

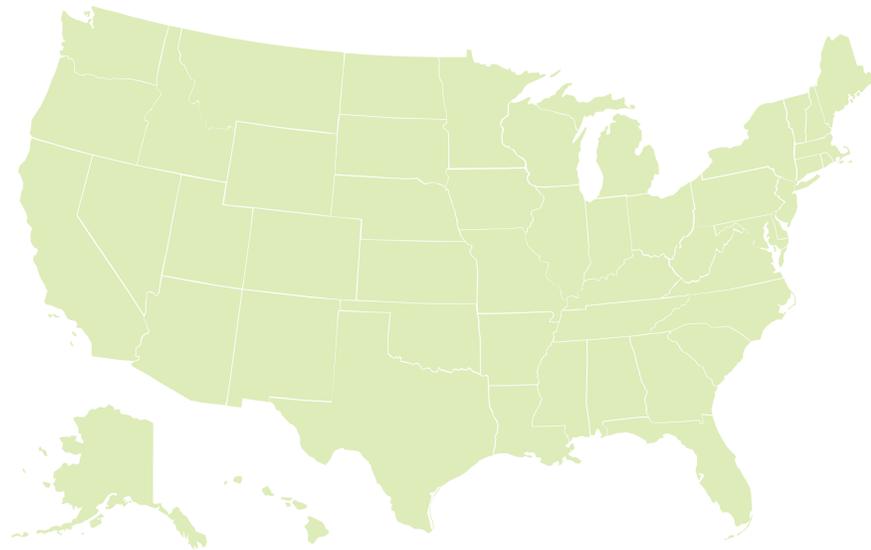
# Forum Guide to Data Governance

# National Forum on Education Statistics

**Mission:** To plan, recommend, and develop education data resources that support local, state, and national efforts to improve prekindergarten through secondary education throughout the United States.

## Members

- Representatives of offices of the U.S. Department of Education and other federal agencies
- Representatives of state and local education agencies (SEAs and LEAs)
- Associate members from U.S. territories, Regional Educational Laboratories (RELs), and national education associations



# Working Group Motivation

- Data governance is a critical issue in the effective and safe management and communication of education data.
- The new resource is designed to complement existing resources while also providing best practices, examples, and case studies from federal, state, and local education agencies.



# Purpose and Audience

- **Purpose:** To highlight how data governance programs benefit education agencies and provide timely and useful best practices, examples, and resources for agencies implementing or updating their data governance programs.
- **Audience:** Education agency leadership and staff who work with, manage, and communicate data at all levels.

# Forum Guide to Data Governance

- Chapter 1: Introduction to Data Governance
- Chapter 2: Effective Practices for Creating and Implementing a Data Governance Program
- Chapter 3: Effective Data Sharing, Data Security, and Privacy
- Chapter 4: How Data Governance Needs Change Over Time
- Chapter 5: Case Studies From States and Districts



# Chapter 1: Introduction to Data Governance

Data governance refers to a formal and comprehensive set of policies and practices designed to ensure the appropriate effective management of data within an organization, encouraging suitable data security, access, and quality.

- Why is data governance important?
- What are the benefits of data governance?
- How does data governance support data collection and reporting processes?

# Why Is Data Governance Important?

Data governance is crucial to the effective and safe management and communication of education data. It includes

- establishing responsibility for individual data elements, datasets, and databases;
- continuously improving data systems through the development and enforcement of policies, roles, responsibilities, and procedures;
- clarifying procedures and best practices for both internal and external access to data; and
- specifying rules and expectations related to data privacy and security.

# What Are the Benefits of Data Governance?

Clearly defined, robust data governance can minimize potential problems by allowing agencies to

- provide accountability for data decisions;
- clarify roles in the governance process;
- minimize inefficiencies, such as continuing to collect data that are no longer needed;
- avoid poor data decisions or planning that erode public trust in the agency's ability to securely collect and maintain data, or to accurately report on data;
- restrict potential fraud or theft within an agency; and
- eliminate data misinterpretation and misrepresentation, either within or outside the agency.

# How Does Data Governance Support Data Collection and Reporting Processes?

A clearly defined management process helps ensure successful implementation of data collection activities, including making decisions, meeting specified needs, minimizing cost and burden, and ensuring cooperation and support for data collection activities. Components include

- design;
- data collection;
- data preparation and processing;
- data analysis; and
- reporting and dissemination of data.

# Chapter 2: Effective Practices for Creating and Implementing a Data Governance Program

This chapter discusses the practices, structures, and essential elements needed in an effective data governance program.

- Create and maintain communication structures
- Identify and establish key roles and responsibilities
- Provide support for data governance
- Clarify data requirements
- Promote a culture of quality data
- Implement core practices for managing data requests
- Address common challenges

# Create and Maintain Communication Structures

All staff who work with data need to know which information they are expected to communicate, to whom, and when. This can be achieved by having specific roles for varied parts of the data collection and management process, as well as regular professional development and support that keeps staff up to date on expectations for them within the data process, particularly as data needs grow or change.



# Identify and Establish Key Roles and Responsibilities

- Data Governance Coordinator
- Executive Board (*interagency*)
- Data Policy Committee (*single agency*)
- Data Governance Committee
- Data Steward Committee
- Data Steward(s)



# Provide Support for Data Governance

- SEAs and LEAs need support to maintain a data governance program, both within the data team and from higher up.
- Supports that benefit agencies include
  - formal documentation of business rules;
  - adequate time for new data collections or changes;
  - consideration of how changes will affect dependencies; and
  - systematic analysis to ensure that there is a clear and compelling need for any personally identifiable information (PII) collected.

# Clarify Data Requirements

- A strong data governance program needs data requirements that support and respond to the particular needs of an agency or location.
- Agencies should begin with data standards that are specific and understood by all data users.
  - These standards should include the data element categories, data collection schedules, and typical data tasks that are organized and maintained.
- Agencies should also consider more specific issues, such as the different data needs and collections related to operational systems data versus accountability data.

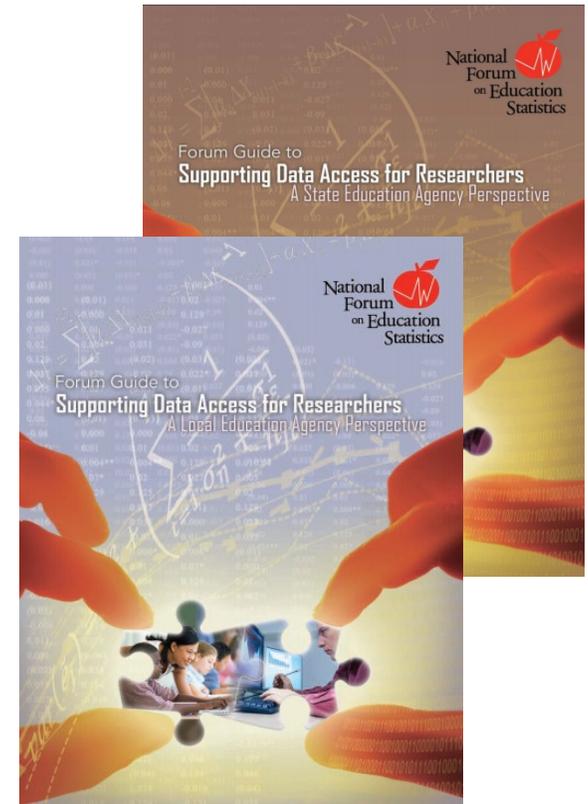
# Promote a Culture of Quality Data

A key part of ensuring data accuracy, security, utility, and timeliness is creating a culture in which quality issues are proactively monitored and effectively addressed. Timely and accurate data make it possible for

- teachers to make the right decisions about their students' instructional needs;
- principals to track student and teacher progress;
- district personnel to apportion staff or other resources;
- state departments of education to plan and manage effective programs proactively; and
- researchers to evaluate the impact of education programs.

# Implement Core Practices for Managing Data Requests

- Help researchers understand agency data and the data request process
- Create effective data request forms
- Review data requests strategically
- Manage the data request process efficiently
- Release data appropriately
- Monitor data use
- Use research findings in the agency



# Address Common Challenges

Although each agency has unique needs and contexts, some data governance challenges are similar across locations. Those challenges might include

- data collection or use requirements that do not align with the realities of data at the local level;
- collection expectations that do not consider how the data will be used;
- data collections that change over time;
- data being used for purposes for which they were not intended;
- agency staff lacking an understanding of why data governance is important to them; and
- maintaining consistency through staff turnover.

# Chapter 3: Effective Data Sharing, Data Security, and Privacy

Data security and privacy are critical as more data are collected, shared, and used for varied purposes. This chapter discusses how data governance programs can be designed to meet privacy and security requirements while also meeting the need for data accessibility and sharing.

- Best practices for data privacy and security in a data governance program

# Best Practices for Data Privacy and Security in a Data Governance Program

- Provide specific training.
- Have an annual Acceptable Use Policy (AUP) training and review.
- Explain to users at different levels how data classification is used.
- Clarify the different levels of physical and electronic access and security.
- Have clear policies regarding transmission security.
- Ensure that users understand why electronic mass data transfers are strictly controlled by role-based access and using secure transport encryption.
- Discuss and implement clear policies for data minimization and destruction.

# Chapter 4: How Data Governance Needs Change Over Time

Establishing a program is just the beginning: data needs and expectations need to be continually monitored in order to guide adjustments and updates to data governance policies and procedures.

- Advances in technology
- Shifts in staffing and leadership
- Suggestions for staying ahead of data needs

# Advances in Technology

- As technological capabilities continue to grow, there are fewer technological constraints on the amount of data that can be collected, stored, analyzed, and moved.
- To keep up with these advances, data governance programs must focus on both people and processes.
  - **People:** Who makes decisions regarding data? Who has access to data? How are they trained? What rules must be followed?
  - **Processes:** What are the rules and procedures that determine how data are collected, used, managed, reported, and destroyed?

# Shifts in Staffing and Leadership

Sustainability includes having a data governance program that allows the agency to navigate shifts in staffing and leadership, especially during simultaneous advances in technology needs and complexities. This can be an even bigger issue in a small organization, with fewer people to handle data governance tasks.



# Suggestions for Staying Ahead of Data Needs

- Continually monitor data needs for ongoing maintenance and improvement.
- Monitor changes in student body, teachers, other staff, etc., that could influence data collections.
- Collaborate with other agencies to share information about relevant changes.
- Stay ahead of technological advances that may influence data collection and use.
- Form collaborative groups including LEA and SEA staff.

# Chapter 5: Case Studies From SEAs and LEAs

This chapter offers an in-depth look at the challenges, successes, and lessons learned from education agencies' data governance efforts, with specific attention to how agencies have envisioned, maintained, and improved their programs.

# Case Studies From SEAs and LEAs

## **West Virginia: Improving Data Quality Through Better, Broader Access**

- As West Virginia began implementing formal data governance in 2012, its Department of Education had the opportunity to rethink how responsibilities for education data at the state level were distributed. Leaders started by focusing on issues of data ownership and job responsibilities. They have built relationships across groups that have allowed data stewards to ask questions earlier in the process and improve data quality overall.

## **Louisiana: Encouraging Buy-in for Data Governance Through Data System Development**

- Louisiana's data governance working group is composed of data analysts. Through their collaborative work, analysts have found that much of their work is interdependent, and they are able to ensure that the analytics staff are not operating in silos. Although it was difficult in the beginning to convince staff to bring data issues to the group, team members now attend working group meetings regularly and submit items to be discussed.

# Case Studies From SEAs and LEAs

## **Arkansas: Developing Data Governance Over Time**

- Early data governance efforts centered on streamlining the multiple systems and processes involved in implementing the statewide computer network. Arkansas moved its data governance program forward by adding the Data Steward Review Committee, which works collaboratively to develop the policies, procedures, and standards that work across the agency.

## **Kentucky: Cross-Agency Collaboration Builds Robust, Sustainable Data Governance**

- The Kentucky Longitudinal Data System is a centralized data system managed by the Kentucky Center for Statistics (KYSTATS). Through strong leadership and guidance from its board over the years, KYSTATS has matured to one of the most robust longitudinal data system programs in the nation.

# Case Studies From SEAs and LEAs

## **Nebraska: Maintaining Flexibility as Needs and Structures Evolve**

- Nebraska's data governance program has evolved over the past two decades. Early versions of data governance focused on project implementation. This approach proved effective for meeting specific data collection and systems goals. Over time, Department of Education leaders realized that they needed overarching process and procedures.

## **Minnesota SLEDS: Maintaining Cross-Agency Governance and Staying Prepared for Change**

- Minnesota's Statewide Longitudinal Education Data System (SLEDS) is managed jointly by the Minnesota Office of Higher Education, the Minnesota Department of Education, and the Minnesota Department of Employment and Economic Development. These agencies agreed that a shared model of data governance was the most appropriate in order to build trust and ensure effective management and use of the system.

# Case Studies From SEAs and LEAs

## **Minnesota ECLDS: Incorporating Early Childhood Data Into the Longitudinal System**

- Minnesota's Early Childhood Longitudinal Data System (ECLDS) incorporates birth through third grade data and is overseen by the state Department of Education. ECLDS was developed as a sub-project under the state's Race to the Top – Early Learning Challenge grant awarded in 2011, and its data governance was originally modeled after that of Minnesota's SLEDS.

## **Metro Nashville, Tennessee: Developing Formal Processes for Data Quality**

- Metro Nashville's data governance program was developed through an iterative process that focused on data ownership and specified business rules. Metro Nashville now has 22 data quality specialists who are responsible for monitoring data quality, identifying the root cause of data quality issues, and guiding and coaching the staff at each school to implement solutions to the issues.

# Case Studies From SEAs and LEAs

## **Northshore School District, Washington: Better LEA-SEA Communication Through Data Governance**

- Northshore School District and other districts in Washington have partnered with the Office of Superintendent of Public Instruction to create formal data governance. When LEA staff in Washington began collaborating with the SEA to formalize data governance, they created groups for governance, data use, and other elements of the process.

## **Loudoun County, Virginia: Creating a Data Governance Structure**

- Loudoun County Public Schools initiated its data governance program through its Department of Digital Innovation as a cross-functional data team composed of members from each department in the LEA. The data governance program grew out of a recognized need for a common language, an approved and vetted set of data, and the understanding that data quality requires defining, documenting, and adhering to resolution practices.

# Case Studies From SEAs and LEAs

## **Clayton County, Georgia: Establishing a Clear System for Data Requests**

- Until recently, Clayton County did not have a clear data governance process for managing data requests, whether from researchers or other interested parties. The coordinator of student information systems collaborated with the interim director of the Research, Evaluation, Assessment, and Accountability Office to create a process whereby data requests are managed centrally and the LEA establishes memoranda of understanding (MOUs) for data sharing.

## **Putnam County, West Virginia: Working With the SEA to Improve Data Governance**

- Putnam County's current data governance program was created by the West Virginia Department of Education, working with a data governance committee made up of five county representatives and key stakeholders from various departments. The data governance program was a product of the state's federal Statewide Longitudinal Data Systems (SLDS) grant and has greatly improved the data quality and reporting processes for both the LEAs and the SEA.

# Data Governance Working Group

## **Chair**

Georgia Hughes-Webb, West Virginia Department of Education

## **Members**

Mary Barkley, Clayton County Public Schools (Georgia)

Laura Boudreaux, Louisiana Department of Education

Elizabeth Dabney, formerly of the Data Quality Campaign

Matthew Danzuso, Ohio Department of Education

Jennifer Esswein, Regional Educational Laboratory-Northwest

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Allen Miedema, Northshore School District (Washington)

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Matthew Strom, Queen Creek Unified School District (Arizona)

Jonathan Wiens, Oregon Department of Education

Debbie Yedlin, Arizona Department of Education

# Questions?



