



P-20W Data Governance *Tips from the States*

Brief 4
May 2012

best practices brief



SLDS Best Practices Brief

P-20W Data Governance

In general, data governance refers to the overall management of the availability, usability, integrity, quality, and security of data. A sound data governance program includes a governing body or council, a definition and allocation of authority, a defined set of procedures, and a plan to execute those procedures. During a webinar sponsored by the Statewide Longitudinal Data Systems (SLDS) Grant Program, three states experienced with P-20W data governance shared their states' stories and offered best practices.

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Data governance is both an organizational process and a structure. It establishes responsibility for data, organizing program area/agency staff to collaboratively and continuously improve data quality through the systematic creation and enforcement of policies, roles, responsibilities, and procedures. Data governance is necessary for creating clear roles and responsibilities for each member of the project team.

This document relates to P-20W or interagency data governance rather than K12 or intra-agency data governance. While there are many similarities in structure and process between inter- and intra-agency data governance, there are key differences. For example, among the various P-20W agencies, there are varying security requirements, data uses, reporting requirements, and timelines. There is also a different, broader research agenda at the P-20W level. (See Figures 1 and 2, next page, for depictions of single agency vs. P-20W data governance structures.)

When data governance is effectively established, the quality of data collected, reported, and used by state and local education agencies (SEAs and LEAs)—as well as early childhood, postsecondary, and other agencies (Department of Labor, Department of Health, etc.)—is enhanced; staff burden is reduced; and communication, collaboration, and relationships with the various agencies, information technology (IT) staff, and program areas are improved.

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The views expressed do not necessarily represent those of the IES SLDS Grant Program. We thank the following people for their valuable contributions:

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P-20W refers to data from prekindergarten (early childhood), K12, and postsecondary through post-graduate education, along with workforce and other outcomes data (e.g., public assistance and corrections data).

The specific agencies and other organizations that participate in the P-20W initiative vary from state to state.



For more information on the IES SLDS Grant Program, additional Best Practices Briefs, or for support with system development or use, please visit
<http://nces.ed.gov/programs/SLDS>.

Initial Steps to Establishing P-20W Data Governance

1. Identify P-20W education policies that span multiple agencies.
2. Develop the initial draft of the P-20W data governance policy, using the P-20W education policies as a foundation and the initial step for governance. Authority for P-20W data governance should be granted via executive order, state statute, or as part of memoranda of understanding (MOUs—either a single MOU or a separate MOU for each participating agency) as the administrative vehicle for responding to P-20W education policy initiatives.
3. Have state leadership¹ review and approve the P-20W data governance policy.
4. The leadership disseminates the policy to staff and to executive and legislative leadership, including a reference to where it will be available electronically.
5. The leadership identifies P-20W data governance leads, establishing the membership of the P-20W Data Governance Committee.
6. The P-20W Data Governance Committee uses the policy as the foundation of its P-20W data governance manual², which details how the policy will be put into practice.

Figures 1 and 2 depict the two data governance approaches (intra-agency (single agency) vs. interagency (multiple agencies)). The intra-agency approach (Figure 1) is an agencywide approach to managing information from collection through use. There should be distinct roles for

and relationships among program areas, IT, and leadership, as well as LEA representation and an agency-wide data governance coordinator. Information is owned at the program area level, and each data element has one owner.

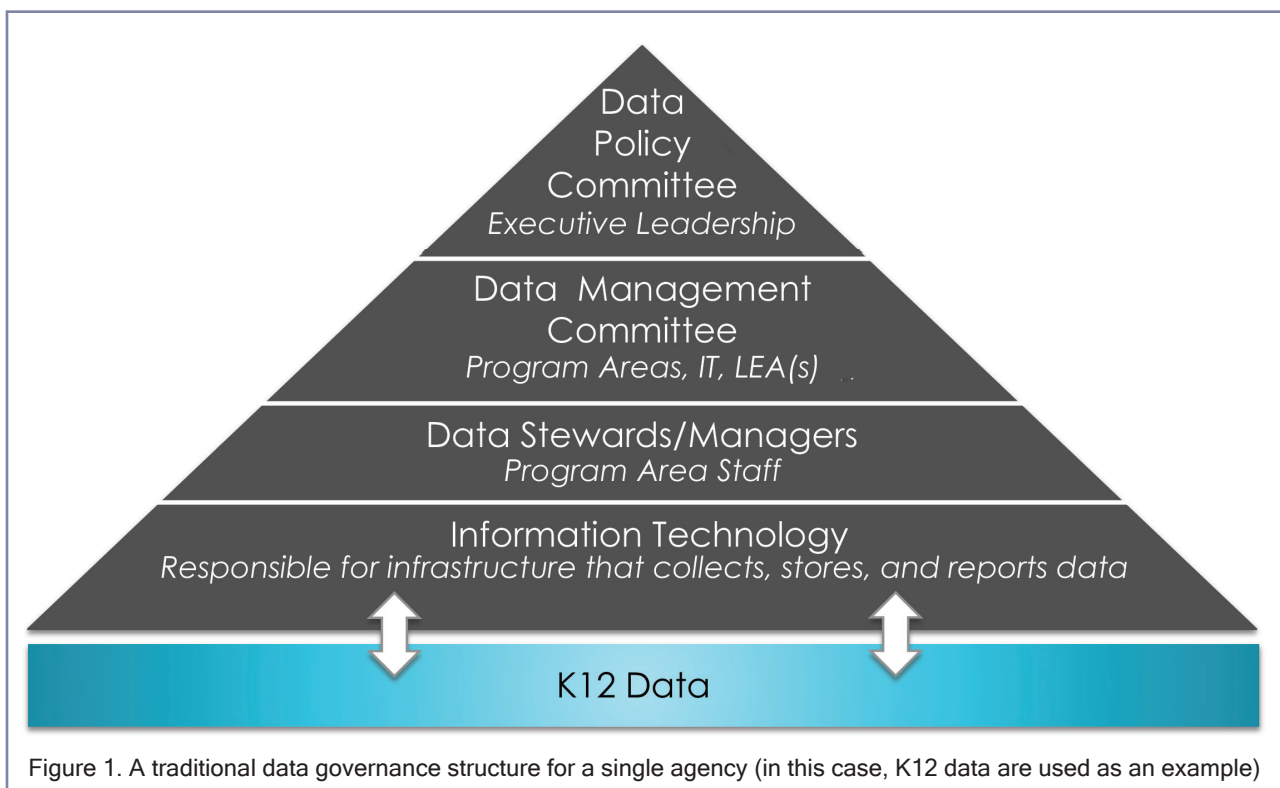


Figure 1. A traditional data governance structure for a single agency (in this case, K12 data are used as an example)

¹State leadership includes leadership from those agencies participating in P-20W, along with leadership from the governor's office and legislature.

²The State Support Team has developed a Data Governance Manual Example & Template that is available to state education agencies upon request. For more information, contact support@sls-sst.org.

The multi-agency approach (Figure 2) offers a statewide perspective of education policy and how other state-level information can help inform the effectiveness of education in the state. There should be distinct roles for and relationships among state leadership, agencies, and agency program areas, as well as a statewide approach to

data collection, integration, reporting, and use. Information is owned at the agency/program area level. A P-20W Data Governance Committee chair serves as point of contact for the Executive Leadership and the Data Steward Workgroup, and there should be agency representation by those participating in the P-20W SLDS.

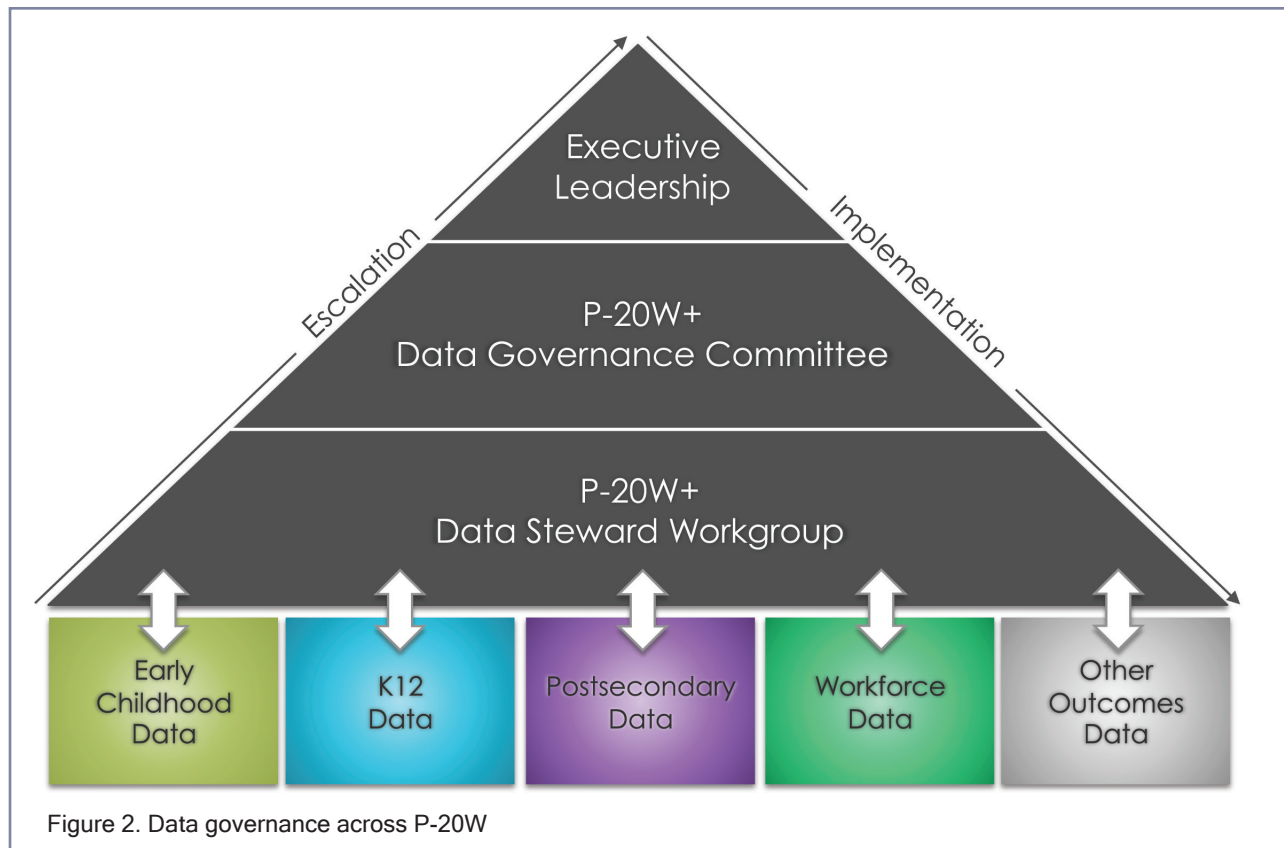


Figure 2. Data governance across P-20W

Do:

According to states, the following practices are effective ways to establish P-20W data governance. (Note: The following suggestions do not necessarily represent the views of the IES SLDS Grant Program.)

Engage state leadership.

When pursuing P-20W data governance, it is vital to fully engage state leadership (the Executive Leadership levels of Figures 1 and 2) early on in the process. Otherwise, both short-term effectiveness and long-term sustainability of the P-20W system may be in jeopardy.

Pay attention to legislative activity in your state.

Many states have legislation impacting how data can be collected, where they can be stored, and who has access to them. During the planning phase, research all possible legislation that could impact your work. If there are state laws that limit data sharing, there may be an opportunity to lobby for the change of said laws—particularly if the state already has legislative and executive support for P-20W. Additionally, demonstrating the capabilities of the P-20W system to the legislature can help to build momentum for a state's data collection efforts.

If the state does not have legislation impacting P-20W data collection, storage, and access, and this serves as a hindrance, develop relationships through the appropriate channels to begin the process of crafting legislation that will support this project. Otherwise, use the lack of legislation as an opportunity to develop the system, but involve policymakers from the beginning so there is buy-in for the project and it can be sustainable in the future.

Convene all relevant parties. Educate each other to develop data knowledge and buy-in.

Once the executive leadership has determined the vision and direction for the P-20W system, data governance is needed to effectively implement this vision. Bring all involved stakeholders to the table and discuss why data governance is important, as well as what data are already being collected—and by whom—within the state. The group can then begin to visualize what data could be shared, as well as what benefit this may have for each of the relevant partners. Such conversations can create a sense of ownership and a common interest, both of which are vital to data governance efforts.

Possible partners in this discussion include key leadership at the executive level, director-level representatives from each agency, agency program data steward representatives, and IT members involved in the project. The key is to design a committee structure that meets the needs of the state. Generally there are three types of committees: 1) executive, 2) data governance, and 3) data stewards (see Figure 2). The chair of the data governance committee should act as a “data coordinator,” managing the work of the various committees and ensuring that all work is documented and shared with the entire governance group.

A word of caution: bringing too many players to the table may hinder the group’s efforts. Strive to include only those partners whose input will bring value to the discussion.

Create clear, distinct roles for and relationships among program areas, IT, and leadership.

Each partner should retain ownership of its own data. Each partner’s role can be clarified in an MOU and administered/managed by the P-20W data governance committee. MOUs should align with the vision of P-20W education at the

Legislative Initiatives Leading to the Development of a P-20⁴ Data System in New Mexico



In New Mexico, most of the state’s data governance efforts are the result of legislative statutes. In 2003, education reform legislation mandated that a state-issued, student unique identifier (ID) be implemented at end of the 2004–2005 school year. As a result, a web-based application now allows school, district, and state administrators to search for a student using a unique ID issued by the Public Education Department. Higher education institutions were required to begin using the same ID system in 2007. Also in 2007, a “data sharing task force” was established between all education-related organizations, including PreK and higher education.

In 2009, an executive order established the New Mexico Data Warehouse Council, in which multiple state agencies would work together toward a comprehensive P-20 data system. Furthering this work, in 2010, House Bill 70 (HB70) established a data system partnership between the Public Education Department and the Higher Education Department, with the intent of creating a seamless link between P-12 and postsecondary data.

HB70 also asked the Data Warehouse Council to establish a data system, including:

- data system management plan;
- intergovernmental agreements for data sharing;
- data governance plan;
- plan to ensure privacy;
- plan to ensure access (for those authorized);
- strategic plan;
- policies associated with establishment of a data system; and
- annual data system report to legislature and governor.

While New Mexico is still working toward the goal of a “seamless link” between P-12 and postsecondary data, because of the partnerships and work mandated by legislature, the state now holds regular data review meetings, can identify data redundancies, and performs data audits—all of which enable the collection of higher quality data and more effective data reporting.

⁴While this document refers to P-20W systems, New Mexico’s data system is a P-20 system (it contains data for preschool through higher education, but not workforce data or beyond).

statewide perspective, which can be defined by legislation or executive order.

Create a data governance policy.

Absent a data governance policy, participating agencies and program areas are more likely to question the state's commitment to the changes that are required to implement a P-20W data governance process. The policy provides strategic direction by creating a framework for decisionmaking about and accountability for how data will be managed. In addition, the data governance policy:

- assigns stewardship responsibilities for P-20W agencies' data;
- establishes overarching standards for the management of the data; and
- empowers the P-20W data governance committee to establish more detailed interagency standards and processes for (1) the communication about and (2) the definition, storage, access, and reporting of data to improve data quality and data use protection of agency data.

Consider the state's existing capacity.

Assessing capacity may involve determining the role or function of state agencies in the process of planning and implementation, and/or current state needs for successful implementation. Where will the data be stored? Is existing infrastructure able to accommodate the additional data? How will the data be secured? While it is the responsibility of the executive leadership to secure the required resources, it may be necessary to perform a gap analysis for what additional resources are needed, and to create a strategy for securing those resources. Planning can only take data governance so far; work with IT and other relevant parties to determine limitations and opportunities with regard to budget, capacity, security, and sustainability.

Convene a data governance committee.

A data governance committee may be mandated by legislature, or it may be a more informal group of policy, data, and IT experts. The committee's role is to disseminate the agreed-upon data governance policy to state leadership and policymakers, and to be responsive to the leadership's vision and direction for education. Data management efforts are only sustainable if all participating agencies are held responsible for adhering to the data governance policy, and if all partners adhere to the leadership's overall vision.

Process and Governance Structure: The Mississippi Experience



When Mississippi set forth to establish P-20W data sharing, the first thing on their to-do list was to create a "culture shift." Data silos needed to be broken down; all agencies and sectors needed to see the benefit of sharing data; and overall, the stakeholders needed to educate each other on their data efforts, because no one

could envision what a data sharing network should look like.

The State Workforce Investment Board was created as a platform to discuss data sharing. Talks began at a high level: helping the stakeholders understand the big picture, working with data users to create buy-in, and generating a sense of ownership for the data sharing project. After much discussion, a "philosophical agreement" among the primary stakeholders emerged—everyone involved understood why the project was important and how they could benefit...now, how to proceed?

Next, the stakeholders set about educating one another on what data were being collected, and by whom. The group began mapping out and identifying programs and responsible agencies, identifying data sources within agencies, and finally identifying individual data elements. This information was used to map out a data structure and visually show interconnections (showing how data could be linked together and what the benefits would be).

Because Mississippi was thorough in their planning and communication among all stakeholders from the onset, the next steps in the data planning process—figuring out a process for transferring data, analyzing the infrastructure, etc.—could proceed smoothly.

Have regular data reviews with pertinent parties.

The collection and auditing of the data should ideally be done in the source systems at the participating agencies. However, there is value in convening stakeholders to review the comprehensiveness of the integration into P-20W; identify any gaps/holes in the data, as they are being integrated from multiple sources; and discuss appropriate use, as similar data element names may have varied meanings

depending on the source. Again, each participating agency should have a sense of ownership over its own data, and be held accountable for adhering to the data governance policy that is implemented.

Consider data governance an education policy-led, rather than an IT-led, initiative.

Although IT is crucial for success, agency or program personnel and management are experts on the data—not

IT. Designing a system that can follow a student's progress longitudinally requires much thought and sensitivity across various agencies and sectors, and IT plays an important supporting role in making this happen. While IT has the technical expertise, program personnel may be more sensitive to or aware of issues directly affecting the data.



Available in the Public Domain Clearinghouse: "OYSTER: Arkansas's Data Governance Tool"

A significant component of data governance is establishing responsibility for data—to include protecting privacy and facilitating data sharing. Arkansas helps to meet these goals through its OYSTER (Open-System Entity Resolution) tool.

OYSTER is a knowledge base identity management system that maintains all representations of an entity (i.e., all IDs) and generates agency-specific identifiers—thereby protecting personally identifiable information.

When a data request is received, OYSTER creates a temporary database of a crosswalk between local identifiers, which is used to join the databases. The results are then returned to the requesting agency without the use of personally identifiable information and the temporary database is destroyed.

OYSTER is an open source project that is available for free download in the Public Domain Clearinghouse in GRADS360° (<https://nces.grads360.org>).

Resources

State Support Team (SST) P-20W Data Governance Service: Available to help states clarify the relationship between K12 and interagency P-20W data governance, and provide a data governance framework in support of states' P-20W SLDS initiatives. To request support from the SST, email support@sst-slds.org.

Traveling through Time: The Forum Guide to Longitudinal Data Systems, Book III: Effectively Managing LDS Data: <http://nces.ed.gov/pubs2011/2011805.pdf>.

Public Domain Clearinghouse: <https://nces.grads360.org>. To request access to GRADS360°, email accounts@grads360.org.