

2020

Data Modernization Playbook: Interview
Guide

Contents

Executive Summary	2
Assessment Framework / Guidance	3
How to Use this Tool	5
Key Terms	5
Data Aggregator	5
Internal Stakeholders	5
External Stakeholders	5
Interview Warm-Up	6
Diagnostic Questions	6
Sample Interview Questions	9
 Data Value Creation	9
 Secure By Design	12
 Data Availability	14
 Reliable and Scalable	16
 Minimal Movement and Duplication	20
 Customer Usability and Accessibility	17
 Future-Proof Infrastructure	19
 Purposefully-Linked Data	20
 Customer-Centered Design	21
 Continuous Improvement Ready	23
 Optimized Customer Experience	25
Sample Interview Questions – Voice of the Customer / User Persona	28

Executive Summary

This Interview Guide is part of a set of tools used to conduct a systems and stakeholder assessment of a State Data Aggregator. The tools are referenced by the “State Modernization Playbook” and are all organized around the same Assessment Framework.

The objective of the Interview Guide is to provide sample question sets for both internal staff at the Data Aggregator being assessed and for external providers and consumers of the aggregator’s data. All questions are tied to the Assessment Framework.

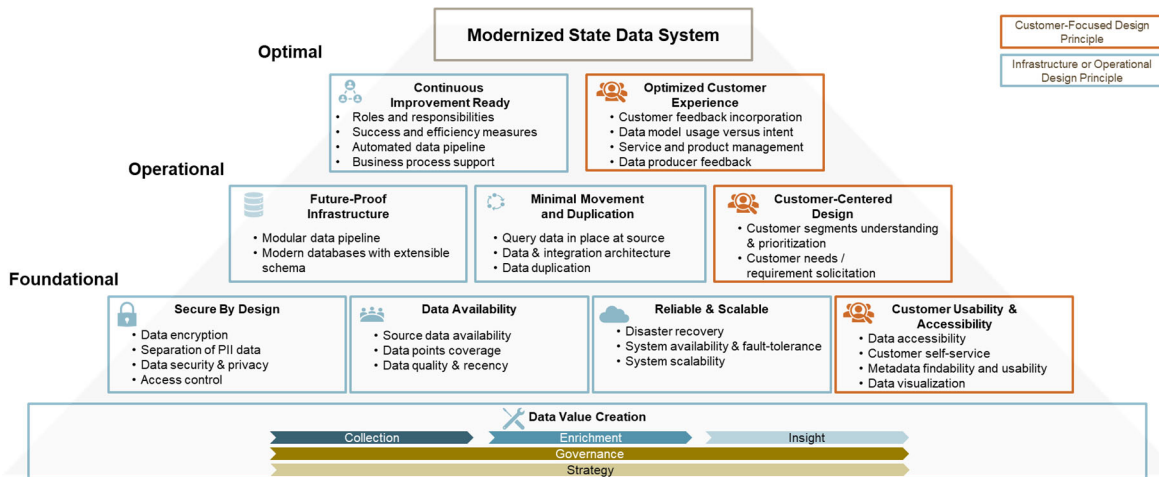
To effectively utilize this guide, one must:

1. Understand the Assessment Framework
2. Understand goals of the assessment
3. Identify key staff to be interviewed at the Data Aggregator
4. Identify key customer interviews

This guide was not meant to be exhaustive, but a starting place to guide the selection of key interview questions to consider.

Assessment Framework / Guidance











The Assessment Framework provides a guide for evaluating a state data system grounded in nine key design principles. The framework is intended to be used by organizations conducting state data assessments and organizations in the process of designing new state data systems.



The nine design principles encompass three high-level areas that a data system should consider: infrastructure, operations, and customer focus.

- Infrastructure and operational-related design principles relate to the structures, architecture, and design of the data system as well as the processes, staff, and methodologies used to create and refine the data system and reporting outputs. A highly mature organization in these areas would have smooth processes, a well defined data schema that easily links to additional data sources, encrypted data that protects privacy of students, and a system that is highly fault-tolerant, among other factors.
- Customer-focused design principles relate to the ways in which an organization understands, prioritizes, and incorporates customer needs into products, processes, and development. An organization that is highly mature in the customer focus area would have a detailed understanding of all customer groups and their needs, request and incorporate feedback into processes, and regularly use customer requests to drive future development.

Design Principle Definitions:

Design Principle	Definition
 Data Value Creation	The process of collecting data, transforming it to answer researcher, practitioner, and parent questions, and effectively providing it to end users
 Secure by Design	The system provides a distributed and virtual public good of rich metadata linked to secure, permissioned, and controlled detail data
 Data Availability	Data sets are easily accessible given acceptable use and authorization
 Reliable and Scalable	Infrastructure has sufficient disaster recovery and is designed to grow to accommodate future use cases
 Customer Usability and Accessibility	High-quality, timely, relevant data is made available in a user-friendly format
 Future-Proof Infrastructure	Modular, extendable infrastructure design enables future use cases
 Minimal Movement and Duplication	Data movement is minimized by storing upstream with minimal duplication and is retrieved to serve end-user needs
 Customer-Centered Design	Researcher, practitioner, and parent questions drive system and reporting design
 Continuous Improvement Ready	Organization is focused on reducing time-to-value for research & innovation
 Optimized Customer Experience	Product management process is responsive to customer feedback and needs in real-time

Design principles are also organized into maturity-levels: foundational, operational, and optimal.

- Foundational principles relate to the basic operations, infrastructure, and customer orientation that an organization may have. These traits are the basic needs that must be fulfilled to have a secure, functional organization (e.g., defined processes, disaster recovery, basic data visualizations). Without these traits, organizations will have difficulty implementing operational or optimal principles effectively.
- Operational principles relate to elements that would allow organizations to function more effectively. These traits are the elements that must be fulfilled to ensure the organization provides insightful data and analysis for the foreseeable future. Without these traits, organizations will not be able to implement optimal principles effectively.
- Optimal principles focus on aspirational practices that relate to continuous improvement and ongoing refinement of organizational processes, products, and services. These principles allow an organization to agilely adjust products and services to address leading questions in the P-20W space.

How to Use this Tool

To use the Interview Guide:

1. Identify a single Data Aggregator to assess
2. Review the Assessment Framework and understand the definitions of each design principle
3. Identify internal stakeholders (at least one technical and one operational stakeholder) to conduct diagnostic interview with (see Diagnostic Questions section below)
4. Select design principles to focus the assessment on based on preliminary diagnostic interviews
5. Design custom interview guides, leveraging the sample interview questions for selected design principles (see Sample Interview Questions sections below)
6. Identify key internal and external stakeholders to be interviewed
7. Schedule and conduct detailed interviews with internal and external stakeholders

Key Terms

Data Aggregator

An organization who collects, processes, stores and provides state data to guide research, legislation, policymaking, teaching practice, and/or other decision-making.

State Data

Includes education data (Pre-K, K-12, post-secondary) as well as other state constituent data (e.g. workforce, transportation)

Internal Stakeholders

Internal stakeholders belong to the Data Aggregator being assessed.

Stakeholder Type	Description
Internal Operational	A business or operational employee of the Data Aggregator. Understands data strategy, data governance, customer service, and product management processes.
Internal Technical	An IT or other technical employee of the Data Aggregator. Understands the system infrastructure, system security, data storage practices, data collection, data transformation and other technical design and process details.

External Stakeholders

External stakeholders are providers or consumers of data from the Data Aggregator being assessed.

Stakeholder Type	Description
External (Upstream) / Data Provider	Organizations who send data to the Data Aggregator. These organizations can be aggregators themselves (e.g. aggregator of higher education data) but in this role are sending the data they generate or collect to the Data Aggregator.
External (Downstream) / Data Consumer	Organizations or individuals who want to access data and information from the Data Aggregator. These can be, for example, researchers, governance boards, policymakers, legislators, students or parents

Interview Warm-Up

Interviews are a great place to gather detailed information. Using broad, open-ended questions often leads to details and additional questions that more targeted questions might miss. Below are some suggested “warm-up” questions to ask at the beginning of an interview.

Sample Introductory Questions:

1. Please tell us about your current role?
2. How do you currently engage with the Data Aggregator?
3. What are your objectives for the data? What data do you use the most?
4. How does your organization interact with other Data Aggregators or providers?











Diagnostic Questions

The Diagnostic Questions are designed to be somewhat open-ended questions to help direct the focus of a more intensive assessment. The answers to these initial questions can help target which areas of the Assessment Framework should be evaluated more deeply with Assessment Criteria questions. They can also be used to do a quick high-level/summary evaluation of the maturity of a Data Aggregator in the case that a deeper assessment isn’t feasible. The Diagnostic Questions are organized by the design principles.

In order to effectively utilize the Diagnostic Questions:

1. Ask a Diagnostic Question to the internal or external stakeholder
2. If answers to questions reveal pain points or cannot be answered, consider focusing the assessment and follow up questions on those particular design principles, using the Assessment Criteria questions to guide more detailed discussion.
3. The Diagnostic Questions are organized by level of maturity. If the interviewer determines there is evidence of low-maturity while answering the earlier questions, it may be advisable not to ask the later questions, which are targeted for higher-maturity organizations.

Diagnostic Questions (See Sample Interview Question section for additional detail):

	Design Principle	Diagnostic Questions
Foundational	Data Value Creation 	<ol style="list-style-type: none"> 1. Describe your data governance process 2. Provide an overview of your current overall strategy and roadmap 3. What is your perspective on internal and external constraints you face to accomplish your mission? 4. How do you enrich data collected from data contributors? 5. How useful do you think the data you provide is to consumers? 6. Describe the value of the data you receive from the Data Aggregator
	Secure by Design 	<ol style="list-style-type: none"> 1. Tell us about your data security processes 2. What are your biggest security challenges? 3. How do you balance the conflicting needs of data privacy and providing broad access to data?
	Data Availability 	<ol style="list-style-type: none"> 1. Tell us about your data collection process 2. Tell us about your approach for including data and insight from adjacent sectors (e.g., other levels of education, non-education sectors)? 3. Are there any data sources that you think should be added to your data collection? Why?
	Reliable and Scalable 	<ol style="list-style-type: none"> 1. What is your perspective on the overall health of the infrastructure? 2. Have there been any material system outages in the recent past?
	Customer Usability and Accessibility 	<ol style="list-style-type: none"> 1. Demonstrate how customers access data and insights 2. What are some challenges or opportunities for improvement in how customers access data and insights? 3. Tell us about the process of accessing data. What are some challenges you face? What are opportunities of improvement?
Operational	Future-Proof Infrastructure 	<ol style="list-style-type: none"> 1. Tell us about your process to manage inbound data structure changes. How do you maintain flexibility? 2. How old is your technology stack and versions? Is any hardware or software outside maintenance period?
	Minimal Movement and Duplication 	<ol style="list-style-type: none"> 1. Tell us about the flow of data from sources to your system? Are there any areas that require manual effort? 1. What is your perspective around data access challenges?
	Customer-Centered Design 	<ol style="list-style-type: none"> 1. What are your processes for understanding your customer base (e.g., customer needs, segmentation, prioritization, etc.)? 2. How do you determine what reports or data visualizations to produce? 3. How well do the Data Aggregator's current data and reporting capabilities meet your needs?
Optimal	Continuous Improvement Ready 	<ol style="list-style-type: none"> 1. What is your approach towards improving efficiency and quality of your processes?
	Optimized Customer Experience 	<ol style="list-style-type: none"> 1. Tell us about your process for engaging with external stakeholders to understand their needs and feedback? 2. How do you prioritize new data collection and feature improvements? 3. Is there a process for providing feedback to the Data Aggregator?

Sample Interview Questions



Data Value Creation

The process of collecting data, transforming it to answer researcher, practitioner, and parent questions, and effectively providing it to end users

Diagnostic Questions

Diagnostic Question	Target Interviewee
Please describe your data governance process	Internal Operational
Can you provide an overview of your current overall strategy and roadmap?	Internal Operational
What is your perspective on internal and external constraints you face to accomplish your mission?	Internal Operational
How do you enrich data collected from data contributors?	Internal Operational
How useful do you think the data you provide is to consumers?	Internal Operational
Tell us about your approach for linking data received from different sources?	Internal Technical
Can you describe the value of the data you receive from the Data Aggregator?	External (Downstream)

Assessment Criteria: Strategy

Target Interviewee: Internal Operational

Sample Interview Questions
Have you identified and staffed key roles responsible for data strategy and roadmap development?
Do you have a documented data strategy ? Please share current strategy documentation
Is your data strategy aligned with customer needs?
What are the primary objectives / most important outcomes of your data collection and/or reporting?
Are there key reporting, analytics and/or research requirements that have not yet been fulfilled (legislative, grant reporting, etc.)? If so, what are they?

Assessment Criteria: Governance

Target Interviewee: Internal Operational

Sample Interview Questions
Have you identified and staffed key roles for data governance? Is there a governance body in place that manages any changes?
Have you established internal policies, processes, and trainings for data governance?
Do you review and update the policies and processes periodically or on change in legislation or emergence of compliance risk?

Target Interviewee: Internal Technical

Sample Interview Questions
Do you follow available national data standards?
Do you have established processes for master data management (identity, organizations, courses, etc.)? Please specify.
What works well with the governance model? What does not work so well?

Assessment Criteria: Collection

Target Interviewee: Internal Technical

Sample Interview Questions
At present how many different inbound data schemas are ingested?
Have you identified and staffed key roles responsible for data collection?
Do strong relationships exist with data producers and Data Aggregator staff?
Is inbound data collection capacity scalable and have low latency?
Describe the user experience or workflow for institutions and other data providers to upload data. What are some pain points?
Are collection processes well documented?
How many data acquisition operations are performed, and at what frequency? By whom (roles and count)? Are they automated?
How many portals exist for data collection? If there are more than one, have you considered consolidating?
Which inputs require the greatest effort to manage? Why?

Target Interviewee: External (Downstream)

Sample Interview Questions
How does the Data Aggregator communicate with you regarding the data they want to collect?
What are the current pain points, gaps or challenges for the data collection / submission processes? (regarding technology, process or otherwise)
Have you developed, or been provided, tools to help meet data standard and quality requirements for the data collection / submission process??

Assessment Criteria: Enrichment

Target Interviewee: Internal Technical

Sample Interview Questions
To what extent do you enrich data (versus collect and pass along the data)?
Is data transformed to add value to consumers?
What methodologies exist for data enrichment? Are they well defined, documented, and understood by internal and external stakeholders?
Are data enrichment methods applied consistently?
How are data enrichment methodologies selected and scoped?

 **Data Value Creation**

Target Interviewee: External (Downstream)

Sample Interview Questions
Is data enriched in a way that is useful to you? Why or why not?
How could the data be made more useful to you?

Assessment Criteria: Insight

Target Interviewee: Internal Operational

Sample Interview Questions
Have you identified and staffed key roles responsible for creating insight and supporting use of data?
What percentage of data collected is used for generating insight (internally or externally)?
What are key measures driven by your output / data? Is there a consolidated list? a. How are the key measures used (e.g., by whom)?

Target Interviewee: Internal Technical

Sample Interview Questions
Is data insight and access easy for customers?
What is the process for consumers to access data?
Describe the architecture of the public web site(s); is it integrated with other enterprise systems?
How do you determine what material should be made available on the public web site?
How many custom data output requests are handled each (day/month)?
How do you handle requests for custom reports or data extracts?

Target Interviewee: External (Downstream)

Sample Interview Questions
Describe the process for accessing data and the process by which you derive insights from it? What are your biggest pain points? Where are opportunities for improvement?
How useful is the data you receive from the Data Aggregator?
How could the data you receive be more useful to you?



Secure By Design

The system provides a distributed and virtual public good of rich metadata linked to secure, permissioned, and controlled detail data

Note that these questions are not meant to take the place of a thorough review of privacy and security by an expert.

Diagnostic Questions

Diagnostic Question	Target Interviewee
Tell us about your data security processes (e.g., data encryption, handling of PII data, FERPA compliance, etc.)	Internal Technical
What are your biggest security challenges?	Internal Technical
How do you balance the conflicting needs of data privacy and providing broad access to data?	Internal Technical

Assessment Criteria: Data Encryption

Target Interviewee: Internal Technical

Sample Interview Questions
Is data encrypted in the consolidated data repository?
Is data encrypted during transit from source system to the consolidated data repository?

Assessment Criteria: Data security and privacy compliance

Target Interviewee: Internal Technical

Sample Interview Questions
Are data security and privacy policies and procedures clearly understood by all employees?
Do you have capabilities for monitoring, alerting, and remediating data security and privacy violations?
Are data security and privacy compliance requirements well understood? What are they?
Are systems and processes compliant with data security and privacy standards?
Are they an integral part of operations?
Are they continuously monitored?
Is the strategy regularly updated based on changing regulations (e.g. FERPA, GDPR, CCPA) and data sharing agreements?
Are there data standards that conflict or should be applied to this data or that you use commonly?



Assessment Criteria: Separation of PII data

Target Interviewee: Internal Technical

Sample Interview Questions
Is individual student identity contained in the consolidated data repository obfuscated with non-identifiable ID?
Is PII data for students kept separately and securely?
Is there a secure process to compile data with actual student identity for specific data requests?
Do your reports and data extracts adhere to certain data standards? a. If no, are there standards that could be used? What prevents you from adopting them now? b. If yes, which one(s) and why? Does it meet the needs of data / report consumers?
How can the PII and sensitive data masking be improved?

Assessment Criteria: Access control

Target Interviewee: Internal Technical

Sample Interview Questions
Do you provide role-based access to internal stakeholders?
Do you provide role-based access to external stakeholders?
How is access to internal and external-facing systems controlled? What tools are used?
Do you provide Virtual Desktop Interface (VDI) or other secure access for authorized users to access or interface with current or historical data sets, or do they download data sets for direct local access? Describe.

Data sets are easily accessible given acceptable use and authorization

Diagnostic Questions

Diagnostic Question	Target Interviewee
Tell us about your data collection process, including: how many data sources you have, what is the data collection process, what are your biggest challenges?	Internal Technical
Tell us about your approach for including data and insight from adjacent sectors (e.g., other levels of education, non-education sectors)?	Internal Technical
Are there any data sources that you think should be added to your data collection? Why?	Internal Technical

Assessment Criteria: Data points coverage

Target Interviewee: Internal Technical

Sample Interview Questions
What percentage of relevant data points from source systems are available currently in the consolidated data repository?
How relevant is the data being provided to stakeholders to their particular purposes?

Target Interviewee: External (Downstream)

Sample Interview Questions
Is the data you need available in the system?
What types of questions are you using the Data Aggregator's data to answer?
How well do data breadth, depth, and usability meet your needs?

Assessment Criteria: Data quality and recency

Target Interviewee: Internal Technical

Sample Interview Questions
Does the quality of data in the consolidated data repository meet your customer needs?
Does the frequency of the data feed from source systems into the consolidate data repository meet the need?
How do you actively manage the quality of its data?
What tools are used perform data quality checks and cleanup?
How much data "cleansing" is typically necessary after data is obtained by, or submitted to, the Data Aggregator?
How often are data quality routines run, what do they check for, and how long (minutes/hrs./days) do they take to complete?
Is data rationalized across sources?

Assessment Criteria: Data quality and recency (continued)

Target Interviewee: External (Downstream)

Sample Interview Questions
Is data consistent between data sets? Any examples of where there have been conflicts? How did you resolve them?
What is the quality of the data you receive? What are some data issues or strengths?

Assessment Criteria: Source data availability

Target Interviewee: Internal Technical

Sample Interview Questions
What percentage of relevant data sources are available currently in the consolidated data repository?
What are the primary data inputs / sources for the in-scope reporting systems?
What are critical data elements? How many are there?
Are all critical data elements available? Why or why not?
Are there other datapoints that should be collected to improve the richness of reporting outputs?
Why haven't these data points been collected to date?

Target Interviewee: External (Downstream)

Sample Interview Questions
Is the data you need available in the system?



Infrastructure has sufficient disaster recovery and is designed to grow to accommodate future use cases

Diagnostic Questions

Diagnostic Question	Target Interviewee
What is your perspective on the overall health of the infrastructure (e.g., backup, disaster recovery, capacity, etc.)?	Internal Technical
Tell us about any material system outages that occurred in the recent past	Internal Technical

Assessment Criteria: Disaster recovery

Target Interviewee: Internal Technical

Sample Interview Questions
Are business continuity and disaster recovery plans documented and disaster recovery drills conducted on a schedule?
Is data backup infrastructure able to meet recovery point and recovery time?
What disaster recovery/business continuity standards or plans are in place for in-scope solutions?
Discuss scalability, availability, disaster recovery, and other relevant aspects of the web site(s).
Is disaster recovery automated?
Is the plan tested and updated periodically? How often?
Which back-up/replication tools are used? At what frequency?

Assessment Criteria: System availability and fault tolerance

Target Interviewee: Internal Technical

Sample Interview Questions
Is the current level of system availability able to meet user needs?
Was recovery time in past failure incidences acceptable?
Are systems fault-tolerant? (highly available; automated disaster recovery?)
Do users or operators report any significant or noticeable network latency or bandwidth issues in the current environment?

Target Interviewee: External (Downstream)

Sample Interview Questions
Are there times when the systems are down regularly?
Is the system available when you need it?

Assessment Criteria: System scalability

Target Interviewee: Internal Technical

Sample Interview Questions
Discuss the scale of key systems, versus average and peak loads; is the current level of system performance able to meet user needs?
Are the critical systems right-sized? Do they need to scale up or down? Do they auto-scale?



Diagnostic Questions

Diagnostic Question	Target Interviewee
How do customers access data and insights compiled by the Data Aggregator?	Internal Technical
What are some challenges or opportunities for improvement in how customers access data and insights?	Internal Technical
Tell us about the process of accessing data. What are some challenges you face? What are opportunities of improvement?	External (Downstream)

Assessment Criteria: Customer accessibility

Target Interviewee: External (Downstream)

Sample Interview Questions
Do you have access to the data you need? Why or why not?

Assessment Criteria: Data visualization

Target Interviewee: Internal Technical

Sample Interview Questions
Do you provide pre-built dashboards, reports and data extracts for customers?

Target Interviewee: External (Downstream)

Sample Interview Questions
On a scale of 1 - 5, how would you rate the data visualization and interfaces provided to you (1 - none provided, 5 - extremely helpful and allow deep, customized data exploration) a. Why would you give it this rating?
What would you improve about the data visualizations? Why?
Are there additional visualizations you would like to see? Why?

Assessment Criteria: Metadata findability and usability

Target Interviewee: Internal Technical

Sample Interview Questions
Do data sets contain complete and consistent metadata?
Does metadata provide detailed descriptions of each data set and element (e.g. descriptions, origin and provenance, domain and methods of data collection, schemas, syntactic and semantic definitions, references to data dictionaries or standards, etc.)?
Is metadata fully searchable, so that users can find relevant data sets?



Assessment Criteria: Metadata findability and usability (continued)

Target Interviewee: External (Downstream)

Sample Interview Questions
Is it easy to search data? Do you understand how different data sets are linked?
Are there challenges with accessing or using the metadata tool or process? What would you change?

Assessment Criteria: Customer self-service

Target Interviewee: Internal Technical

Sample Interview Questions
Do you provide access to data through APIs or other mechanisms for customers to easily access data?
Do you provide the capability for customers to slice and dice the data on the website?
Are customers able to query the data outside the browser-based interface?

Target Interviewee: External (Upstream)

Sample Interview Questions
To what extent does the Data Aggregator support your ability to provide data?
Is there slowness (latency) when using the data provider resources on through the website? If yes, does this happen often and which websites are you experiencing this?
On a scale of 1 - 5, how would you rate the interfaces provided to you (1 - highly cumbersome, 5 - sleek, simple flexible) a. Why would you give the interfaces provided to you this rating?

Target Interviewee: External (Downstream)

Sample Interview Questions
Is there slowness (latency) when accessing reports or using the interactive data on through the website? If yes, does this happen often and which websites are you experiencing this?
On a scale of 1 - 5, how would you rate the interfaces provided to you (1 - highly cumbersome, 5 - sleek, simple flexible) Why would you give the interfaces provided to you this rating?



Diagnostic Questions

Diagnostic Question	Target Interviewee
Tell us about your process to manage inbound data structure changes. How do you maintain flexibility?	Internal Technical
How old is your technology stack and versions? Is any hardware or software outside maintenance period?	Internal Technical

Assessment Criteria: Modular data pipeline

Target Interviewee: Internal Technical

Sample Interview Questions
Are data pipelines built with modular components shared across the data pipelines?
What is the typical time to build new data pipeline to ingest data from a new source? Is this acceptable?

Assessment Criteria: Modern databases with extensible schema

Target Interviewee: Internal Technical

Sample Interview Questions
What percentage of data is stored in modern NoSQL databases?
Are data systems capable of handling semi-structured and un-structured data?
Can you provide schemas or other documentation for the key data repositories? By what process are they maintained?
Is new data easily linked or incorporated into the existing information architecture?
What is the current size of in-scope data repositories? <ol style="list-style-type: none"> a. What has been the trend of the size of in-scope data repositories for the last 8 quarters? Is this trend likely to remain the same or increase? Why?



Minimal Movement and Duplication

Data movement is minimized by storing upstream with minimal duplication and is retrieved to serve end-user needs

Diagnostic Questions

Diagnostic Question	Target Interviewee
Tell us about the flow of data from sources to your system? Are there any areas that require manual effort?	Internal Technical
What is your perspective around data access challenges?	Internal Technical

Assessment Criteria: Data duplication

Target Interviewee: Internal Technical

Sample Interview Questions
What percent of data is duplicated within your systems for analysis and reporting?
Do reports reference master data rather than copies of it?
Do multiple, conflicting copies of data exist?
How is provenance tracked?
Is master data clearly defined?

Assessment Criteria: Data integration and architecture

Target Interviewee: Internal Technical

Sample Interview Questions
Is there any duplication among database technologies being used?
How many instances of production databases are there? Are there any areas that are unnecessarily complex? Why is that?
How many interfaces are there for data integration? Is there any duplication among the interfaces?
Are all interfaces built with a common technology platform?
Describe the architectural structure of your data management and reporting systems
Describe the reporting architecture, data flows between up/downstream transactional systems, internal/external interfaces, data repositories (e.g. Data Warehouse), analytics/reporting tools, etc.
How are systems integrated? Synchronous/asynchronous? Frequency and sequencing of batch jobs?
What are the technology systems (enterprise applications) that support key reporting functions?
What are the biggest technical challenges or limitations of the current information architecture and data management processes?
Which applications present the greatest challenges / opportunity for improvement?

Assessment Criteria: Query data in place at source

Target Interviewee: Internal Technical

Sample Interview Questions
What percent of the data is retrieved in real-time from data producer systems?
What are the biggest challenges of the data retrieval process?
Why do these challenges to the data retrieval process exist?



Diagnostic Questions

Diagnostic Question	Target Interviewee
What are your processes for understanding your customer base (e.g., customer needs, segmentation, prioritization, etc.)?	Internal Operational
How do you determine what reports or data visualizations to produce?	Internal Technical
How well do the Data Aggregator’s current data and reporting capabilities meet your needs? What value does the Aggregator provide?	External (Downstream)

Assessment Criteria: Customer needs / requirement solicitation

Target Interviewee: Internal Technical

Sample Interview Questions
What reporting needs are unmet or underserved by the current reporting?
Are intent and needs reviewed, solicited, and fed back into strategy and operations? At what frequency?
What are some common types of data requests?
What are the biggest pain points for data consumers?
What is the typical turnaround time for a process or feature change? How could this time be improved?

Target Interviewee: External (Downstream)

Sample Interview Questions
What are the top three data requests you ask the Data Aggregator?
What are your biggest pain points when interacting with the Data Aggregator?
What are some common types of data requests?
What are the biggest pain points for data consumers?
What are you doing with your own data that the Data Aggregator should be doing?
What additional data do you wish you had access to? Why?
Where do you think the Data Aggregator delivers the greatest value? Least value? Where do they have opportunity going forward?

Target Interviewee: External (Upstream)

Sample Interview Questions
What are the top three requests you have given the Data Aggregator?
What are your biggest pain points when interacting with the Data Aggregator?
What are you doing with your own data that the Data Aggregator should be doing?



Assessment Criteria: Customer needs / requirement solicitation

Target Interviewee: Internal Technical

Sample Interview Questions
Who are the key individuals / stakeholders that regularly access or use data sets?
Who are considered to be the prioritized consumers of produced reports?
Who are the primary internal and external customers/service consumers by type or persona?
What are customer needs, priorities, and desires by customer type/persona?
How do the needs, priorities, and desires by customer persona differ?
How do customer goals align or differ from your goals? Why do you think that is?

Target Interviewee: External (Downstream)

Sample Interview Questions
What key questions are you looking to answer when using the Data Aggregator's data?



Continuous Improvement Ready

Organization is focused on reducing time-to-value for research & innovation

Diagnostic Questions

Diagnostic Question	Target Interviewee
What is your approach towards improving efficiency and quality of your processes?	Internal Operational

Assessment Criteria: Automated data pipeline

Target Interviewee: Internal Technical

Sample Interview Questions
How many data feeds exist?
What data feeds are manual?
What data feeds are automated?
What percentage of data processing requires manual effort?
How well does data processing work now?
What are some areas for improvement? Why?

Assessment Criteria: Business process support

Target Interviewee: Internal Operational

Sample Interview Questions
Is there a continuous improvement process in place? Please describe it
In your opinion, which aspects of your process are efficient, and which are inefficient? Why?
Do you feel the right technology is in place to support these processes? What could be improved?
Are processes documented and revised regularly? How?

Assessment Criteria: Roles and responsibilities

Target Interviewee: Internal Operational

Sample Interview Questions
Have you identified and staffed key roles responsible for continuous improvement?
How well are roles and responsibilities defined and formalized?
Do key roles have 'backups'?
Are there roles specifically for continuous improvement?
How well do the continuous improvement roles work?
Have you identified and staffed key roles responsible for continuous improvement?

Assessment Criteria: Success and efficiency measures

Target Interviewee: Internal Operational

Sample Interview Questions
Do you track key success measures? What are they? (e.g., Number of reports produced; number of times reports are accessed; etc.)
How often are measures tracked?
Are results tracked and used to drive continuous improvement?
Are there any other relevant KPIs? If so, what are they? <ol style="list-style-type: none">Are success or quality of service metrics well understood by internal and external stakeholders?Do you think these are the best measures of success?How often are these measures updated?



Optimized Customer Experience

Product management process is responsive to customer feedback and needs in real-time

Diagnostic Questions

Diagnostic Question	Target Interviewee
Tell us about your process for engaging with external stakeholders to understand their needs and feedback?	Internal Operational
How do you prioritize new data collection and feature improvements of the system?	Internal Technical
Is there a clear an effective process for providing feedback to the Data Aggregator?	External (Upstream)

Assessment Criteria: Customer feedback incorporation

Target Interviewee: Internal Operational

Sample Interview Questions
What is the process for and how frequently is customer feedback solicited?
Do customers actively provide feedback to the Data Aggregator based on their data needs? Why or why not?
Are changes to systems, support processes, and rules made based on solicitation of customer feedback and experience?
Who are the most frequent requestors of custom reports or data extracts?
What are some examples of commonly expressed customer feedback? Why do you think that is?

Target Interviewee: External (Upstream)

Sample Interview Questions
Do you provide feedback to the Data Aggregator regularly? Why or why not?
How often is feedback solicited?
How satisfied are you with the current customer feedback and incorporation process?
If applicable, do you believe your feedback is incorporated into system or process changes? Why or why not?
Are you able to request additional data provider support if it is not currently available?
How would you like to see the data collection process and tools from the Data Aggregator improve?



Optimized Customer Experience

Target Interviewee: External (Downstream)

Sample Interview Questions
Do you provide feedback to the Data Aggregator regularly? Why or why not?
How often is feedback solicited?
How satisfied are you with the current customer feedback and incorporation process?
Do you believe your feedback is incorporated into system or process changes? Why or why not?
Are you able to request additional reporting if it is not currently available?
Are you able to request additional visualizations if it is not currently available?
How would you like to see data and reporting from the Data Aggregator improve?

Assessment Criteria: Data model usage versus intent

Target Interviewee: Internal Operational

Sample Interview Questions
Do you have a tool or process to measure or track demand or usage for reports?
Do you track utilization statistics for data sets?
If so, what have been the data access and utilization results over the last eight quarters?
What are the most frequently leveraged reports or queries? Which are rarely or never used?
Are access patterns tracked and understood by customer type?
Is there a process for retirement of reports or dashboards based on low usage patterns?

Target Interviewee: External (Upstream)

Sample Interview Questions
Describe how you currently engage with the Data Aggregator's data collection process
What are your objectives in interacting with the Data Aggregator's collection process?
Why do you currently contribute to the Data Aggregator's set (e.g., legislative requirements)?
What additional tools, communications, or documentation would be valuable for you from the Data Aggregator?

Target Interviewee: External (Downstream)

Sample Interview Questions
Describe how you currently engage with the Data Aggregator's data collection and reporting
What are your objectives in interacting with the Data Aggregator's reporting?
What do you use the data/reporting for most often? Why?
What additional data would be valuable for you from the Data Aggregator?
What analysis could you do with the additional data that you cannot do now?

Assessment Criteria: Data producer feedback

Target Interviewee: Internal Operational

Sample Interview Questions
Do you provide a way for data producers to provide feedback?

Assessment Criteria: Data producer feedback (continued)

Target Interviewee: External (Upstream)

Sample Interview Questions
Is there a process by which you are able to provide feedback to the Data Aggregator?
How satisfied are you with the current processes / systems / overall experience?
Do you have a way to transfer feedback to the Data Aggregator? How often is feedback solicited?
How could the data submission process at the Data Aggregator be improved?
Do you contribute data to other Data Aggregators? If so, how do the processes differ? How does this Data Aggregator's process compare?
What does an effective data submission process look like to you?
How would you like to see the data submission process from the Data Aggregator improve?

Assessment Criteria: Service and product management

Target Interviewee: Internal Operational

Sample Interview Questions
Have you identified and staffed key roles for responsible for service and product management?
Do you manage and publish a data and features roadmap for the data system?
Are SLA / MOUs used to drive continuous monitoring and feedback?
How are SLAs measured and analyzed? How often?
If an SLA is not met, what happens?
Are SLAs understood by all stakeholders of the process, both internal and external?
Are SLAs revised for appropriateness? How often?
What do you do to help attract and educate data/service consumers and promote your products and services?
How do you manage the services and products (e.g. reports, data) provided to users?
Do you perform system performance measurement and tuning? How and when? Is it done in response to user feedback, or routinely?

Target Interviewee: Internal Technical

Sample Interview Questions
How often are reports updated? By whom, and through what process?

Target Interviewee: External (Downstream)

Sample Interview Questions
Do you understand the data rationalization and cleansing process as it stands now?
Do you need any additional information about how data is processed by the Data Aggregator?
What would you change about the current data rationalization and cleansing processes now? Why is that?

Sample Interview Questions – Voice of the Customer / User Persona

See sample interview questions that could be asked to conduct a Voice of the Customer or User Persona-focused interview. These questions are intended to be directed to external stakeholders, and is a compiled list of the external stakeholder questions that appear in the design principles sections above.

Institutional Researcher-Specific Questions:

1. Please tell us about your current role
2. Describe how you currently engage with the Data Aggregator's data and reporting
 - i. What are your objectives? What do you use most?
3. How well do the Data Aggregator's current data and reporting capabilities meet your needs?
4. How do you access the data?
 - i. What processes do you use? Are there rules to access?
 - ii. Comment on what works well and where there are challenges
5. What is the quality of the data you receive? What are the data issues or strengths?
6. Is the data you need available in the system?
 - i. What types of questions you are using the Data Aggregator's data to answer?
 - ii. How well do the data breadth, depth and usability meet your needs?
7. How often is your feedback solicited? Do you provide input? Is it received?
8. Is the system available when you need it?
9. How would you rate the interfaces provided to you? Data visualization?
10. How would you like to see data and reporting from the Data Aggregator improve?
11. How do the engagement requirements with the Data Aggregator impact your organization (resource requirements, frequency, level of effort)?
12. What are you doing with your own data that the Data Aggregator should be doing?
13. Where do you think the Data Aggregator delivers the greatest value? Least value?

All Other Data Consumer Questions:

1. Please tell us about your current role
2. Describe how you (or your team) currently engage with the Data Aggregator's data collection and reporting
 - i. What are your objectives? What do you use most?
3. How well do the Data Aggregator's current data and reporting capabilities meet your needs?
4. How do you access the data (what processes)?
 - i. Comment on what works well and where there are challenges
5. What is the quality of the data you receive?
6. Is the data you need available in the system?
7. What strategic outcomes or changes are you looking to make where data from the Data Aggregator does, or could, play a part?
 - i. What key questions are you looking to answer with data from the Data Aggregator?
8. With regard to their role in aggregating and sharing data and metrics/reports, where do you think the Data Aggregator delivers the greatest value? Least value?
9. What changes would you like to see this data modernization project achieve to better serve your needs? The needs of the broader education community? E.g., data access, frequency of reporting, types of reports, etc.
10. How often is your feedback solicited? Do you provide input? Is it received?