DaSy Data System Framework

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Contents

Terms and Acronyms

These are terms and acronyms used throughout the framework.

619 – Section 619 of IDEA (Early Childhood Special Education)

ECIDS – Early Childhood Integrated Data System

EHDI – Early Hearing Detection and Intervention

IDEA – Individuals with Disabilities Education Act

IEP – Individualized Education Program

IFSP – Individualized Family Service Plan

Part B – Part B of IDEA (School-Aged)

Part C – Part C of IDEA (Early Intervention)

SLDS – State Longitudinal Data System

Introduction

The Center for IDEA Early Childhood Data Systems (DaSy Center), funded by the Office of Special Education Programs (OSEP), was charged with developing a data system framework. The purpose of the DaSy Data System Framework (hereafter referred to as DaSy framework) is to assist Part C and Part B 619 programs in developing and enhancing high-quality state data systems for the collection, analysis, reporting, and use of their IDEA data. The DaSy framework is intended to enhance the capacity of Part C and Part B 619 state staff to:

- *understand* the characteristics and capabilities of a good state data system, so they can
- *lead or actively participate in* state data system development and enhancement efforts, including cross-agency work, so they can
- *use* their state data system to comply with IDEA federal reporting requirements and answer important policy and program questions, which will
- *enable* states to continuously improve their system of services and programs to ensure equitable access, services and supports, and positive outcomes for *all* young children with developmental delays and disabilities and their families served under Part C and Part B 619, especially those who have been historically underserved.

A high-quality data system provides data for multiple purposes. As reflected in the DaSy framework, these purposes are:

- accountability—data are used for federal, state, and local reporting purposes;
- program improvement—data are used to examine and improve programs and services and the results achieved by *all* young children with disabilities and their families especially those who have been historically underserved; and
- program operations—data are used to support the day-to-day management and implementation of programs and increase the effectiveness and efficiency of program activities.

High-quality data are fundamental to OSEP's vision for Results-Driven Accountability (RDA), which focuses on using data to improve results for infants, toddlers, children, and youth with disabilities. RDA represents a shift from an accountability system concerned primarily with compliance to one that puts greater emphasis on improving educational results and functional outcomes for children with disabilities and supporting their families. Having high-quality data systems for Part C and Part B 619 programs will improve states' capacity to collect, analyze, report, and use high-quality data required under the Individuals with Disabilities Education Act (IDEA).

Data-informed decision-making is at the heart of improving the operation of programs and provision of evidence-based practices and supports and, ultimately, of improving results for all children and families, especially those who have been historically underserved. A fundamental assumption reflected throughout the DaSy framework is that Part C and Part B 619 state staff will use data regularly to administer the program and make improvements. High-quality data are instrumental in answering key policy and programmatic questions including those related to equity (see discussion below in section on Cross-Cutting Themes). For example, data are an important tool to ensure that children have equitable access, services and supports, and outcomes. However, this has often not been the case for Black, Indigenous, Hispanic and/or Latino and other children of color, as well as children from low-income households and isolated

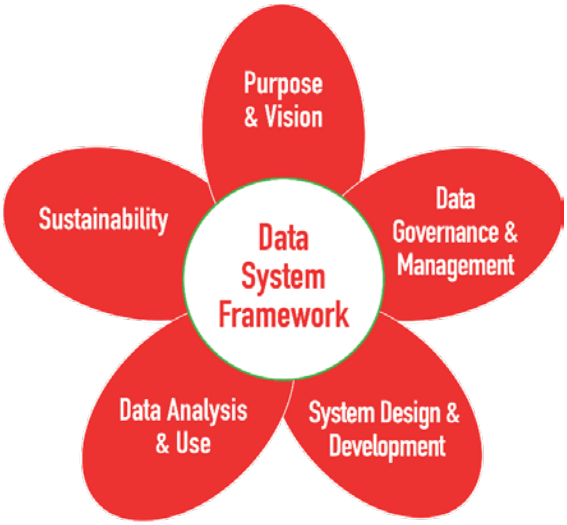
communities. Thus, it is important that data are collected, analyzed, and used intentionally to examine equity for underserved groups and communities.

The use of the term *data system* is conceptualized broadly in the DaSy framework. It refers to the hardware, software, and other applications and processes that enable Part C and Part B 619 programs to collect data about children, families, workforce, and/or program characteristics (e.g., program quality), as well as the analysis, reporting, and data use practices associated with those data. We use the more narrowly defined term of *database application* to refer to the computer software programs used to enter, store, organize, and retrieve data or information from a computerized database. Database applications allow multiple users to access and use the data, while also securing the data by permitting access by only authorized personnel who can perform various functions with the data, such as entering, querying, updating, and creating data reports.

The DaSy framework was intentionally written to set a high bar for state data systems; a state that has addressed the entire contents of the DaSy Framework will indeed have a high-quality data system. The DaSy framework also was designed to be comprehensive and aspirational. Everything necessary for a high-quality data system is addressed; although we recognize that most states have not yet achieved the entire range of characteristics described in the DaSy framework. A question repeatedly asked during DaSy framework development was, “What does high quality look like?” This question was asked about all facets of the DaSy framework’s broad conceptualization of data systems, including the kinds of data collected, the uses of data, the process and structures for governing the data, and the processes for developing or enhancing the technology.

The Structure of the DaSy Framework

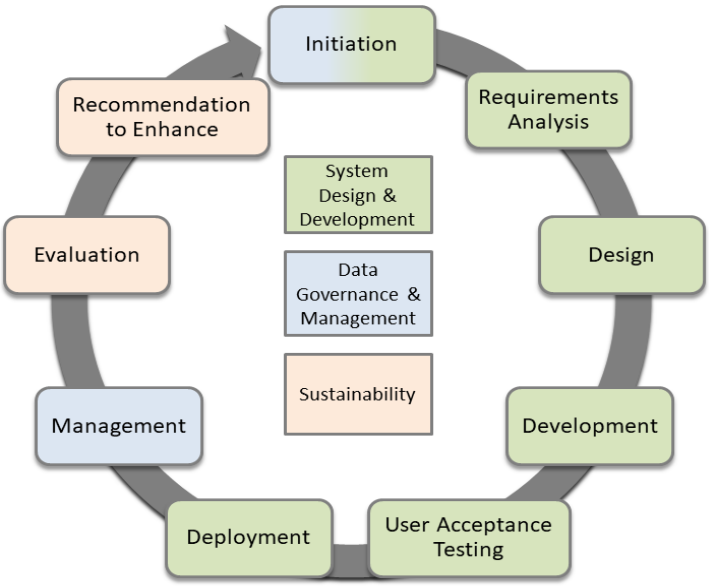
Figure 1. Subcomponents of the DaSy Framework



The DaSy framework is organized around five subcomponents: Purpose and Vision, Data Governance and Management, System Design and Development, Data Analysis and Use, and Sustainability (Figure 1). The five subcomponents are interrelated. For example, the Purpose and Vision subcomponent addresses the mission, usage, and goals of the data system, which are fundamental to other subcomponents. The intended uses of data as addressed in the Data Analysis and Use subcomponent should reflect the purpose and vision of the data system and also impact data system design. Similarly, the data system should be designed to reflect the Purpose and Vision and be developed or enhanced in line with the System Design and Development subcomponent. Likewise, Sustainability considerations must be part of and are integral to the Purpose and Vision, Data Governance, and System Design and Development subcomponents.

The phases of developing a new data system or enhancing an existing one are commonly viewed as a life cycle (Figure 2), and the DaSy framework subcomponents reflect this. The life cycle model is a high-level view of the major sequential stages a data system goes through. The cycle begins with planning and initiation that reflects the intended Purpose and Vision subcomponent. Next, having a process to identify the need for a new database application or changes to an existing application—for example, user needs for enhancing reporting capability or the need to address a new federal reporting requirement—is addressed in the Sustainability subcomponent. The Data Governance and Management subcomponent addresses the approval to move forward with initiating a new database application or an enhancement. The phases and processes related to the development of a new application or enhancement are covered in the System Design and Development subcomponent. The ongoing development and implementation of policies and procedures to manage the data

Figure 2. DaSy Framework Subcomponents and the Life Cycle of a Database Application



system are part of the Data Governance and Management subcomponent, with the evaluation of how well the system is meeting user needs and recommendation for changes covered in the Sustainability subcomponent.

Each of the DaSy framework's five subcomponents contains one or more quality indicators (QIs) and multiple elements of quality (Figure 3). Quality indicators are broad statements about actions or activities that state agency staff undertake or the policies, procedures, or documents that the state needs to have in place to support a high-quality data system. Each quality indicator has a corresponding set of elements of quality that operationalize the implementation of the quality indicator. The elements of quality describe various aspects of the quality indicator. In short, quality indicators describe *what* quality is in a data system, and the elements describe *how* quality is achieved.

Figure 3. Structure of the DaSy Framework

Subcomponent: Data Governance and Management (DG)
- **Quality Indicator DG1**
  - **Element of quality DG1a**
  - **Element of quality DG1b**
  - **Etc.**
- **Quality Indicator DG2**
  - **Element of quality DG2a**
  - **Element of quality DG2b**
  - **Etc.**

Subcomponent: System Design and Development (SD)
- **Quality Indicator SD1**
  - **Element of quality SD1a**
  - **Etc.**

Cross-Cutting Themes in the DaSy Framework

Several cross-cutting critical themes are addressed in multiple subcomponents of the DaSy framework. First, *data quality* is one such theme. Policies and procedures related to data quality are addressed in the Data Governance and Management subcomponent, technical features of the data system to promote data quality are addressed in the System Design and Development subcomponent, and the importance of using data to promote data quality is addressed in the Data Analysis and Use subcomponent.

Second, *stakeholder engagement* is another critical theme because key stakeholders should contribute to each of the subcomponents in certain ways. Members of stakeholder groups may differ depending on the data system topic. Many topics such as the purpose of the data system and uses of the data require input from a broad representation of stakeholders. Other more technical topics such as the development of the business requirements or security features require input from a more limited group of stakeholders. For topics requiring broad stakeholder input, it is essential that the stakeholders fully represent all families, providers, and others, especially those who have been historically underserved and have an interest in the role of data in contributing to a high-quality state system.

Third, an important and aspirational feature of the data system DaSy framework is the emphasis on the *integration of the Part C and Part B 619 data with each other and data from other programs serving young children in the state* through collaborative data initiatives such as Statewide Longitudinal Data Systems (SLDS) and Early Childhood Integrated Data Systems (ECIDS) (see additional information on pages 6−7). Therefore, elements in several of the

subcomponents address the need for states to build early childhood integrated data systems and for Part C and Part B 619 to be a part of these efforts.

Fourth, the 2022 revision includes equity as a cross-cutting theme. Data systems should be designed—and the data collected, analyzed, reported, and used to support equity—to identify disparities with regard to access, services and supports, and outcomes of children and families served in Part C and Part B 619 programs. Equity considerations are embedded throughout the data system framework. For example, the purpose of the data system needs to address key policy and program questions about equitable access, services and supports, and outcomes (see Purpose and Vision subcomponent). Similarly, equity considerations require the use of best practices for identifying and displaying/labeling data by subgroups of race, ethnicity, disability characteristics, gender, immigration status, home language, geography, socioeconomic status and their intersections (e.g., gender and disability characteristics) (see Data Analysis and Use subcomponent).

Development of the DaSy Framework

Initial development

Beginning in 2013, the DaSy framework content was developed through an iterative process of literature reviews, information gathering, and multiple rounds of feedback and revisions from state staff in seven partner states and external reviewers. In spring 2013, DaSy invited applications from state Part C and Part B 619 programs interested in working on the development of the DaSy framework. The seven states selected as partners were Alaska, Arkansas, Connecticut, Georgia, Idaho, Massachusetts, and Pennsylvania. The individual staff members from each state were the Part C and 619 coordinators and the Part C and Part B 619 data managers, along with additional personnel from some of the states. The state staff participated in monthly individual state calls and monthly all-state calls. In addition, the state staff participated in four face-to-face meetings between summer 2013 and spring 2014.

During this time a work group of DaSy staff members and consultants began developing the quality indicators and elements for each subcomponent with a review of the literature. The work group also developed a set of questions to gather information about the current status of that subcomponent in each partner state. Drawing on the literature and the information collected from the states, the workgroup drafted preliminary quality indicators and elements of quality. These were reviewed by other DaSy staff and revised, shared with the partner states during the all-state and individual state calls, and further revised based on additional input. The face-to-face meetings provided the DaSy staff and partners with the opportunity to engage in more in-depth discussion and refine the DaSy framework content. In the spring of 2014, DaSy staff conducted a series of conference calls with a group of external reviewers (see Acknowledgments) to further refine the content. Final revisions to the first DaSy framework occurred during summer 2014 and included an overall review by OSEP. The framework was released in 2014.

Revisions

In 2020 and 2021, DaSy center staff reviewed and revised the DaSy framework to improve usability. The revision was conducted to improve clarity, streamline content, eliminate redundancy, reduce the number of elements where appropriate, and consolidate indicators and elements within and across subcomponents. As part of this process, stakeholder engagement

was eliminated as a separate subcomponent and woven into each of the other subcomponents. This is more aligned with the treatment of stakeholder engagement in the other components of ECTA System Framework and underscores that stakeholder engagement is a cross-cutting theme. The revision process included review and input from state Part C and Part B 619 staff and TA providers who had used the original version of the data system subcomponent and from their colleagues who were less familiar with the previous framework. The intent of the revision was to clarify and, if possible, simplify the critical aspects of a high-quality data system so that states could use the DaSy framework more efficiently and effectively for self-assessment and systems improvement tracking.

An additional focus of the revision was to strengthen the framework's treatment of centering equity in the data systems. A presidential Executive Order in 2021 defines equity as "the consistent and systematic fair, just, and impartial treatment of all individuals including individuals who belong to underserved communities that have been denied such treatment…"[1]. The Executive Order goes on to note how the federal government's inability to disaggregate data by race, ethnicity, gender, disability, income and other variables has impeded efforts to measure and advance equity. Data can be used to drive improvement and uncover systemic problems with service delivery but also can and has been used to cause harm to historically underserved groups. Using data to do good and avoid harm requires acknowledging that data are never neutral and that each individual brings their own life experiences and biases to any data activity.

The revision team recognized that equity is a cross-cutting issue that needs to be addressed in different ways and to different degrees in many quality indicators and elements. The earlier version of the framework did not address equity explicitly, which meant that a state data system could be considered high quality when it did not reflect equitable data practices. The framework was revised to make it more explicit that a high-quality data system must address equity. The challenge was that equity is cross-cutting, and it did not seem appropriate or useful to insert data equity concepts into all of the applicable indicators and elements. Rather, the revision calls out equity in key areas where it is especially most relevant/germane. The overall goal was to be intentional about equity and build data systems that support the identification and correction of inequities in access, service delivery, and outcomes. Framework users are encouraged to reflect on the role of data systems in contributing to equity and working against inequity in each of the subcomponents.

As noted above, the importance of stakeholder engagement is woven throughout the revised framework. The makeup of the stakeholder groups is a key equity consideration, and that makeup will differ depending on the specific task addressed in the subcomponent. Regardless of task, for elements addressing stakeholder involvement to be considered to fully implemented, the stakeholders must represent the diversity of individuals with a vested interest in the issue. Stakeholder groups involving families, must include family representatives of the range of demographic characteristics of the state. Likewise, stakeholder groups of users involved in reporting data must be representative of those users. To have a high-quality data system, a state must seek out and incorporate input from diverse voices for the many different decisions presented across the subcomponents.

[1] Executive Order on Advancing Racial Equity and Support for Underserved Communities Through the Federal Government, January 20, 2021.

Coordination of the Data System (DaSy) Framework with Other Frameworks

The 2013 DaSy framework was developed in coordination with two other efforts: the Early Childhood Technical Assistance (ECTA) Center's System Framework and the SLDS State Support team's framework for data systems. OSEP charged the ECTA Center with developing a framework for high-quality Part C and Part B 619 systems. From the literature and extensive input from six partner states and a technical work group of national, regional, and state experts, ECTA developed a system framework to answer the question, "What does a state need to put into place in order to encourage/support/require local implementation of effective practices that result in positive outcomes for children with disabilities and their families?" The purpose of the ECTA system framework is to guide state Part C and Part B 619 coordinators, staff, and leadership in evaluating their current state Part C and Part B 619 systems and identifying areas for improvement and to provide them with direction on how to develop a more effective, efficient system that supports implementation of effective practices. The ECTA system framework consists of six interrelated components: Governance, Finance, Personnel/Workforce, Data Systems, Accountability and Quality Improvement, and Quality Standards (Figure 4).

Because DaSy was tasked with developing a framework for data systems, the two centers agreed that the DaSy data system framework would serve as the Data Systems component in the ECTA framework. Accordingly, the DaSy framework follows the same organizational structure as the ECTA framework (i.e., component, subcomponent, quality indicator, element) to facilitate use by Part C and Part B 619 state staff. The two centers worked closely throughout the initial development of both frameworks to ensure that the DaSy framework was compatible with the other components of the ECTA system framework. Because the DaSy framework was developed on its own in addition to being a component in the ECTA system framework, it has considerably more subcomponents, quality indicators, and elements than the other five components in the ECTA system framework.

Figure 4. ECTA System Framework

In 2019, ECTA began work on revising the ECTA framework. DaSy coordinated with ECTA to revise the DaSy framework, with both centers following the same guidelines. When the revision process was well underway, equity emerged as a critical issue. Both ECTA and DaSy decided to look at the drafts of the revised frameworks through an equity lens and make additional revisions. The equity revision process also was coordinated across the two Centers so the two frameworks would address equity in similar ways.

DaSy also coordinated with the federal technical assistance project working with states on developing SLDS and ECIDS. Funded by the U.S. Department of Education, in 2012 the SLDS

Grant Program State Support Team (SST)[2] worked with states to develop a Toolkit for use when building and implementing an ECIDS. The contents of the Toolkit were organized around the seven components of the SST's Framework for Data Systems. As the DaSy Center was beginning the development of the DaSy framework, the SST was undertaking development of the Toolkit resources. Recognizing that state staff could be using the DaSy framework to improve their Part C or Part B 619 data system while also using the ECIDS materials to participate in broader collaborative data system initiatives, DaSy committed to making its framework compatible with the ECIDS Toolkit. After discussion with the partner states, DaSy decided to use the same components (e.g., Purpose and Vision, Data Governance) as the SDLS framework. As the work on the DaSy framework progressed, DaSy staff found that the SLDS component Planning and Management was not a good fit with the DaSy framework; management-related topics became part of the Data Governance and Management subcomponent, and planning-related topics became part of the Sustainability subcomponent in the DaSy framework. DaSy and SLDS State Support Team staff compared the contents of each ECIDS component with the comparable DaSy framework subcomponent and identified many similarities and some differences that were deemed necessary given the different purposes of the two frameworks.

In 2020 and early 2021, SLDS State Support Team also revised their materials associated with ECIDS (for the same purposes described for the DaSy framework revision). DaSy staff have continued to collaborate with SLDS State Support Team staff to ensure the two frameworks are compatible and do not contradict guidance provided to states on similar aspects of high-quality data system development, implementation, maintenance, and enhancement.

Considerations for Understanding and Using the DaSy Framework

As states well know, developing a high-quality Part C or Part B 619 data system is a complicated, multifaceted undertaking. The nature and scope of state data systems vary greatly by state. The considerations that follow are important for making the best use of the contents of the DaSy framework.

1. What is quality? The operating assumptions for the DaSy framework are as follows:

- A state that has fully implemented all of a quality indicator's elements has that quality indicator in place.
- A state that has all the quality indicators in the subcomponent in place has high quality in the subcomponent.
- A state that has all the subcomponents in place has a high-quality data system.

Fully implementing an element means that the element is (1) in place and (2) of high quality. For the sake of brevity and because of the extensive variation across states, the DaSy framework does not provide much detail on what constitutes quality implementation for each element. For instance, one of the elements speaks to the need for a state to conduct regular monitoring and testing on the overall security of and access to the Part C/619 data system. The element does not describe what constitute high quality monitoring or testing. DaSy has been compiling and developing additional resources for states to further clarify quality at the element level; these resources can be found on the DaSy Center website.

[2]This grant was part of the SLDS Grant Program that worked with the development of an ECIDS as well as an SLDS.

2. Who are Part C and Part B 619 state staff or other state staff? To the extent possible, the quality indicators were written to identify who is expected to carry out the action described in the statement while also being sensitive to the variations in Part C and Part B 619 organization and administration across the states. Therefore, the actors identified in quality indicators and elements are somewhat open ended. When an indicator or element stipulates “Part C/619 state staff” or includes “other staff,” it refers to staff with knowledge of the program and generally refers to the state coordinators or other individuals in the state program office. When an action needs to be carried out specifically by state Part C/619 coordinators, they are identified specifically. When an action is carried out by state leadership this refers to state staff who have authority to make decisions and could include the Part C and Part B 619 coordinators, agency leadership, or other leaders.

3. What database applications are included? States have multiple database applications (i.e., a computer software program used to enter, store, organize, and retrieve data or information from a computerized database). States collect multiple types of data related to the implementation of IDEA, and these data may reside in different database applications (Derrington et al., 2013). For example, in many states, data on children reside in one database application whereas information about the personnel who work with them is in another. The information in the DaSy framework applies to every state dataset or application that contain data related to the implementation of IDEA Part C and Part B 619 programs. The phrase “data system” appears many times throughout the DaSy framework. In the interest of succinct communication, the DaSy framework uses “data system” rather than “data systems” or “data system(s).”

4. What are state Part C and Part B 619 data? State Part C/619 data are data related to the implementation of IDEA and encompass different types of data such as data about the children, their families, their services, the providers, and the programs, including the fiscal support for the programs, that serve the children and their families. Included are all the data required for IDEA reporting in the state performance plan/annual performance reports (SPP/APR), the data collections authorized under Section 618 of the IDEA, and other data the state collects about the program. As noted above, some of these data reside in different datasets or databases. Once data are included in the state Part C/619 data system, they are considered part of the Part C/619 state dataset and within the oversight of the state Part C or Part B 619 program, regardless of their origin (e.g., from the local programs or districts).

5. Does the framework apply to local data systems? The DaSy framework was written to identify the components of a high-quality state data system. It is intended to be used by states to examine their state data systems. Many of the quality indicators and elements could apply equally well at the local level, but they were not written or reviewed with local data systems in mind. Local programs are addressed explicitly in the Data Analysis and Use subcomponent because quality data are an essential feature of a good data system, and when data are used by those who provide the data, the quality of the data improves. In addition, the return on investment in collecting the data is maximized when data are used at multiple levels. Also as reflected in the Data Analysis and Use subcomponent, the DaSy framework sees the state as having an important role in supporting programs and districts to use data.

6. Does the framework apply to contractors or vendors? Many of the framework quality indicators and elements are directly applicable to vendors contracted to work with the Part C or Part B 619 program to design, develop, deploy, and/or maintain the database application and other data system functions. However, the framework does not address other important content between the program and vendor typically addressed in a signed contract (e.g., code ownership, transference of data from one vendor to another).

Self-Assessment Tools

The DaSy and ECTA Centers have developed an ECTA/DaSy framework self-assessment based on the ECTA system framework (which includes the DaSy framework as the data system component). The self-assessment enables states to systematically review their status on the framework elements and generates a visual display of that status across quality indicators. The self-assessment is intended to provide states a current snapshot to help them prioritize improvement efforts, generate a set of scores for states to measure progress over multiple points in time, and serve as a mechanism to encourage state participants to engage in rich conversation about their data systems.

The results of the self-assessment can help a state identify the relative strengths and weaknesses of its data system, but the ECTA/DaSy framework is not a road map for how to build a high-quality data system in that it does not tell a state where to start or what to do next. The state will need to determine where to focus improvement efforts based on its priorities and resources. A state might choose to focus entirely on one subcomponent or on elements from multiple subcomponents. A state might choose to complete the self-assessment for only one or two subcomponents. State staff and their stakeholders can use the self-assessment results to support a planning process that identifies the activities, timelines, resources, and outcomes needed to improve the system.

The framework and self-assessment are designed to be tools to help states build high-quality systems of service for infants, toddlers, and preschoolers with developmental delays and disabilities and their families, including high-quality data systems. There are no rules, only suggestions, for how the ECTA/DaSy framework is to be used; therefore, we encourage states to use these tools in whatever ways they find most helpful.

The DaSy and ECTA Centers developed a Framework Quick Start Guide for the initial framework, and this will be revised for the 2022 framework. This guide can help states identify specific subcomponents of the DaSy framework (or components of the ECTA/DaSy framework) for in-depth assessment and improvement planning. Ideally, state leaders would conduct an in-depth review of all components of their system with stakeholder involvement. However, with limited time, state leaders can use this guide as a starting point for their system improvement work.

Uses of and Resources Associated with the DaSy Framework

To date, there have been many uses of the DaSy framework:

- The DaSy Center has used self-assessments with state clients to monitor progress in technical assistance activities with states, to conduct needs assessments, and to evaluate infrastructure improvements.
- The DaSy framework also has been used as a guide to support state system design and development work. Specifically, states have used subcomponents to develop written data governance policies, identify data elements and features of a high-quality data system, or evaluate their data use practices.
- The DaSy Center has used the content of the DaSy framework to guide the development of toolkits about, for example, data governance, building a culture of data use, data visualization, and building stakeholder knowledge about data.
- The DaSy Center also has developed a resource with a set of critical questions that can be addressed with a high-quality data system.

The DaSy Center posts these resources to the DaSy Center website with links to the related part of the DaSy framework.

DaSy Center Technical Assistance Related to the DaSy Framework

States can contact the DaSy Center for technical assistance related to the DaSy framework. The DaSy Center can help with finding resources and with improvement activities. We also can clarify the meaning of quality indicators and elements and provide support in using the self-assessment, such as, for example, facilitating a stakeholder process to complete the self-assessment or a strategic planning process to make use of the results.

Subcomponent: Purpose and Vision (PV)

A high-quality data system serving Part C and/or Part B 619 programs originates from a clearly articulated purpose and vision. An effective purpose statement succinctly describes the reasons for building the data system and its short-term benefits, including the scope of the system and how key stakeholders are expected to use it. The vision statement is an aspirational description of how the data system will support a statewide system that offers equitable access and services and supports and achieves equitable outcomes for *all* children with disabilities and their families, especially those families who traditionally are underserved. It does not focus on the data system itself, but rather on how the data will be used to address the state's early intervention and preschool special education policy and program goals, especially the ultimate goal of improving outcomes for all young children with disabilities and their families.

Having a written purpose and vision statement for the data system provides guidance for every phase of data system development and enhancement. In addition, a well-articulated purpose and vision statement enables the state to maintain the intended scope of work while planning for expansion, use, and sustainability of the data system over time. Ideally, the statement is developed before but could be done after a data system is deployed.

Quality Indicator PV1: State leadership articulates a purpose and vision statement for the data system reflective of the Part C/619 program's intents and goals.

Elements of Quality	
PV1a.	The statement is in written format, either separate or embedded in other documents related to the data system (e.g., minutes, notes, procedural documents).
PV1b.	The statement addresses: • the benefits of the data system and who benefits from the data system; • what kinds of data (e.g., fiscal, workforce, outcomes) are included in the system that, at a minimum, meet IDEA and other state and federal reporting requirements; and • how the data are used to address accountability, program improvement, and program operations, including answering key policy and program questions such as questions about equitable access, services and supports, and outcomes, some of which may require sharing data with other programs/agencies.
PV1c.	The development and revision of the statement is informed by input from stakeholders fully representative of all families, providers, and others with interest in the statewide system of services.
PV1d.	The statement is readily accessible (e.g., available on a website, in a user manual, in a parent resource).
PV1e.	The statement is reviewed and revised as needed.

Subcomponent: Data Governance and Management (DG)

Data governance is both an organizational process and a structure. Data governance establishes responsibility for data, organizing program staff to collaboratively and continuously improve data quality through the creation and enforcement of policies, roles, responsibilities, and procedures. Management is the development, implementation, and enforcement of policies and procedures (standardization of business processes) to operationalize all aspects of the data system. Management addresses the implementation of data governance policies (via procedures) and oversees the use and operation of the data system.

Data governance exists whether formal or informal. Informal data governance is associated with significant risks. These risks may include:

- questionable data quality, security, and usefulness;
- difficulty in maintaining consistent and reliable data and processes;
- unclear roles and responsibilities of internal and external staff relative to the data; and
- inappropriate data sharing with internal and external staff and across external agencies.

Formal data governance exists in written form. The benefits of formal data governance include:

- increased likelihood that data are of high quality and protected;
- increased use of data in ways consistent with the purpose and vision of the data system;
- increased confidence in data and associated processes (e.g., oversight of analysis activities); and
- improved management, including fiscal efficiency and overall system accountability.

Data governance structures and policies are dynamic; they must evolve as the programs and policies that drive the data system evolves. They must also be consistent with applicable federal and state regulations and policies. Managing the state data system requires responding to the evolving structures and policies and implementing the associated procedures. Part C and Part B 619 state staff or other designated state staff should be actively engaged in the governance of their data system. (In some states, there may be more than one data governance structure overseeing data that impact Part C or Part B 619.)

This subcomponent consists of three sections. The first section, Authority and Accountability, is about establishing the data governance and management structure(s), responsibility, and oversight. The second section, Data Quality and Integrity, addresses policies to ensure data quality (timeliness, completeness, accuracy and reliability) and integrity (maintaining data quality and consistency for data's intended use throughout their lifecycle). The section also focuses on the implementation of the procedures to ensure consistent application of data quality and integrity policies. The third section, Security and Access, focuses on ensuring appropriate access and the protection of state data from loss, misuse, and contamination.

Section 1: Authority and Accountability

Quality Indicator DG1: The state's data governance delineates appropriate roles and responsibility for decision-making authority, accountability, and management consistent with the uses of the Part C/619 data system.

Elements of Quality	
DG1a.	State-level, formalized data governance structure exists to facilitate necessary decisions about the Part C/619 data system.
DG1b.	Data governance structure includes representation/input from Part C/619 state program staff who have decision-making authority.
DG1c.	Data governance structure oversees all data collected and maintained by Part C/619 and ensures adherence to governance policies related to Part C/619 data, regardless of where the data are located.
DG1d.	Written statement(s) delineates decision-making authority for Part C/619 data governance.
DG1e.	All data-related responsibilities associated with the Part C/619 state data system(s) are clearly delineated and assigned to responsible and informed parties (e.g., data manager, data steward, data owner).
DG1f.	Information about data governance decision-making authority is communicated to staff and stakeholders (e.g., dissemination of organizational chart, data sharing agreements).
DG1g.	Data governance structure and authority applicable to Part C/619 are reviewed and revised as needed with input from Part C/619.

Quality Indicator DG2: Part C/619 staff and other state staff develop and implement data governance policies and procedures to effectively manage the data system.

Elements of Quality	
DG2a.	Data governance policies and procedures are aligned with the purpose and vision of the Part C/619 data system.
DG2b.	Data governance policies and procedures adhere to all federal (e.g., IDEA, FERPA, HIPAA), state, and local laws, regulations, and align with standards.
DG2c.	Data governance policies are developed with input from different groups of stakeholders as relevant.
DG2d.	Processes are in place to allow Part C/619 staff and other state staff to recommend and provide input on relevant policy and procedural changes (e.g., new or revised data collection requirements, federal regulation change, changes to how external requests for data are addressed).
DG2e.	Data governance policies and procedures address Part C/619 data oversight and accountability.
DG2f.	Data governance policies and procedures are communicated to staff and stakeholders.
DG2g.	Data governance policies address Part C/619 representation on other data governance structures (e.g., SLDS, ECIDS, lead agency governance committee) in relation to Part C/619 state data.
DG2h.	Data governance policies and procedures address responding to Part C/619 data requests.
DG2i.	Data governance policies and procedures are periodically reviewed and revised as needed.

Section 2: Data Quality and Integrity

Quality Indicator DG3: Data governance policies and procedures address the quality and integrity of the data.

Elements of Quality	
DG3a.	Data governance policies and procedures address timeliness, completeness, accuracy, and reliability aspects of Part C/619 data.
DG3b.	Data governance policies and procedures address maintaining data quality and consistency for Part C/619 data's intended use throughout its lifecycle.
DG3c.	Data governance policies and procedures require all staff and contractors who collect, maintain, and/or receive Part C/619 data to participate in ongoing data quality and integrity training.
DG3d.	Data governance policies and procedures require that any internal or external program or agency maintaining and/or using state Part C/619 data adhere to applicable data quality and integrity policies and procedures.
DG3e.	Data governance policies and procedures require documentation that addresses data integrity when transferring state Part C/619 data to other programs or agencies.
DG3f.	Data governance policies and procedures require Part C/619 data are retained and destroyed according to applicable federal, state, and agency requirements.

Quality Indicator DG4: Part C/619 or other state staff oversee and manage the consistent application of data quality and integrity policies and procedures.

Elements of Quality	
DG4a.	Data quality and integrity policies and procedures are regularly communicated to system users.
DG4b.	Standardized training materials are created and maintained for Part C/619 data system quality operations.
DG4c.	Data quality trainings are regularly conducted for data managers at the state and local levels.
DG4d.	Data are regularly reviewed for timeliness, completeness, accuracy, and reliability for improvement purposes.
DG4e.	Data quality and integrity procedures are adhered to when Part C/619 data are transferred or shared.

Section 3: Security and Access

Quality Indicator DG5: Data governance policies and procedures address the security of and access to Part C/619 data.

Elements of Quality	
DG5a.	Data governance policies and procedures document and support secure data system operations (e.g., data security, data storage, back-up, recovery, transmission, destruction, role-based permissions).
DG5b.	Data governance policies and procedures document and support authorized user access and include specific data system user practices (e.g., signed data system user agreements, password strength and authentication, acceptable use of personal devices, timely removal of user access when role changes or employment ends).
DG5c.	Data governance policies and procedures require that all IT and program staff (including contractors) who collect, maintain, or receive Part C/619 data participate in periodic training about applicable data security and access.
DG5d.	Data governance policies and procedures require adherence to security and access requirements when transferring or sharing Part C/619 state data.
DG5e.	Data governance policies delineate procedures in response to a Part C/619 data breach.

Quality Indicator DG6: Part C/619 or other state staff oversee and manage the consistent application of data security and access policies and procedures.

Elements of Quality	
DG6a.	Data security and access policies and procedures are regularly communicated to data system users.
DG6b.	Regular monitoring and testing are conducted on the overall security of and access to the Part C/619 data system.
DG6c.	Methods are in place to ensure that all users with access to state Part C/619 data adhere to security and access policies and procedures.
DG6d.	Security procedures are monitored when transferring or sharing Part C/619 data.
DG6e.	Standardized training materials are created, used, and maintained that address procedures and responsibility for Part C/619 data system security, access operations, and data use.

Subcomponent: System Design and Development (SD)

The System Design and Development subcomponent addresses the characteristics of the functional and technical requirements for database applications, and the development and implementation of applications based on those requirements. This subcomponent includes the process of defining the database structure, user interface, system standards and components, and the data elements. State staff involvement, input, and review throughout the entire process are hallmarks of a high-quality Part C and Part B 619 data system.

The purpose of the System Design and Development subcomponent is to assist states in creating and supporting database applications based on the Part C and Part B 619 program requirements consistent with the purpose and vision. System design and development is the means by which the operational needs of the program staff and other users are translated into a functional and technical infrastructure that will meet those needs. This subcomponent supports the development of new database applications as well as major enhancements to existing systems.

This subcomponent was developed around the phases and processes of a standard System Development Life Cycle (SDLC), which includes (1) system initiation; (2) system requirements analysis; (3) system design; (4) system development; (5) system acceptance; and (6) system deployment. This subcomponent should begin once a high-level plan is approved for a new database application or enhancement and ends when the application or enhancement is deployed. Ongoing management to support the application is addressed in the Data Governance and Management subcomponent, and the evaluation of the application to determine needed enhancements is addressed in the Sustainability subcomponent. Designing and developing a database application involves numerous technical requirements and processes usually performed by the information technology (IT) team and not the Part C and Part B 619 staff. Although the technical activities conducted by the IT team are not addressed within this subcomponent, Part C and Part B 619 staff should collaborate with them to ensure the application functions as expected.

This subcomponent consists of three sections, each of which addresses two phases of the SDLC. The first section, Initiation and Requirements Analysis, addresses the first two phases of the life cycle: initiation of a new database application or enhancement, and system requirements analysis. The purpose of requirements analysis is to obtain a thorough and detailed understanding of the “business” or program needs and to break those into discrete requirements that provide the foundation this work. These requirements must then be clearly defined, reviewed, and agreed upon by the state Part C and Part B 619 staff. Sufficient time and resources should be allocated during system requirements analysis to bring stakeholders and their interests into the process. Subject-matter experts in Part C and Part B 619 must also be actively involved in defining business requirements through an iterative process.

This first section also addresses critical data elements and functions that should be included in a high-quality Part C or Part B 619 database application. A fundamental purpose of the framework is to help states develop more robust and comprehensive database applications, and such applications include the suggested data elements and functions. Although many state database applications do not have all the suggested data elements and functions, the purpose of the framework is to help states move toward more effective systems. It is important to look at emerging social and technical issues when developing system functionality, e.g., equity

considerations, designing for access through mobile devices, electronic signature capability, parent portals, and predictive analytics.

The second section, Design and Development, addresses the technical aspects of the system design and development work. Part C and Part B 619 staff may not be directly involved in this technical work. The state should, however, have a process in place for Part C and Part B 619 state staff to work and communicate with the IT team, regularly providing input, feedback, and approval when necessary.

The third section, Acceptance and Deployment, addresses the fifth and sixth phases of the SDLC. Successful acceptance testing is the final opportunity to establish that the database application performs as expected in environments that closely simulate those which will be used after deployment. During acceptance testing, end users thoroughly test the application as if it were fully implemented. This section also includes updating supporting documentation and reference materials. Deployment refers to the launch of the new database application or enhancement.

Section 1: Initiation and Requirements Analysis

Quality Indicator SD1: Part C/619 state staff are actively involved in initiating the development of the new database application or enhancement, including business requirements, process models, and data models.

Elements of Quality	
SD1a.	Input is provided to determine project team roles and responsibilities and commit staff to the development of the database application/enhancement.
SD1b.	Input is provided on how the new system/enhancement will be developed (i.e., vendor/contractor, in-house, commercially available product).
SD1c.	Input is provided into the plan and the schedule for the system requirements analysis and other remaining system design/development phases.
SD1d.	A plan for the application/enhancement is reviewed to ensure that it meets Part C/619 goals and needs.
SD1e.	The following are developed with input and ongoing review to ensure they reflect an accurate understanding of the Part C/619 program, processes, and language: • Business requirements • Process model • Data model
SD1f.	Stakeholder input is gathered for business requirements, process models, and data models.
SD1g.	A clear process is used for the approval of the final business requirements.

Quality Indicator SD2: The system requirements analysis results in documented requirements for the new database application/enhancement that accurately describe what the new application/enhancement must do.

Elements of Quality	
SD2a.	Functions of the database application/enhancement are fully specified and expressed in the language of the Part C/619 program.
SD2b.	Business requirements are drafted, prioritized, and then identified as either in or out of scope.
SD2c.	The system requirements address technical requirements that operate in the background (e.g., encryption, system performance and load, data archiving, and audits and controls).

Elements of Quality	
SD2d.	Process models and workflow diagrams visually depict major processes such as eligibility determination and IFSP/IEP and subfunctions such as IFSP/IEP development, review, etc.
SD2e.	All data needed for Part C/619 reporting, accountability, program improvement, and program operations have been identified for the application/enhancement.
SD2f.	A data model identifies the data elements, the attributes that define those data, and the relationships between the entities (database tables).
SD2g.	An initial data dictionary is produced that defines the data elements, their attributes, and the logical relationships among the data elements.
SD2h.	Criteria are established for running the legacy system in parallel with the new database application and the point at which the legacy system is retired.

Quality Indicator SD3: The Part C/619 state database application has the capacity to support accountability, program improvement, and program operations, and should contain the following data elements and functions.[3]

Elements of Quality
SD3a. Includes, but is not limited to, the following types of data: 1. Child-level data elements a. Unique child identifier b. Family demographics i. Primary language spoken in the home ii. Home address iii. Socioeconomic status (e.g., eligibility for Medicaid, free and reduced lunch) c. Child demographics i. Gender ii. Race/ethnicity iii. Primary language iv. Date of birth d. *For Part C:* Child Protective Services involvement e. In foster care f. Referral i. Date ii. Source g. Evaluation and eligibility i. Date of consent for evaluation ii. Date of evaluation iii. Date eligibility determined iv. Date of enrollment in the program v. Eligibility status

[3] Unless otherwise noted, the data elements listed in this quality indicator are recommended for inclusion in database applications for both Part C and 619 programs. It is not necessary for all of the data elements to be in one application as long as the necessary linkages are in place. For example, budgeted and expended funds for each local program/district may be obtained by linking to a separate agency financial system.

Elements of Quality

vi. Reason eligible (e.g., developmental delay, visual impairment, established condition or disability)
vii. Reason for delay of eligibility determination

h. Descriptive information on nature of delays/disabilities (e.g., International Classification of Diseases codes (ICD-9), diagnosed conditions, areas of delay)
i. IFSP/IEP
  i. Date
  ii. Type (e.g., initial, annual)
j. Services (planned and received)
  i. For each planned service:
    1. Type
    2. Start date
    3. End date
    4. Frequency
    5. Intensity (e.g., minutes/session)
    6. Method
    7. Setting
  ii. For services received:
    1. Types
    2. Dates
    3. Minutes
    4. Providers
    5. *For Part C:* Reason for delay of initiation of service(s)
k. Attendance in any center-based program (e.g., child care, preschool)
l. Enrolled in public insurance, e.g., Medicaid, CHIP
m. Child outcomes
n. Family survey/outcomes
o. Transition
  i. Date of transition plan
  ii. Date of transition notification
  iii. Parental opt out of notification
  iv. Parental approval for transition conference
  v. Date of transition conference
  vi. Reason for delay of notification to Part B
  vii. Reason for delay of transition conference
p. Exit
  i. Date
  ii. Reason

2. Service provider/teacher-level data elements
  a. Identifier that can be linked to child identifier and program identifier
  b. Service provider/teacher demographics
    i. Gender
    ii. Race/ethnicity
    iii. Date of birth
    iv. Languages other than English
  c. License, certification

Elements of Quality
d. Education i. Field(s) of study ii. Degree(s) awarded iii. Date(s) awarded iv. *For Part C:* Continuing education information (e.g., units, hours) e. Employment i. Employer/agency ii. Date started iii. Position title f. *For Part C:* Number of years working with children ≤ 5 years old with disabilities and their families 3. Local Early Intervention Services (EIS) program/local educational agency (LEA)-level data elements a. Name of entity b. Unique ID of entity c. Address of entity d. Type (e.g., school district, other public provider, private) e. Size of program/district in terms of number of children (e.g., total # of children ≤ 5 years old) f. Size of program/district in terms of number of children ≤ 5 years old who receive IDEA services g. Size of program/district in terms of staff (e.g., number of full-time equivalent [FTE] staff serving children ≤ 5 years old receiving IDEA services) h. Inclusion opportunities (i.e., does entity provide IDEA services in settings where children without disabilities are receiving early care and education?) i. Local determination j. Financial data i. Total funds budgeted for the Part C or 619 program ii. Total funds expended for the Part C or 619 program iii. Funds budgeted by revenue source (e.g., federal Part C/ Part B, state, private insurance, public insurance) iv. Funds expended by revenue source (e.g., federal Part C/ Part B, state, private insurance, public insurance)
SD3b. Has the capacity to share and transfer child records when they move from one Part C/619 local program to another in the state.
SD3c. Has built-in data validation and edit-check routines (e.g., format checks, field validation restrictions, logical consistency checks).
SD3d. Has established reports to assess data quality (e.g., error reports, outliers, missing data).
SD3e. Has controls in place so end users access data consistent with federal, state, and local privacy requirements, including requiring strong passwords; limits on the length of access (e.g., session timeouts, use of different user types and role-based permissions).
SD3f. Has embedded supports and training materials for end users (e.g., mouse over definitions, support documents, practice scenarios, practice site, audiovisual tutorials).
SD3g. Directly or through a related application, has reporting and analytic tools that: • Provide access to raw and aggregate data in reasonable time • Allow users to disaggregate the data, e.g., by race, ethnicity, type of disability • Support standing and ad hoc reporting

Elements of Quality	
	• Meet the unique needs of role-based user types • Employ dashboards • Support data visualization
SD3h.	*For transactional systems:* Provides automated functions that support program practices for end users (e.g., date tickler or calendar reminders of critical dates such as deadlines for IFSP/IEP reviews and transition conferences).
SD3i.	Has provisions that allow the state to comply with federal, state, and local data privacy and security requirements, including those that address the following: • Data transmission • Data storage • Data encryption • Data back-up and recovery • Data archival and destruction
SD3j.	Allows for selected administrative modifications within the database application with little or no reliance on the IT team, such as adjusting user permissions and adding support documents.
SD3k.	Has the capacity to link various child-level data elements, including child outcomes.
SD3l.	Has the capacity to link child-level data with service provider/teacher data.
SD3m.	Has the capacity to link child-level data with program/school/classroom data.
SD3n.	Has the capacity to link service provider/teacher data with program/school/classroom data.
SD3o.	Has the capacity to link family survey/outcomes data with other child-level data, including child outcomes.
SD3p.	*For transactional systems:* Can track entries/changes made by end users to data in the database, and the user who made them.
SD3q.	Has interoperability that allows for Part C or 619 data to be linked with other statewide longitudinal and early childhood data systems.

Section 2: Design and Development

Quality Indicator SD4: Part C/619 state staff work together with the IT team to translate requirements into the design, build, and testing of the new database application/enhancement.

Elements of Quality	
SD4a.	Aspects of the applications' infrastructure (e.g., hardware and software, naming conventions, importing legacy data) are jointly decided.
SD4b.	The database application requirements are jointly refined with consideration of the scope.
SD4c.	Mock-ups of modules, reports, and other functions are jointly reviewed, refined, and approved.
SD4d.	The data dictionary is jointly developed and continually refined throughout the process.
SD4e.	Modules are jointly developed and reviewed before user acceptance testing.
SD4f.	Adequate system performance is jointly designed for anticipated peak usage.
SD4g.	Legacy data and new data are accurately processed together per the requirements.

Section 3: Acceptance and Deployment

Quality Indicator SD5: Part C/619 state staff prepare for, communicate about, and conduct user acceptance testing to ensure the new database application/enhancement functions properly before deployment.

Elements of Quality	
SD5a.	Representative end users (e.g., based on user types, permissions) are selected for user acceptance testing.
SD5b.	A user acceptance testing plan, including a schedule and expected testing environment, is created in collaboration with the IT team.
SD5c.	Testing materials (e.g., test data, sample cases) and feedback mechanisms are prepared for user acceptance testing.
SD5d.	User acceptance testing findings and other forms of user feedback are communicated to the IT team.
SD5e.	User acceptance testing plans are adjusted as needed in collaboration with the IT team.
SD5f.	User acceptance testing is repeated as necessary until the system functions properly.

Quality Indicator SD6: Part C/619 state staff participate in creating, reviewing, and revising materials to support the implementation of the database application/enhancement.

Elements of Quality	
SD6a.	User support and technical materials (e.g., technical documentation, user manuals, online tutorials, webinars) are created and updated, as necessary.
SD6b.	Materials are updated based on users' review and feedback.
SD6c.	Changes to the materials are communicated to help desk support.
SD6d.	Written documentation delineating administrator/staff roles associated with the application is developed to guide the transfer of knowledge about the application to new Part C/619 state staff, IT staff, and vendors.

Quality Indicator SD7: Part C/619 state staff communicate and work with the IT team to deploy the new database application/enhancement.

Elements of Quality	
SD7a.	A deployment plan, including guidelines for transition to the new data application/enhancement, schedule for running legacy and new system in parallel, roles and responsibilities, and contingency steps, is created in collaboration with the IT team.
SD7b.	The deployment plan is communicated to all necessary parties, including state and local staff.
SD7c.	End user support (e.g., training, release notes) is provided for the new application/enhancement.
SD7d.	The new database application is deployed, or new enhancement released, in collaboration with IT.
SD7e.	The responsibility for the new database application/enhancement is transitioned to the state agency.

Subcomponent: Data Analysis and Use (DU)

The effective use of Part C and Part B 619 data is fundamental to the achievement of positive outcomes for children with disabilities and families. Achieving positive outcomes for *all* children with disabilities requires equitable access to IDEA services and the individualized and equitable provision of those services and supports. All high-quality state systems should be using data regularly to see if there are differences across subgroups which could be an indication that the system is not equitable and to identify the root causes for those differences and inform solutions. Part C and Part B 619 state staff need the knowledge and skills to formulate and answer critical questions about equitable access, services and supports, and positive outcomes for the overall population of children and families and for each of the various subgroups in the state.

The purpose of the Data Analysis and Use subcomponent is to assist state leaders in facilitating ongoing use of quality Part C and Part B 619 data for program accountability, program improvement, and program operations at state and local levels. As data leaders, Part C and Part B 619 state and local staff need to set expectations and support the conditions that will lead to effective data use at state and local levels. Effective data use requires ongoing planning, analysis, and dissemination of data products. Data products are defined as all types of materials containing data, for example, data tables, presentations, and reports.

Linking data with other data (e.g., child outcome data with child service data, Part C with 619 data) allows the state to answer critical questions that could not be answered by either data set alone. As data leaders, Part C and Part B 619 state staff need to understand the power and potential concerns associated with linked data and be able to actively participate in planning efforts that involve linking their program's data with other data sets.

An assumption underlying the framework is that many different kinds of individuals, including those who have been historically underserved, should understand and use data. A data user is any person who accesses the data in any form, including raw data, data tables, data displays, reports, or any other data products. To be a skilled data user, individuals need professional development and access to technical expertise that builds their capacity. All data must be shared and used in compliance with data governance policies and with careful attention to the protection of personally identifiable information.

To achieve positive outcomes based on continuous improvement of programs and systems, the state needs to ensure availability of quality data; analyze, prepare, and disseminate a variety of data products; and provide leadership to build the capacity of state and local staff and stakeholders for effective data use.

This subcomponent consists of three sections. The first section, Data Availability, addresses activities that ensure that users of the data have the quality data they need when they need it. Next, the Data Analysis section addresses activities involving planning and conducting data analyses that meet the needs of the data users. The third section addresses Data Leadership and Data Use, the activities that support creating and maintaining the conditions for a culture of data use at state and local levels.

Section 1: Data Availability

Quality Indicator DU1: Part C/619 state staff implement the processes required to ensure quality data are available for analyses.

Elements of Quality	
DU1a.	All data sources are identified and documented.
DU1b.	Clear, timely, and necessary guidance is provided for all data collections.
DU1c.	State and local staff are trained on data collection and submission processes.
DU1d.	Approved processes are in place to meet data requests of potential users (e.g., agency staff, researchers, legislators).
DU1e.	A schedule or timeline is developed for accessing and preparing data for all required data analysis activities.
DU1f.	Processes required to ensure quality data are reviewed and revised as needed.

Section 2: Data Analysis

Quality Indicator DU2: Part C/619 state staff plan and prepare for data analyses.

Elements of Quality	
DU2a.	The purposes for the analyses are identified, including the critical questions to be addressed.
DU2b.	Plans for data analysis routinely include critical questions to intentionally examine equitable access, services and supports, and outcomes.
DU2c.	The type and format of data products that will be used to disseminate results of the analyses are identified.
DU2d.	Data are reviewed and their completeness, accuracy, and timeliness are verified.
DU2e.	Data analysis methods that are appropriate for the purpose and use of the data are identified.
DU2f.	Data analysis plans are reviewed by individuals with relevant technical and programmatic expertise.

Quality Indicator DU3: Part C/619 state staff conduct data analyses that meet the needs of the state agency and other users.

Elements of Quality	
DU3a.	Analyses are conducted consistent with the attributes of the data (e.g., data quality, significance levels, sample size), intended purposes, and the planned data products.
DU3b.	The strengths and possible limitations of the analyses are identified.
DU3c.	Results of the analyses are reviewed by individuals with relevant technical and programmatic expertise including the potential risks of misinterpretation.
DU3d.	Data products are developed that meet the needs of intended users, incorporating where appropriate: • dashboards that display multiple data views; • comparative analyses (e.g., subgroups, trends) and examination of root causes; • best practices for identifying, displaying, and labeling data by subgroups by disability characteristics, race, ethnicity, gender, immigration status, home language, geography, socioeconomic status;

Elements of Quality	
	• features to provide users with the ability to interact with the data (e.g., filtering, sorting); and • effective data visualizations (e.g., clear and understandable; use of appropriate racial and cultural icons).
DU3e.	Disclosure avoidance techniques are used to ensure that personally identifiable information (PII) is protected in accordance with federal and state requirements in all data products.
DU3f.	Documentation is developed to support future replication of the analyses conducted (e.g., data elements, tools and methods used, strengths/limitations of data analysis and results, data products developed) where applicable.

Section 3: Data Leadership and Data Use

Quality Indicator DU4: State Part C/619 coordinators function as data leaders to create and maintain the conditions for a culture of data use at the state level.

Elements of Quality	
DU4a.	Staff have the knowledge and skills necessary to use data to inform decision-making, including using data to examine equitable access, services and supports, outcomes.
DU4b.	A commitment to using data for decision-making exists throughout the agency.
DU4c.	Data are high quality and comprehensive.
DU4d.	Data products (both routine and ad hoc) are available and timely.
DU4e.	Data are routinely made available across administrative units for collaborative use (e.g., monitoring, fiscal, contracts, programs).
DU4f.	The strengths and limitations of the analyses and the potential risks of misinterpretation are shared with users of the data products (e.g., data quality, significance levels, small sample size, comparative analyses such as by race, ethnicity, disability characteristics).
DU4g.	Staff participate in efforts to share IDEA data with and access other early childhood data across programs, agencies, or initiatives (e.g., Medicaid, ECIDS, Child Welfare, EHDI, SLDS, Education).

Quality Indicator DU5: Part C/619 state staff lead an ongoing data-informed decision-making process (i.e., review of data analyses, interpret results, and make decisions informed by the data).

Elements of Quality	
DU5a.	Effective and routine processes for data-informed decision-making have been adopted (e.g., Plan Do Study Act, Change Management).
DU5b.	Processes for data-informed decision-making are implemented consistently by individuals and teams.
DU5c.	Stakeholder groups that represent the full range of diversity in the state, especially those who have been historically underserved, participate in data-informed decision-making processes as appropriate to the topic.
DU5d.	Data from cross-program and cross-agency partnerships are used for program improvement.
DU5e.	Processes for data-informed decision-making are reviewed and revised as needed.
DU5f.	Data-informed decision-making processes routinely and intentionally use data to examine equitable access, experiences, and outcomes.

Quality Indicator DU6: Part C/619 state staff support local programs or districts in building a culture of data use.

Elements of Quality	
DU6a.	Professional development opportunities are available to build data skills of local programs or district administrators, staff, and stakeholders.
DU6b.	Supports are provided to ensure data needed by local program or districts to inform decisions are high quality and comprehensive.
DU6c.	Data products and displays for local programs and districts are available and timely.
DU6d.	Supports are provided to local programs or districts to engage stakeholders in the ongoing use of data.
DU6e.	Supports are provided to create and sustain local use of data for decision-making by individuals and teams.
DU6f.	Supports are provided to local programs or districts to implement data-informed decision-making processes that routinely and intentionally use data to examine equitable access, services and supports, and outcomes.
DU6g.	Supports are reviewed and revised as needed based on local program or district feedback.

Subcomponent: Sustainability (SU)

Sustainability refers to the state's capacity to support the Part C and Part B 619 database application over time to meet the program's evolving needs. To sustain a data system that addresses the state's evolving needs, state leadership needs to ensure a continuation of sufficient fiscal and human resources, key leadership and stakeholders' support, and data use throughout the system. Demonstrating the value of data in informing decisions is an important contributor to sustainability. Sustaining an efficient, effective data system is an ongoing endeavor. This involves identifying emerging social and technical issues when considering system functionality, e.g., equity considerations, designing for access through mobile devices, electronic signature capability, parent portals, and predictive analytics. Therefore, monitoring and reviewing of requirements will be necessary to ensure data system remains current and relevant.

The process of identifying the need for enhancements or for a new database application is conceptualized as a part of sustainability. However, those involved with data governance and management are responsible for translating the identified enhancements or request for a new system into an actionable scope of work that includes activities, timelines, and required resources (see Data Governance and Management subcomponent). The development of a new system or enhancement of an existing system is executed in accordance with the system development life cycle as presented in the System Design and Development subcomponent.

Quality Indicator SU1: Part C/619 state staff use a systematic process to identify enhancements to the database application.

Elements of Quality	
SU1a.	The process involves identifying and collecting relevant information to inform decision-making about potential enhancements (e.g., user input, changes in federal or state reporting requirements, equity considerations, disruptions related to disasters, state data initiatives such as ECIDS, current effective technologies).
SU1b.	Information is analyzed to identify needed improvements to the database application (e.g., improved reporting capabilities, new notification functionality, additional data elements).
SU1c.	Information is analyzed to identify additional or improved user supports (e.g., video tutorials, new online training materials).
SU1d.	Enhancements are aligned with the database application's purpose and vision.

Quality Indicator SU2: Part C/619 state staff generate administrative and fiscal support to sustain and enhance the database application.

Elements of Quality	
SU2a.	The database application value is demonstrated through the use of data-informed decision-making for continuous improvement at multiple levels (policymakers to local users).
SU2b.	The benefits of the application and the need for improvements are effectively articulated to decision-makers.
SU2c.	In collaboration with state leadership, resources needed to maintain and/or improve the application are identified (e.g., new or increased funding).
SU2d.	Knowledge transfer to sustain the operation and use of the database application, including system administrative roles, is systematically conducted for new Part C/619 state staff, IT staff, and vendors.

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Subcomponent: Data Analysis and Use

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To learn more about the DaSy Center, visit the DaSy Center website at http://www.dasycenter.org/.