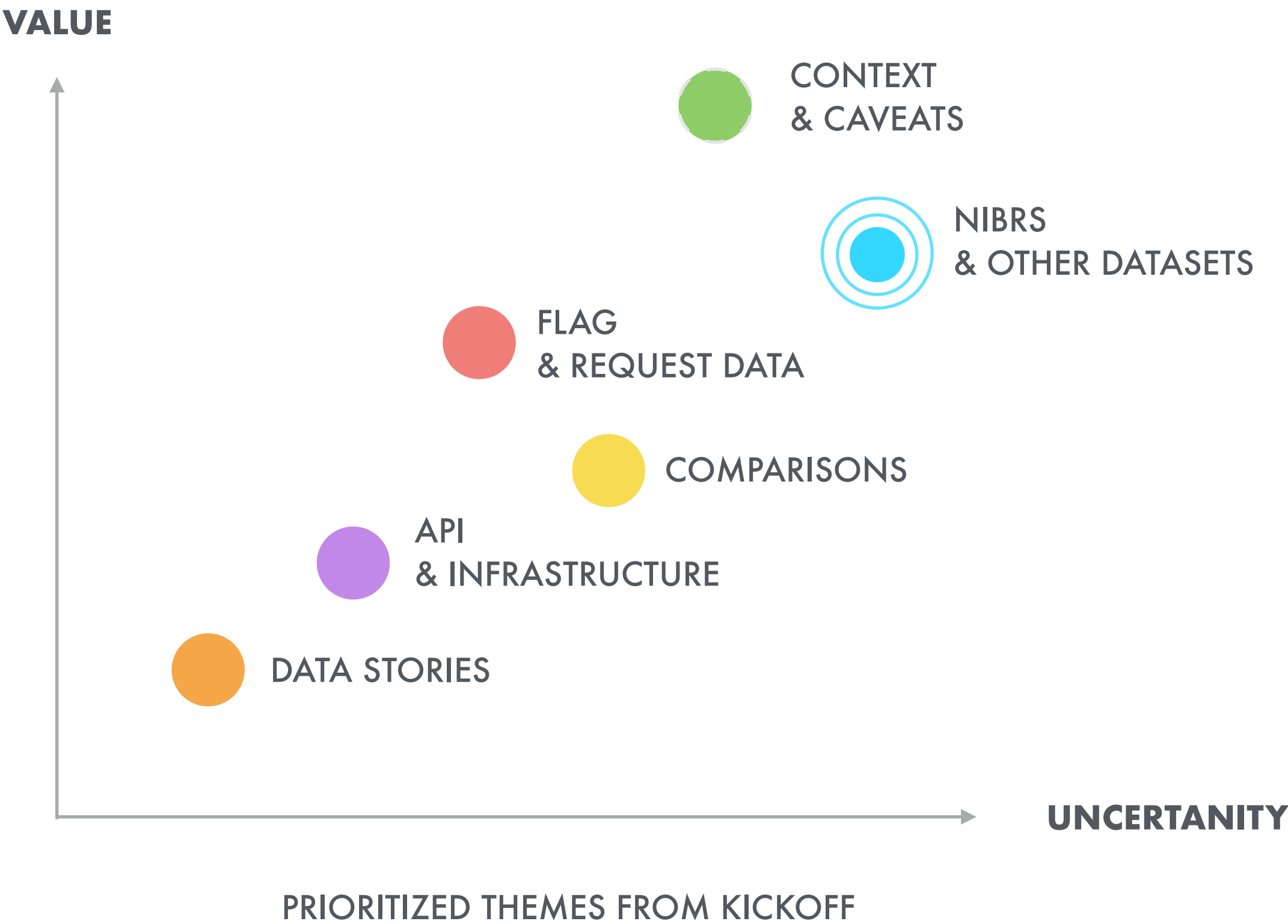
THE TEAM WILL DOCUMENT & SHARE WHAT IS LEARNED FROM EACH SPRINT TO INFORM SUBSEQUENT ITERATIONS.

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.

PRIORITIES FROM KICKOFF

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

While all of these ideas deserve future consideration for the CDE product roadmap we set “expanding the presence of NIBRS” as our initial target.



## **HOW CAN WE MAKE NIBRS DATA EASIER TO WORK WITH?**

How effective are our current NIBRS offerings?  
Are they a fair representation of UCR data?

What are the key barriers to analysis,  
especially when working with downloads?

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

## **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?

How might factors like low participation, volume,  
and timeliness affect the CDE-NIBRS roadmap?

KEY INSIGHTS

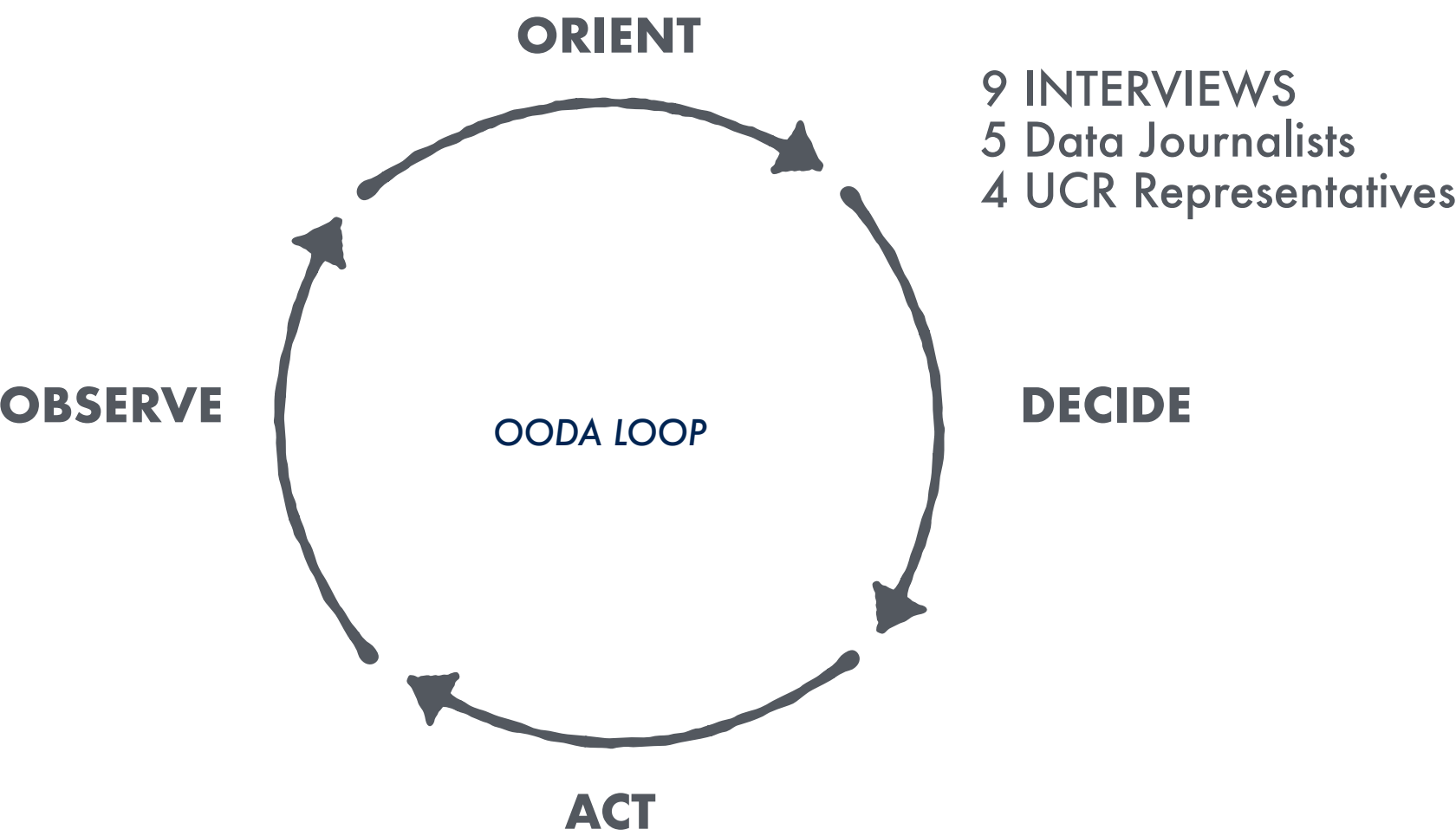
THE CDE-NIBRS DATA MODEL NEEDS REVIEW

MOST OF OUR TARGET USERS ARE COMFORTABLE WORKING WITH LARGE & COMPLEX DATASETS

THERE IS OPPORTUNITY TO IMPROVE THE CONTEXT SUPPORTING THE DATA PRESENTED

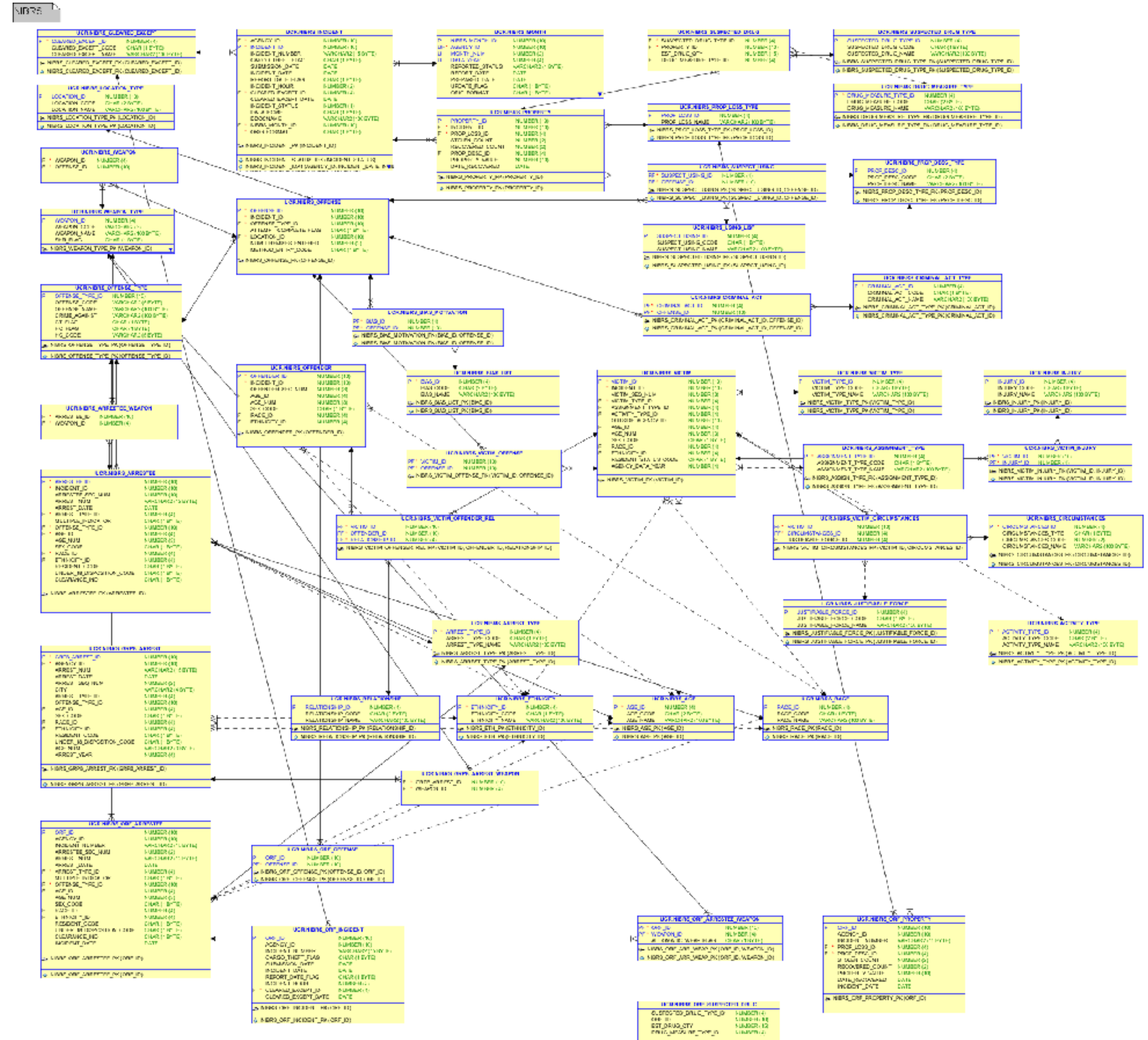
LAW ENFORCEMENT VALUES ACCURACY, BUT DOESN'T EXPECT PERFECTION

THERE'S NO CONSENSUS ON WHAT NIBRS DATA PEOPLE WOULD LIKE TO SEE NEXT – BUT THERE ARE A FEW LOGICAL PLACES TO START





# NIBRS IS A COMPLICATED & SEGMENTED DATASET



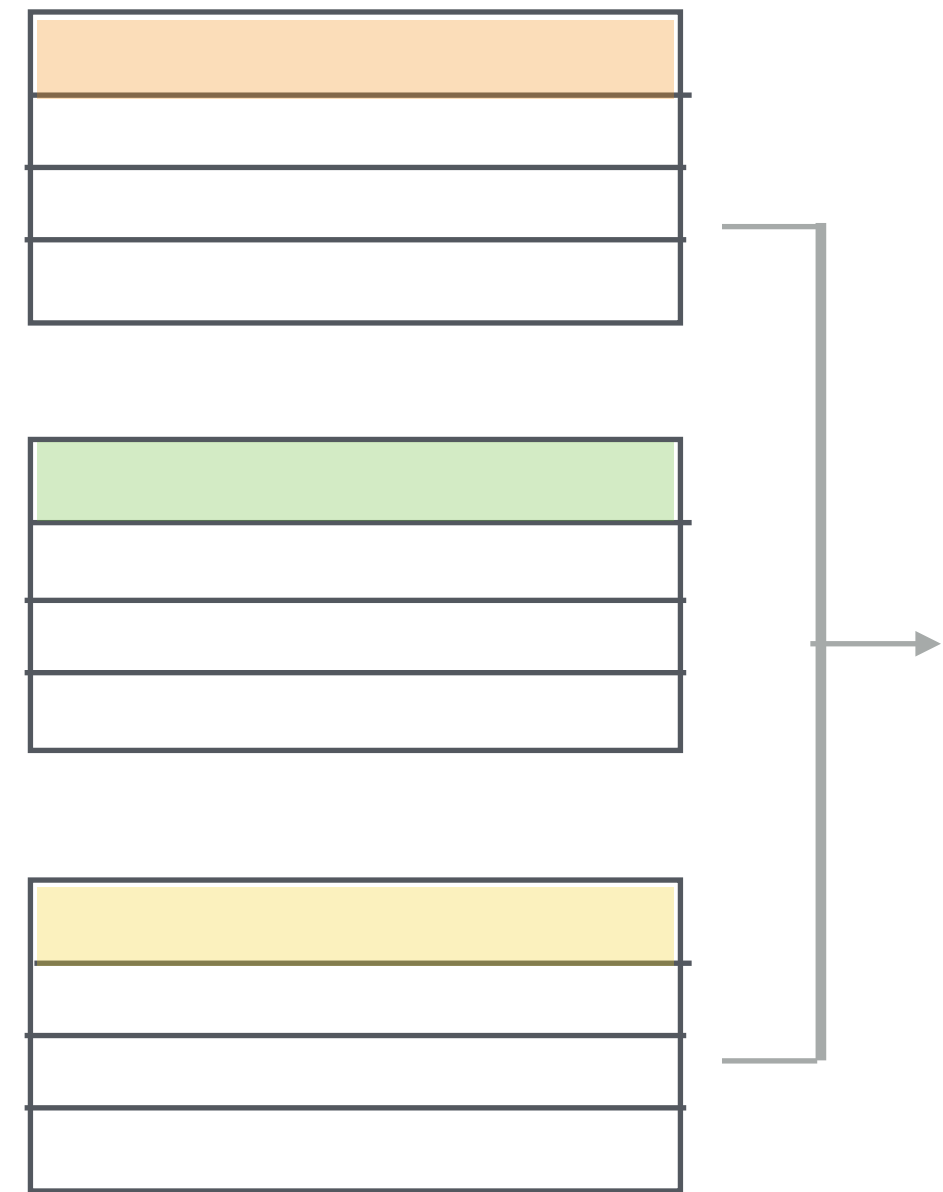


WHAT HAPPENED & WHAT WE'RE DOING ABOUT IT

An attempt to make NIBRS data easier to work with (denormalization) led to an oversimplification of the relationships between elements, specifically offender-victim counts.

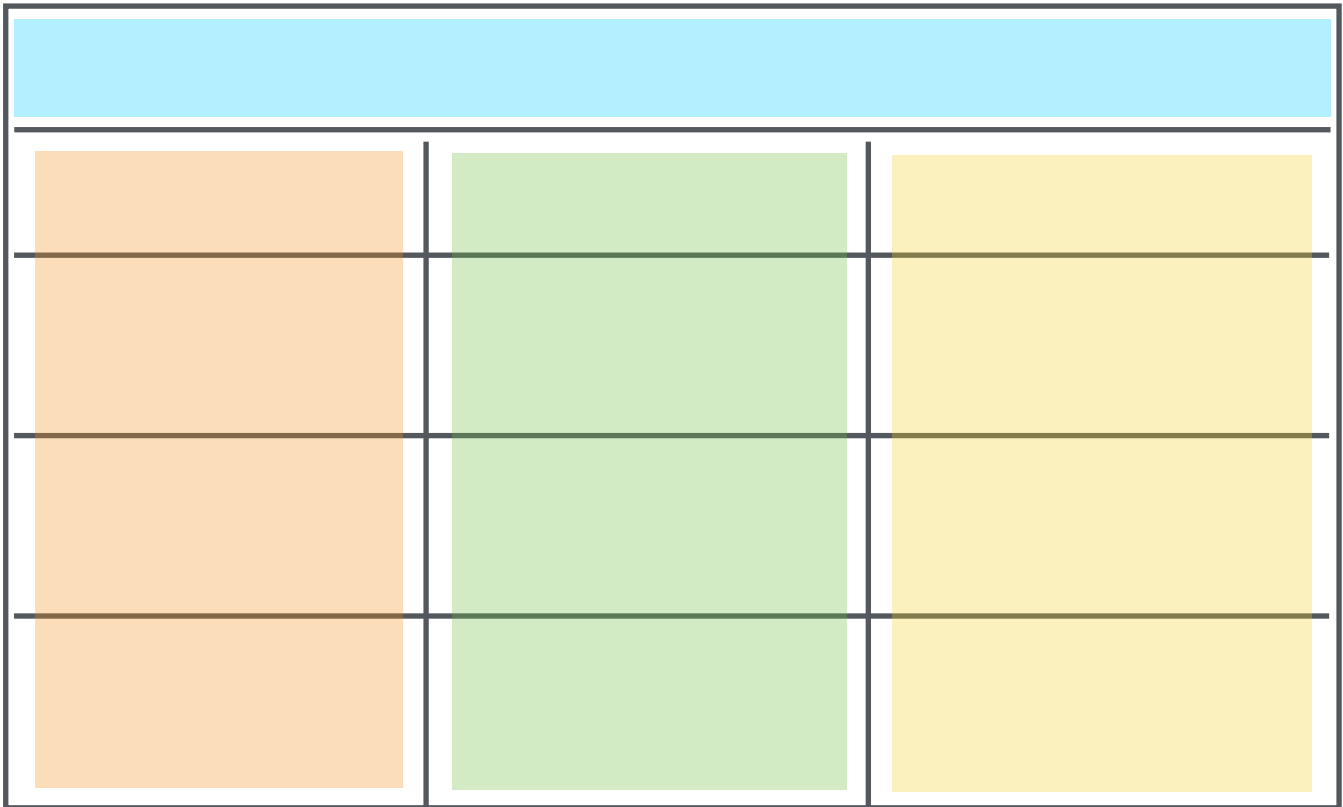
We are revising this model for improved accuracy and are considering the best denormalization strategy going forward. As we think about the best way of “packaging” NIBRS data as a download, we should consider the tradeoffs between greater flexibility (more tables) and ease of use.

**NORMALIZATION** IS A WAY OF ORGANIZING DATA THAT INVOLVES BREAKING COMPLEX TABLES INTO SMALLER ONES



IT REDUCES THE SIZE OF A DATABASE, BUT REQUIRES MORE “TABLE JOINS” THAT RESULT IN LESS EFFICIENT QUERIES

**DENORMALIZATION** REDUCES THE “COST” OF MAKING CERTAIN QUERIES BY CREATING SPECIALIZED GROUPINGS OF DATA



IT CAN LEAD TO SOME DUPLICATION OF THE DATA, BUT RESULTS IN FEWER TABLES TO WORK WITH, WHICH IS HELPFUL AS A DOWNLOAD

## LESSONS LEARNED

**UCR DATA WILL NEVER BE PERFECT.**

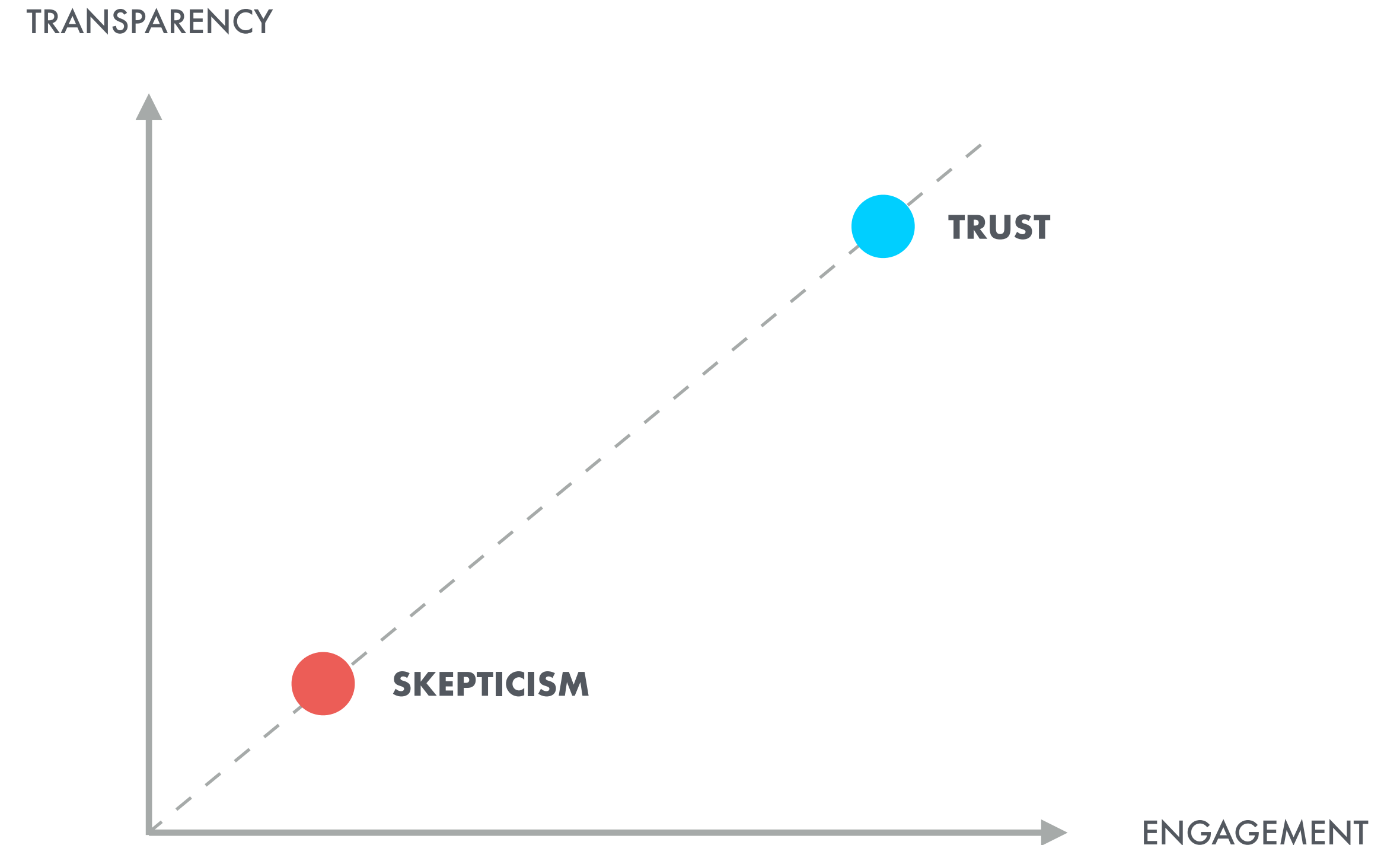
**BEING MORE TRANSPARENT  
AND WORKING IN THE  
OPEN CAN MITIGATE  
CRITICISM ABOUT WHAT IS  
PUBLISHED.**

DEFINE A PROCESS FOR VALIDATING CDE DATA & FUTURE UPDATES

EMBRACE OPEN SOURCE STANDARDS IN USE ACROSS GOVERNMENT & KEEP THE CDE PROJECT REPO OPEN IN ACCORDANCE WITH OMB M-16-21

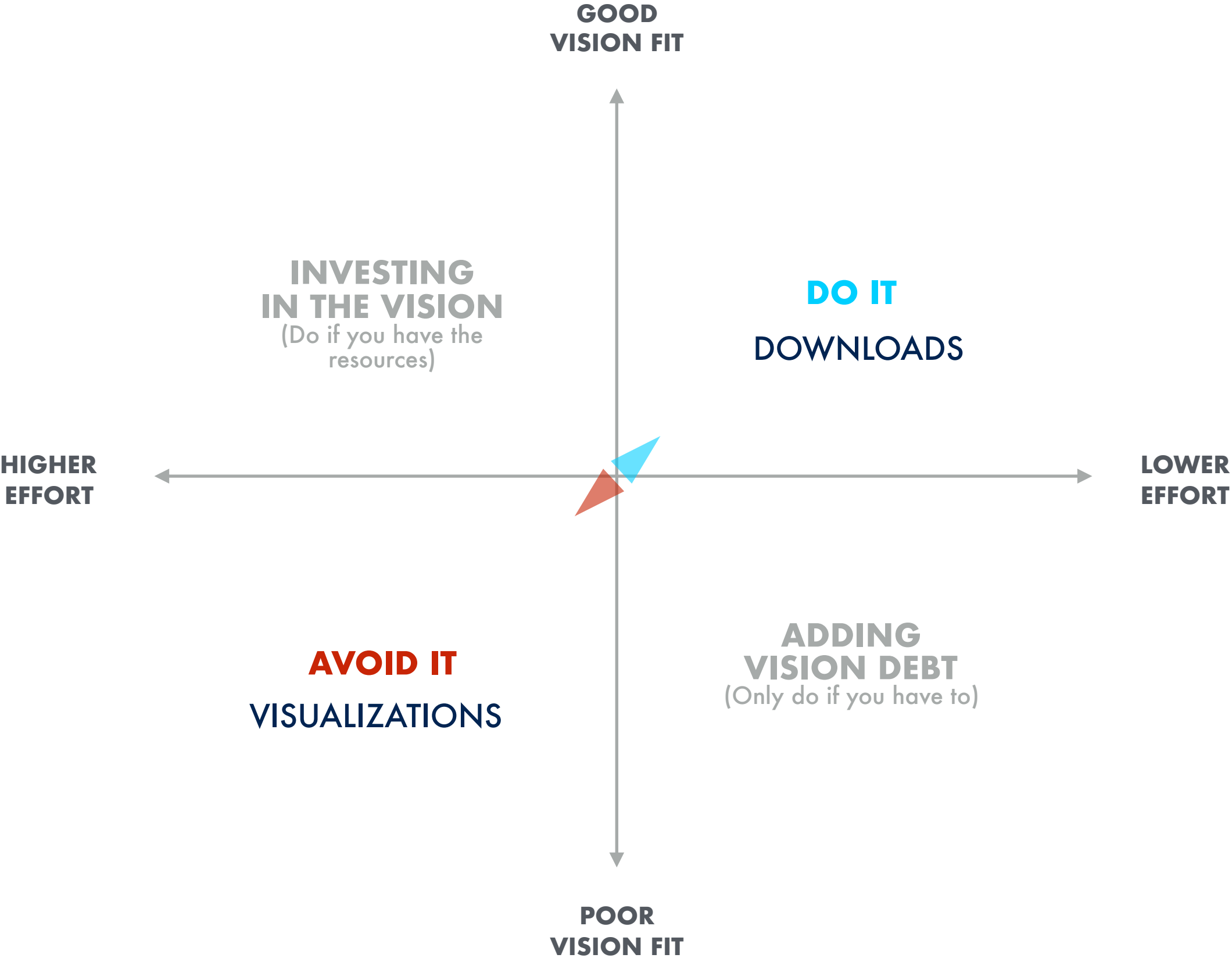
CREATE & MAINTAIN FEEDBACK LOOPS WITH USERS TO FLAG POTENTIAL DATA QUALITY ISSUES & TO INFORM THE DIRECTION OF THE PRODUCT

ENSURE THAT THE METHODOLOGIES FOR TABULATING CDE DATA ARE EASILY UNDERSTOOD BY THE PUBLIC & CONSISTENTLY APPLIED.

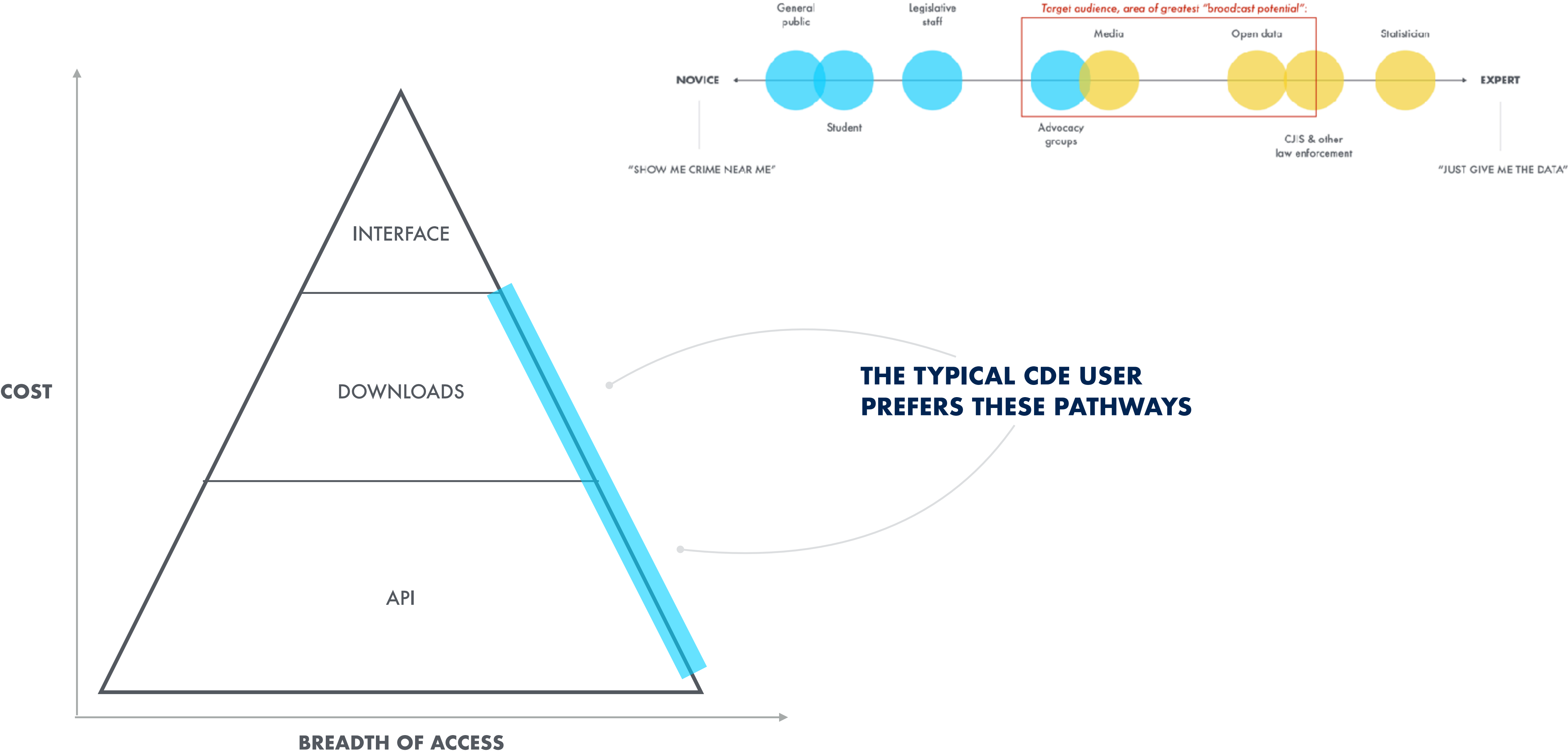


THE CDE IS THE “DIGITAL FRONT DOOR” FOR THE UCR PROGRAM.

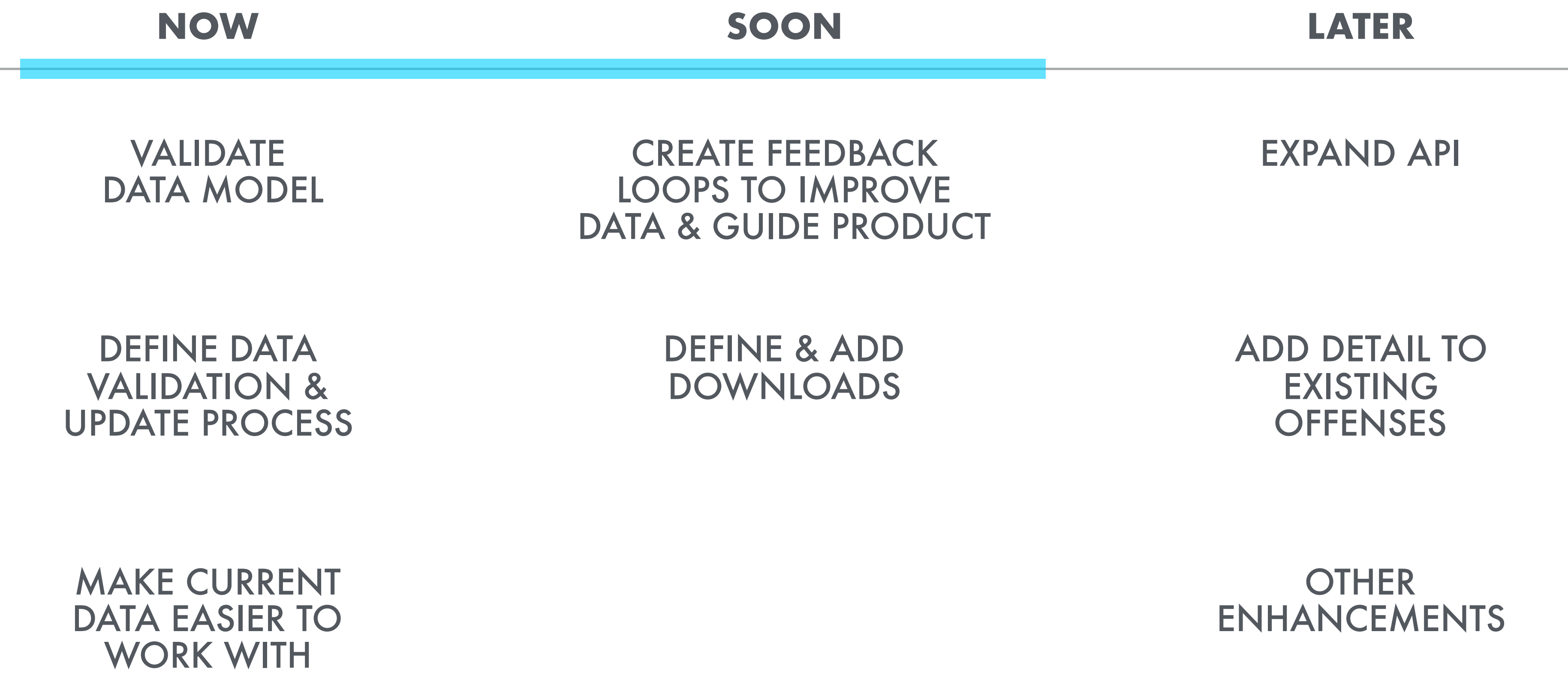
IT PROMOTES PROGRAM MODERNIZATION THROUGH IMPROVED ACCESS TO UCR DATA.



WHY AVOID CHANGING THE INTERFACE?



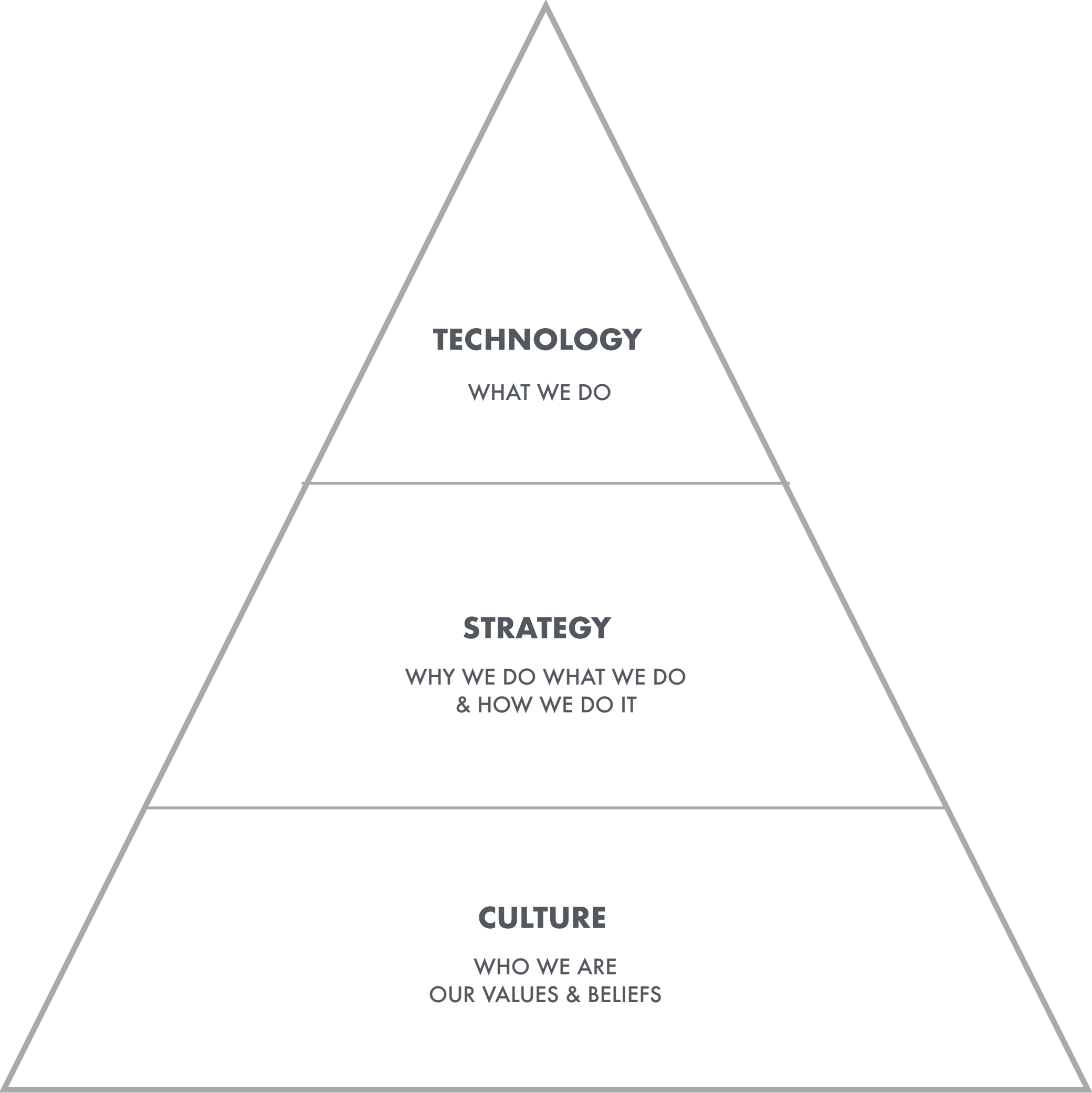
WHAT IS FOUNDATIONAL?



TECHNOLOGY IS ONLY AN ENABLER.

A SUCCESSFUL TRANSITION OF THE CDE WILL REQUIRE A SHIFT TOWARDS A MORE AGILE & OPEN ORGANIZATION.

WE CAN HELP WITH THIS.



ESTABLISH A PRACTICE OF ITERATIVE DESIGN & DEVELOPMENT

DELIVER ON “SMALL BESTS” & VALIDATE

ACQUIRE NECESSARY INFRASTRUCTURE & STAFF FOR SUPPORTING THE CDE

DEVELOP A SHARED VISION & ROADMAP FOR THE CDE

DEFINE & MEASURE SUCCESS

SEEK & RESPOND TO USER FEEDBACK

ADOPT OPEN SOURCE STANDARDS

EMPOWER TEAMS

ENCOURAGE EXPERIMENTATION

PRIMARY COMPONENTS OF A DIGITAL ORGANIZATION



**QUESTIONS?**

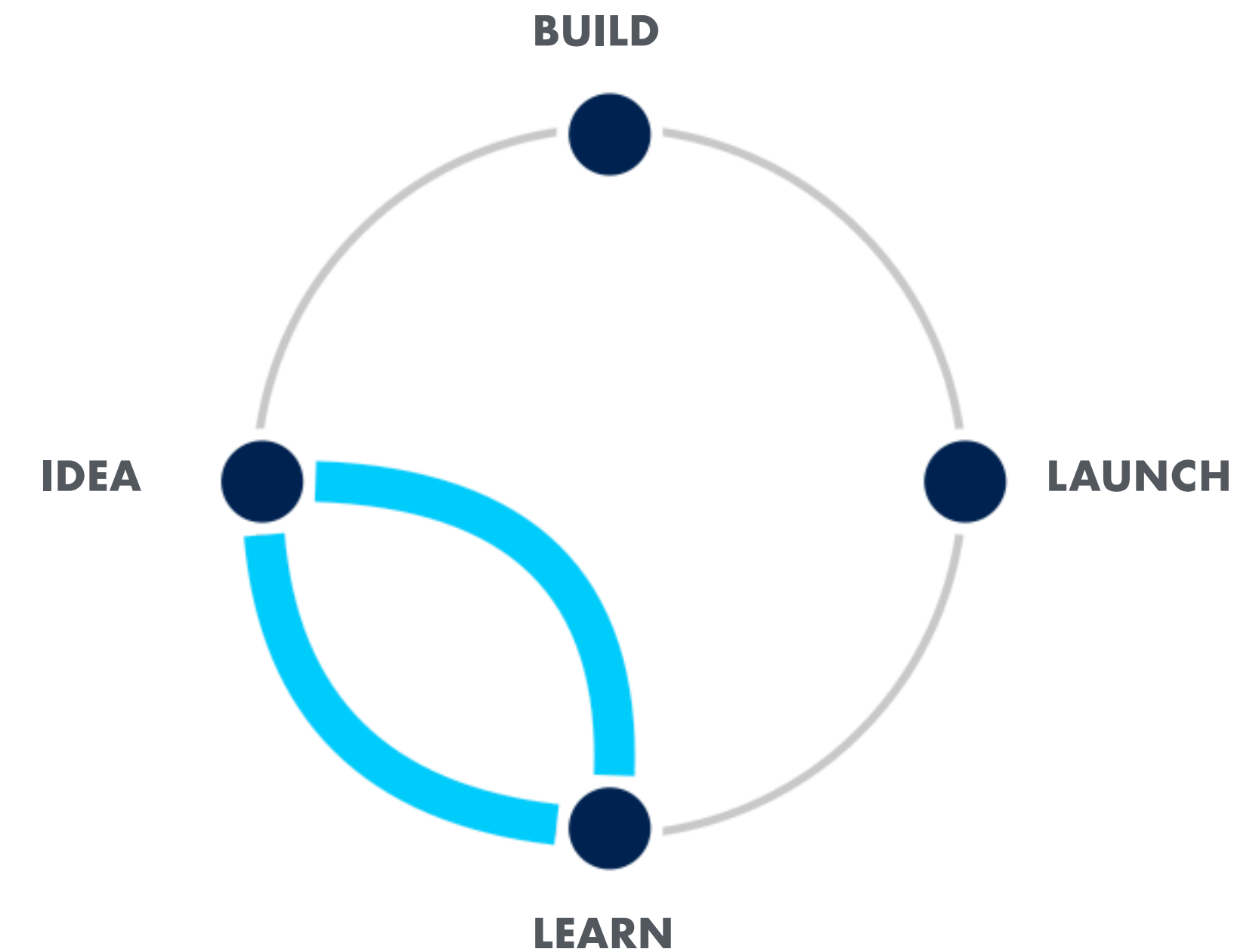
# APPENDIX

## 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.

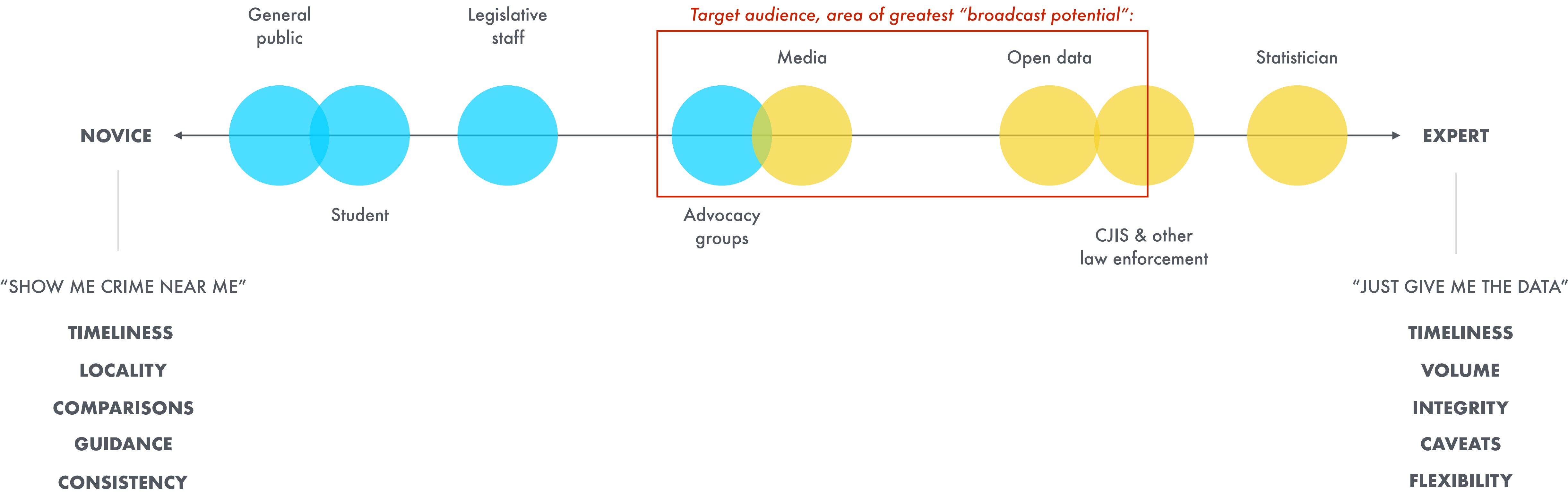
These activities will result in a revised product vision & roadmap that helps align stakeholders and guides future development efforts at CJIS. Since 18F's focus is "future-oriented" it will not deliver new features as part of this scope of work; however, it will provide coaching, knowledge transfer,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

THE USER COMMUNITY

**RESEARCH SUGGESTS THAT THE TYPICAL CDE USER IS FAMILIAR WITH THE UCR PROGRAM AND OR WORKING WITH OPEN DATA.** SIMILAR TO THE “NOVICE” THEY VALUE CONTEXT, BUT PREFER TO WORK WITH THE DATA IN ITS PRIMARY FORM - FAVORING DOWNLOADS & THE API OVER THE INTERFACE.



18F