

Development and pilot of the OMB ICR Application: Stakeholder perspectives on an automated tool for Information Collection Reviews that supports data inventory creation and updates

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Agenda

- History and Background –Marilyn Seastrom and Jennifer Nielsen, NCES – 15 minutes
- Supporting Current Data Collections – Carrie, NCES – 15 minutes
- Improving Data Use After Collection – Bob, OMB – 15 minutes
- Technical Components and Demonstrations – Zac, Sanametrix – 15 minutes
- Questions and Discussion – If you have questions for the panel, please send them via the chat window

History and Background

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History

- The ED Data Inventory was developed in response to a 2009 data.gov initiative and was the subject of a 2012-13 GAO performance audit
<https://www.gao.gov/products/GAO-13-596R>
- GAO concluded that “Education has followed a reasonable process to populate its inventory and has designed appropriate internal controls to ensure the accuracy of information included, such as reviewing and verifying data entered into the inventory.”
- The inventory draws heavily on content from the OMB ICRs, through a manual process. This led to an interest in combining the two processes

Background: Project description

- This project builds upon NCES' research and Beta version of the ED Data Inventory by **developing electronic templates within a capture/review system (OMBICR) that generates Supporting Statements Parts A and B of the ICR while tagging the data elements in the ICR needed to populate the ED Data Inventory**
- The OMB ICR tracks authorship and reviewer roles throughout the development process
- After OMB approval is obtained, any changes are entered into the ICR template and the OMB ICR generates an extract of the specified metadata fields from the templated ICR and populates the enterprise data inventory

Background: Project cost

- FY2018 Funds (for work in 2019)
 - \$180,000 in **President's Management Agenda Cross Agency Project (CAP) Goal** funding and
 - \$119,985.47 in **NCES Statistics** funds to:
 - Develop an electronic template that produces Supporting Statements Parts A & B of an OMB ICR package, tracks authorship and reviewer roles throughout the agency development of the Supporting Statements A and B, and develop an electronic interface to create a capture/review system that automatically extracts metadata fields from the templated ICR and populates the enterprise data inventory
- FY2019 Funds (for work in 2020)
 - \$325,000 in **President's Management Agenda Cross Agency Project (CAP) Goal** funding to:
 - Extend the capture/review system development and implementation beyond NCES to other offices within the Department of Education and/or to another federal agency on a pilot basis

Develop electronic templates with a capture/review system (OMBICR)

The screenshot displays the OMBICR web application interface. At the top, a dark teal navigation bar includes the user name 'R Walley', a 'Packages' button, a search icon, an 'Admin' button, and a 'Support' button. Below this, a breadcrumb trail shows '2020 Survey of Market Absorption of New Multifamily Units (SOMA)-2 Edit'. A secondary navigation bar contains icons for 'ICR', 'Collection Details', and 'Steps/Responsibilities'. On the right side, a 'Package Writing' section shows a pencil icon and a 'Target 04/23' date. The main content area is titled 'Supporting Statement Part A Section 1. Collection Circumstances' and contains several paragraphs of text, including dates, agency information, and legal references. A progress bar on the right indicates '25 of 27 Sections Completed'. Below the progress bar, two lists of sections are shown: 'Supporting Statement Part A' and 'Supporting Statement Part B', each with a list of sections and their completion status (checked or unchecked).

ICR

R Walley Packages Search Admin Support

2020 Survey of Market Absorption of New Multifamily Units (SOMA)-2 Edit

Package Writing Target 04/23

ICR Collection Details Steps/Responsibilities

Text View Data View Attachments Source Materials

See Recent ICR Updates Notify the team I'm done writing!

Supporting Statement Part A

Section 1. Collection Circumstances

25 of 27 Sections Completed

Supporting Statement Part A

- ✓ Cover
- ✓ Preface
- ✓ Section 1. Collection Circumstances
- Section 2. Information Purpose
- ✓ Section 3. Collection Techniques
- ✓ Section 4. Duplication Prevention
- ✓ Section 5. Burden on Small Business
- ✓ Section 6. Consequences Not Conducted/Conducted Less
- ✓ Section 7. Special Circumstances
- ✓ Section 8. Outside Agency Consultation/Federal Register Notice
- ✓ Section 9. Respondent Gift/Payment
- ✓ Section 10. Assurance of Confidentiality
- ✓ Section 11. Questions of Sensitive Nature
- ✓ Section 12. Estimates of Burden
- ✓ Section 13. Total Annual Burden Cost
- ✓ Section 14. Annualized Cost to Federal Government
- ✓ Section 15. Reasons for Program Changes/Adjustments
- ✓ Section 16. Tabulation and Publication
- ✓ Section 17. Reasons to Not Display OMB Expiration
- ✓ Section 18. Paperwork Reduction Act Exception

Supporting Statement Part B

- ✓ Cover
- Preface
- ✓ Section 1. Respondent Universe
- ✓ Section 2. Collection Procedures
- ✓ Section 3. Methods to Maximize Response
- ✓ Section 4. Tests of Procedure

The 2020 Survey of Market Absorption of New Multifamily Units (copy) (SOMA) is conducted by the National Center for Education Statistics, part of the Institute of Education Sciences, within the Department of Education, and is part of the Baccalaureate and Beyond Longitudinal Study data collection program at <https://www.census.gov/programs-surveys/soma.html>. The [Sample Collection](#)_{A-2} will begin [06/26/20](#)_{A-16} and end [06/26/20](#)_{A-16}.

The primary [Agency](#) for this data collection is [U.S. Census Bureau](#). [0](#) Sub-collectors

The collection is authorized under [Title 12, U.S.C. Sec. 1701z-1 and 2](#). The full text of the authorizing law is: [§1701z-1. Research and demonstrations; authorization of appropriations; continuing availability of funds](#)

[The Secretary of Housing and Urban Development is authorized and directed to undertake such programs of research, studies, testing, and demonstration relating to the mission and programs of the Department as he determines to be necessary and appropriate. There is 1 authorized to be appropriated to carry out this title \[12 U.S.C. 1701z-1 et seq.\] \\$35,000,000 for fiscal year 1993 and \\$36,470,000 for fiscal year 1994.](#)

[§1701z-2. Advanced technologies, methods, and materials for housing construction, rehabilitation, and maintenance](#)

[\(a\) General acceptance; costs, reduction; health and safety restrictions on expanded housing production](#)

[The Secretary shall require, to the greatest extent feasible, the employment of new and improved technologies, methods, and materials in housing construction, rehabilitation, and maintenance under programs administered by him with a view to reducing costs, and shall encourage and promote the acceptance and application of such advanced technology, methods, and materials by all segments of the housing industry, communities, industries engaged in urban development activities, and the general public. To the extent feasible, in connection with the construction, major rehabilitation, or maintenance of any housing assisted under section 1701z-1 of this title, the Secretary shall assure that there is no restraint by contract, building code, zoning ordinance, or practice against the employment of new or improved technologies, techniques, materials, and methods or of preassembled products which may reduce the cost or improve the quality of such construction, rehabilitation, and maintenance, and therefore stimulate expanded production of housing, except where such restraint is necessary to insure safe and healthful working and living conditions.](#)

[\(b\) Experimental construction under approved housing plans on Federal or other lands with view toward ultimate mass housing production; use of section 1701z-1 funds and authority](#)

[To encourage large-scale experimentation in the use of new technologies, methods, and materials, with a view toward the ultimate mass production of housing and related facilities, the Secretary shall wherever feasible conduct programs under section 1701z-1 of this title in which qualified organizations, public and private, will](#)

Develop electronic templates with a capture/review system (OMBICR)

The screenshot displays the OMBICR web application interface. At the top, a dark teal navigation bar contains the text 'ICR' on the left and 'R Walley', 'Packages', 'Search', 'Admin', and 'Support' on the right. Below this, a breadcrumb trail shows '2020 Survey of Market Absorption of New Multifamily Units (SOMA)-2' with an 'Edit' link. A secondary navigation bar includes icons for 'ICR', 'Collection Details', and 'Steps/Responsibilities', along with a 'Package Writing' status indicator and a 'Target 04/23' deadline.

The main content area is titled 'Supporting Statement Part A' and 'Section 1. Collection Circumstances'. It features a sub-navigation bar with 'Package Info', 'Study', 'Activities', and 'Respondents'. The 'Package Info' section is active, showing two numbered fields:

- 1. Authorizing Law Cited:** A text input field containing 'Title 12, U.S.C. Sec. 1701Z-1 and 2'. Below the field are links for 'Clear Text' and a 'more...' link with the text 'Abbreviation, year, and full citation for the law authorizing the data collection.' At the bottom of this section are icons for 'R Walley', 'Entry History', and 'Add Comment'.
- 2. Authorizing Law Text:** A text area containing two paragraphs of text. The first paragraph is: '§1701z-1. Research and demonstrations; authorization of appropriations; continuing availability of funds. The Secretary of Housing and Urban Development is authorized and directed to undertake such programs of research, studies, testing, and demonstration relating to the mission and programs of the Department as he determines to be necessary and appropriate. There is 1 authorized to be appropriated to carry out this title [12 U.S.C. 1701z-1 et seq.] \$35,000,000 for fiscal year 1993 and \$36,470,000 for fiscal year 1994.' The second paragraph is: '§1701z-2. Advanced technologies, methods, and materials for housing construction, rehabilitation, and maintenance (a) General acceptance; costs, reduction; health and safety restrictions on expanded housing production. The Secretary shall require, to the greatest extent feasible, the employment of'.

On the right side of the interface, a progress bar indicates '25 of 27 Sections Completed'. Below this is a table of contents for 'Supporting Statement Part A' and 'Supporting Statement Part B', with each section listed and a checkbox indicating its completion status.

Populate the ED Data Inventory – Formatted output to the EDI

	A	B	C	D	E	F
1	Package					
2	2020 Survey of Market Absorption of New Multifamily Units (SOMA)					
3	#1	#6	#10	#15	#36	#84.5
4	Principal Office Name	Principal Office Abbrevi	Unit Name	Unit Abbreviation	Program Abbreviation	Bureau Code
5	[tblPrincipleOffice]	[tblPrincipleOffice]	[tblUnit]	[tblUnit]	[tblProgram]	[dig.staging.tblDetail]
6	[Principal Office Name]	[Principal Office Abbrev	[Unit Name]	[Unit Abbreviation]	[Program Abbreviation]	[Bureau Code]
7	Institute of Education Sc	IES	National Center for Edu	NCES	ACG	018:50
8						
9	Study					
10	2020 Survey of Market Absorption of New Multifamily Units					
11	#31	#46	#51	#54	#55	#56
12	Program Name	Study Name	Study Abbreviation	Study Website	Study Abstract	Frequency
13	[dig.staging.tblStudy]	[dig.staging.tblStudy]	[dig.staging.tblStudy]	[dig.staging.tblStudy]	[dig.staging.tblStudy]	[dig.staging.tblStudy]
14	[Program Name]	[Study Name]	[Study Abbreviation]	[Study Website]	[Study Abstract]	[Frequency]
15	Academic Competitiven	2020 Survey of Market /	SOMA	https://www.census.go	SOMA collects data for	annual
16						
17	Collection					
18	2020 SOMA Collection					
19	#140	#141	#143	#144	#145	#146
20	Collection Type	Cost	Cost Details	Experiments Descriptio	Experiment Results	Recruitment Start Date
21	[dig.staging.tblCollectio	[dig.staging.tblCollectio	[dig.staging.tblCollectio	[dig.staging.tblCollectio	[dig.staging.tblCollectio	[dig.staging.tblCollectio

Enhancements and Agency Demonstrations/Pilots

- Enhancements
 - Testing within NCES resulted in useful feedback and critical enhancements that shifted the focus of the application from inventory to ICR creation
 - Demonstrations across ED have resulted in additional enhancements and suggestions for next round of funding
- Agency demonstrations and pilots
 - Thirteen demonstrations at eight agencies: ED (NCES and NCEE), Commerce (Census), HUD (PD&R), CFPB, FCC, NSF (NCSES), EPA, and GSA (COE Cloud Adoption)

Supporting Current Data Collections

Carrie Clarady
NCES OMB Liaison
National Center for
Education Statistics

Role of the OMB Liaison

- Work with program officers and their contractors to prepare packages for review by OMB
- Historically, the process of submitting a new package began with the program office building each new package by using the most recent previously cleared package (in .doc) as a first rough draft
- For a new package, the review process usually takes 1-6 weeks from submission of the completed package to my office to publication in the Federal Register or submission to OMB
- My job: make our OMB officer's life easier and our waits for reviews and clearances shorter, keep work flowing

Why NCES is a great place to develop this tool

- A lot of research, not very many researchers
 - The workload is high and efficiency is especially valued
- More than half of our studies are voluntary data collections
 - Monitoring burden is a primary function of PRA review
 - Respondent incentives are frequent and necessary
- Education research is frequently multistage
 - Sampling at the state, district, school levels
- If this approach can work for NCES, it should be powerful and flexible enough to work across most of government

The value of a tool like this

- Previously, review was done by email exchanges of Word documents.
 - Requires a deep and continuously maintained archive of previously submitted and cleared, which can be interrupted by employee transitions
- The tool supports building of the Supporting Statements Parts A & B through a structured collection of information about the research plan
 - Planning
 - Record of comments back and forth and all decisions made
 - Submission to PRA/OMB
 - Documenting the decisions of OMB
 - Locking the package and keeping the approved version ready to go for the next approval request

Growing Pains

- Change is frustrating, difficult, and disfavored
 - There is a significant time investment the first time a group of contractors and researchers uses the tool
 - Contractors shared across projects seems to be helping with this issue
- Complex Incentive Structures – still working on it!
 - Only relevant for voluntary studies (not an issue for administrative data collections)
 - Most NCES studies contain at least one incentive experiment
 - Non-monetary incentives
- Multistage Sampling Structures – still working on it!
- Better tracking for Attachments
 - NCES studies always have at least two appendices, one for recruitment and communication materials and one for instruments
 - Some packages have far more, up to about 25



IMPROVING DATA USE AFTER COLLECTION

Bob Sivinski

April 12, 2021

REUSING DATA: THE EVIDENCE ACT AND THE FEDERAL DATA STRATEGY

Data siloes result in missed opportunities, unnecessary duplication, and wasted resources.

Improving the use of data through **authorities**

- New roles: Statistical Officials, Chief Data Officers, and Evaluation Officers
- Data is open and machine-readable by default
- Presumption of access and codification of OMB's Trust Directive

And **tools**

- Learning agendas
- Comprehensive data inventory
- Toolkits/Frameworks for data quality, data protection, and data ethics

Evidence Act: advances the evidence building functions in the Federal government by improving access to data and expanding evaluation capacity.

Federal Data Strategy: a 10-year vision for how the Federal Government will accelerate the use of data to deliver on mission, serve the public, and steward resources.

PILOT AN AUTOMATED TOOL FOR INFORMATION COLLECTION REVIEWS THAT SUPPORTS DATA INVENTORY CREATION AND UPDATES (ACTION 17)

- Leverage existing effort. Agencies must submit an ICR in order to gain approval from OMB to collect information from the public. For many agencies, a substantial fraction of data inventory items originate with an information collection.
- Support the inventory requirements under the Evidence Act by organizing metadata captured as part of the information collection design phase into agency inventories.
- Help address public, cross-agency, and intra-agency needs for data discovery and access by improving the metadata generated by agencies to go beyond the minimum standards currently required, and better enable prospective data users to understand the degree to which an already collected data asset can meet their needs.

BETTER METADATA MEANS BETTER...

discovery

- What data does my agency currently own or collect?

access

- Who owns the data?
- What are the access restrictions?

use

- What is the fitness for use of the data?

BENEFITS OF IMPROVED STANDARDIZATION AND FLOW

Reduced compliance burden

- Evidence Act and other statutory requirements
- OMB requirements

Improved ICR packages!

- More consistent presentation of material
- Easier for OMB to review*
- Easier to cross-reference and contextualize

* Improved OMB clearance times are neither guaranteed nor implied

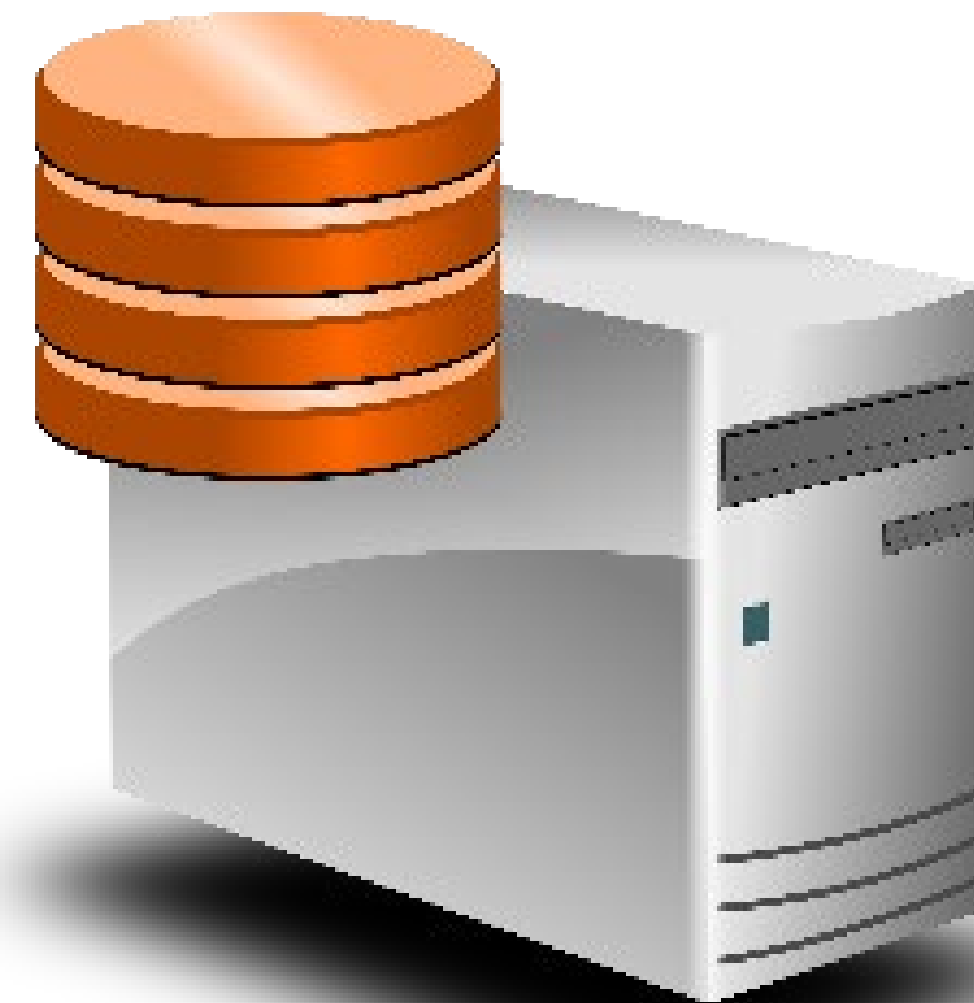
Technical Components and Demonstrations

Zac Mangold
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Technology

Flexible, Scalable, Compatible, Modern

- Flexible Authentication
 - Email/password or Active Directory
- Scalable Architecture
 - Abstract data structures
 - Custom organizational elements and user types
 - Custom display/options based on user
- Simple Host Environment Requirements
 - SQL Server
 - .NET Core
- Aurelia Client Application
 - Html and JavaScript



Estimated LOE

2-4 months

**Shared hosting*

4-6 months

**Agency hosted*

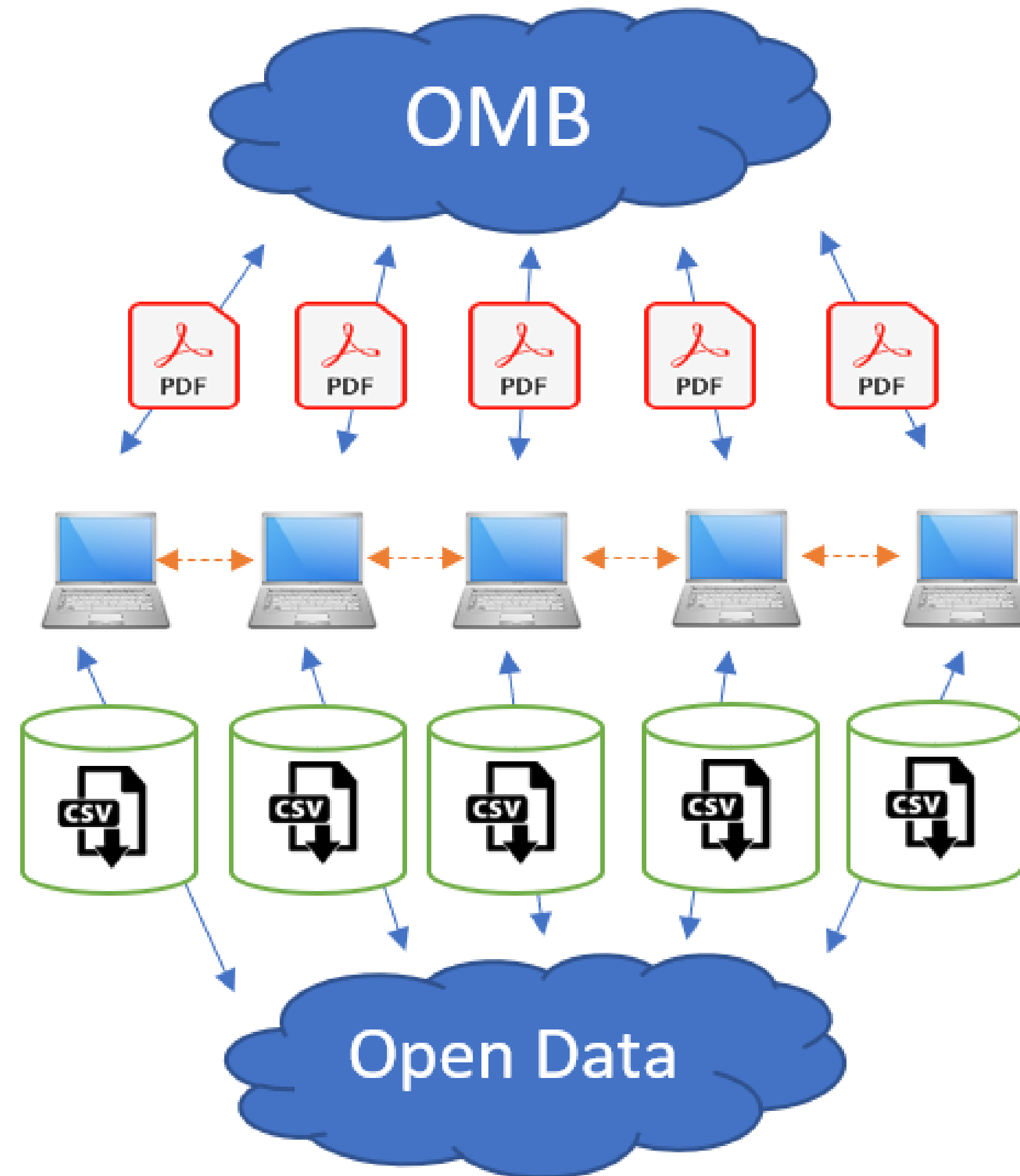
*Deploy
Test
Refine
Rollout*

Looking ahead...

Standardizing the format of delivery will reduce processing time (creation, review, and approval).

OMBICR can create a new or contribute to an existing Data Inventory.

Supports the Open Data Initiative



Promotes collaboration, a central repository of ICRs using a standardized format. Version control, historical repository, and process control.

Improved data quality by including system validations for fields and sections within the ICR.