

**VLDS BOOK OF DATA GOVERNANCE**  
**VERSION 2.1**  
**Feb. 16, 2017**

We, the members of VLDS, promise to protect the privacy and confidentiality of data entrusted to us. The VLDS system is designed to meet or exceed all state and federal privacy laws and requirements

## Signature Page

The following parties agree upon the policies and procedures outlined in this version of the VLDS Book of Data Governance with the understanding that this is a living document where modifications shall be by unanimous consent of the VLDS Data Governance Council.

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# 1 Executive Summary

Realizing the importance of data analysis and reporting initiatives to improve the quality and cost of programs in the Commonwealth, as well as informing policy relating to those programs, the Commonwealth of Virginia applied for federal funding and received one of twenty grants from the USED 2009 ARRA Statewide Longitudinal Data System (SLDS) program. Virginia agencies collaborated to create Virginia Longitudinal Data System (VLDS) to provide secure access to data while maintaining privacy and confidentiality. This access will provide for more effective research into questions that will inform policy in the Commonwealth for years to come while exceeding the highest standards for protecting personal identified information.

The Book of Data Governance is a reference guide to help VLDS stakeholders become familiar with the VLDS Data Governance model and to inform them of associated roles, responsibilities, authority, and processes. This document outlines the structure of the VLDS Data Governance Program, including critical roles and responsibilities including information for each of the major roles: Data Governance Council members, and the four Subcommittee members (Technical, Legislative, Communications, and Research).

A key feature of VLDS is its ability to add agencies and their data, which would increase the capabilities of the system. As such, in addition to an overview of the VLDS Data Governance Program, this document outlines information, expectations, and requirements necessary to become a VLDS Partnering Agency (i.e. contributes to or consumes VLDS data).

## 2 Introduction

### 2.1 Purpose

This document is designed to define and describe the authority, policies, and procedures for the oversight and governance of the Virginia Longitudinal Data System (VLDS) Data Governance Program.

#### Definition: Data Governance Program

Data governance is both an organizational process and a structure; it establishes responsibility for data, organizing program area staff to collaboratively and continuously improve data quality through the systematic creation and enforcement of policies, roles, responsibilities, and procedures.<sup>1</sup>

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<sup>1</sup> National Forum on Education Statistics (2011). *Traveling Through Time: The Forum Guide to Longitudinal Data Systems. Book Three of Four: Effectively Managing LDS Data* (NFES 2011–805). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

This document aims to help Virginia stakeholders become familiar with VLDS. It informs them of the Data Governance structure and it describes the policies and procedures for becoming a VLDS Partnering Agency.

#### **Definition: Virginia Longitudinal Data System (VLDS)**

VLDS is a P20+ system comprised of a core of data that is centered on education and workforce data from K-12, postsecondary, selected social services programs and health professional survey data. The various source systems that make up the comprehensive P20+ system retain their own internal data governance, source systems, and data collections; only a selected subset of data from each agency are made available to VLDS .

## **2.2 Overview**

The Commonwealth of Virginia and its agencies created VLDS in connection with a federal grant received pursuant to the 2009 ARRA Statewide Longitudinal Data System program. VLDS provides authorized researchers with a secure access to data records that are merged across multiple agency datasets. In recognizing the critical nature that data plays in VLDS and its Partnering Agencies, the VLDS primary stakeholders have implemented this VLDS Data Governance Program.

In order to successfully coordinate Virginia’s set of heterogeneous data sources (with the flexibility of extending to data sources outside of Virginia) within existing state legal requirements on the protection of personal privacy, VLDS was built using a federated data system model. VLDS Partnering Agencies will continue to house their respective agencies’ source data in their locally maintained databases. Alongside the main database, a smaller separate data base (VLDS Exposure Database) resides. The VLDS Exposure Database contains hand selected elements from the main database. Both databases belong exclusively to that named agency and are fully protected behind firewalls.

#### **Definition: Federated Data System**

A federated data system is a system that interacts with multiple data sources on the back-end and presents itself in a single data set on the front-end, without creating a traditional “data warehouse” to store records. Users querying a federated data system cannot tell that they are in fact querying many different data sources at the same time.

### Definition: Partnering Agency

A Partnering Agency is an agency or organization that is collaborating and/or contributing data to VLDS for the purposes of merging records with other agencies' data.

To increase the accessibility of available data to Virginia stakeholders, VLDS plans to offer different levels of access. Currently, access to VLDS is restricted to researchers who have gained authorization from an agency sponsor by having an approved research study. The approved research study must be related to at least one of the published VLDS Burning Questions approved by the VLDS Data Governance Council.

### 2.3 Goals and Deliverables

The following goals and deliverables characterize VLDS:

- I. Establish an extensible, longitudinal data system that includes educational data beginning with Pre-K and extending through post-secondary colleges and universities, data on workforce development and experience, social service delivery and experience, and any other area of commitment of the Commonwealth to its citizens and residents as the system evolves.
- II.
- III. Maintain secure and confidential data at rest and during transmission to guarantee that the shared data meets and exceeds all state and federal privacy laws.
- IV. Establish agreements between the various Partnering Agencies to ensure data is provided despite any changes in staff or administration.
- V. Provide a means to respond to state and federal reporting requirements.
- VI. Provide a means to address cross-sector questions pivotal to citizens and policymakers by merging data across participating agencies.

## 3 VLDS Data Governance Model

The VLDS Data Governance Model reflects the individual autonomy of specific organizational data governance structures for all partnering agencies.

VLDS policy and procedure decisions are currently made by the voting members on the Data Governance Council. This committee consists of a designated key person from each of the Partnering Agencies. The VLDS Data Governance Council is supported by 4 sub-committees: Technical, Legislative, Communications and Research.

The table below illustrates the organizational roles and responsibilities of the VLDS:

Committee	Roles & Responsibilities
<b><i>Data Governance Council</i></b>	<p>The Data Governance Council monthly meetings are facilitated by a nonvoting member of the participating agencies. The voting members on the Data Governance Council are the designated representatives from the respective Partnering Agencies. The DG Council establishes VLDS policy and procedures; identifies appropriate burning questions; serves as the authority for escalation of issues; is responsible for ensuring continued commitment of resources, provides vision and direction for VLDS in general and oversees the governing agent for actions presented from the Data Governance Sub-Committees.</p>
<b><i>Technical Subcommittee</i></b>	<p>A representative of a partner agency shall act as chair of the subcommittee. This committee ensures the continued technical development of the VLDS and its ability to guarantee privacy and security that complies with current and emerging standards for technology. This includes all of the components of VLDS: Exposure Database, Data Adapter, Data Request Tool, the matching engine, and the Lexicon Meta Data Tool. This committee oversees the identification and tracking of all defects and enhancements including those related to each of the components. This committee relays information to and from respective agencies and the Data Governance Council regarding the functionality of VLDS and the quality of data going into and being returned by VLDS. The Technical Subcommittee works with VLDS and the Operations and Maintenance provider’s Project Manager to oversee the status of enhancements, defects, software release levels and renewals for licenses, CALS and software purchases that are required by VLDS. All requests for changes to VLDS, web page or newsletter are routed through the Technical Sub-Committee. It the Technical Subcommittee who monitors the VLDS web site for accuracy and relevance. The Technical Subcommittee provides input to the Data Governance Council for all matters related to respective agency’s data governance policies, requirements, and priorities for the purpose of guaranteeing that the VLDS workforce is not out of sync with an agencies policy and procedures for sharing data. The Technical Subcommittee formulates recommendations related to the technical aspects of VLDS for presentation to the Data Governance Council for approval.</p>
<b><i>Research</i></b>	<p>A representative of a partner agency shall act as chair of the subcommittee. The purpose of the Research Subcommittee is to identify</p>

<p><b>Subcommittee</b></p>	<p>ways to foster more VLDS research through communications and marketing to the research community by offering various types of assistance to researchers. The goal is to 1) make researchers more aware of what VLDS can do and 2) create and maintain the VLDS Research agenda, and 3) identify and provide researchers with information and documentation that would help them have understanding and clarity of VLDS data and the relationships between the data elements.</p> <p>In addition to developing the VLDS Research agenda, this committee oversees the progress of each research project with a focus on providing support on the proper use of data, not on conclusions of the research. This Research Subcommittee develops processes or protocols for reviewing queries before the researcher runs them to help reduce problems caused by poorly designed queries. Requests for maintenance to the research black list are handled through this committee. The Research Subcommittee formulates recommendations for presentation to the Data Governance Council for approval.</p>
<p><b>Communications Subcommittee</b></p>	<p>A representative of a partner agency shall act as chair of the subcommittee. The members of this committee manage all of the strategic public facing communications as it relates to VLDS. The objective is that there is a positive and consistent message whenever VLDS is referenced. This includes but is not limited to creation, publication and maintenance of the distribution list for VLDS Press Releases, VLDS blog and VLDS articles for the VLDS website’s “NEWS” tab. The committee is also responsible for working closely with researchers to create, edit and publish One-pagers for each completed VLDS Research Study. This Subcommittee advises on cost and funding source necessary to pay for any fees associated with email management and other communications. This committee is also responsible keeping the Media Kit current. All templates (PowerPoints, One-pagers, and other assorted Word Documents) on the VLDS website are to meet Section 508 and at least Level A Conformance to WCAG 1.0 If a change is requested for a template or any other communication document or a new template created, then it must come to the Communication Subcommittee first. The Media Kit and templates can be found on the DOE I drive under the folder, “2009 SLDS Project Artifacts” or submit a request to <a href="mailto:resultshelp@doe.virginia.gov">resultshelp@doe.virginia.gov</a>. The Communication Subcommittee formulates communication recommendations for presentation to the Data Governance Council for approval.</p>
<p>Legislative Subcommittee</p>	<p>A representative of a partner agency shall act as chair of the subcommittee. This committee is comprised of a member from each</p>

	<p>participating agency who is most keenly aware of the actions or pending actions within and between the Virginia General Assembly and their respective agency. The members of this committee explore the ways and means for obtaining funding through the General Assembly to finance the maintenance and expansion of VLDS. This committee formulates the VLDS Sustainability Plan and works with fiscal agents within each Partnering Agency to ensure that funds are available to meet the needs of VLDS. This committee is also aware of federal regulations or pending regulations to their respective agencies that would in turn have an effect on VLDS; members from this Subcommittee work with the Bill Sponsors and Patrons to contribute language for the bills that would affect their agency and VLDS. The Legislative Subcommittee shares information and makes recommendations and proposals the VLDS Data Governance Committee for all matters related to the codification and funding of VLDS.</p>
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### 3.1 Data Governance Council

#### 3.1.1 Authority

The Data Governance Council’s mission is to provide direct oversight and leadership to the VLDS data governance structure and to provide support for the continuous sustainability of the VLDS system. The VLDS Data Governance Council shall have the power to adopt, amend, and repeal rules, procedures, and minimum standards required for the use, maintenance, participation in, and operation of VLDS. The Data Governance Council oversees the governing of the conduct of persons and organizations using or participating in the VLDS. These rules and procedures shall also extend to the sub-committees. The Data Governance Council is the primary governing body, charged with developing and implementing the VLDS. The Data Governance Council may establish sub-committees as needed.

The Data Governance Council shall:

- a. Provide oversight, vision, and leadership for all matters concerning VLDS.
- b. Serve as the authority for escalation of issues and recommendations from any Subcommittee .Works with the Legislative Subcommittee to codify the role of the VLDS in Virginia legislation.
- c. Advocate for the VLDS, in regard to policy, legislation, and resources.
- d. Receive any reports and findings of the Auditor of Public Accounts regarding the VLDS.
- e. Adopt bylaws and make changes to bylaws and the VLDS Book of Data Governance.
- f. Develop and approve VLDS policies and procedures.
- g. Serve as the authority for escalation of issues and recommendations from the Sub-Committees.
- h. Consider appeals from a Subcommittee; only one appeal is allowed per issue.

- i. The Data Governance Council is authorized to form and disband sub-committees and appoint and remove members from committees.
  - a. Subcommittee membership may be comprised of Data Governance Council members, alternates, and others agreed to by the Data Governance Council.
  - b. The Data Governance Council may delegate decision-making authority to Subcommittees.
  - c. The Data Governance Council will create Subcommittee charges that authorize Subcommittee action, and whether decisions are binding without Council review, or must be reviewed by the Council before becoming official.
  - d. Council and Subcommittee decisions shall be made by consensus, which is defined as “Can you live with it?” In other words, a decision is approved if all Council or Subcommittee members can “live with” the decision.
  - e. If a Council or Subcommittee member believes a decision is somehow improper, that person should re-convene the Council or Subcommittee to attempt to resolve the issue, or if not practical, may present the issue as soon as possible at a scheduled or emergency meeting to the Data Governance Council.
  - f. Council and Subcommittee members are authorized to delegate voting rights to an alternate.
  - g. Council and Subcommittee voting alternates shall be identified by an absent Council or Subcommittee member in advance of or during a meeting of the Council or sub-committee.

### 3.1.2 *Membership*

The Data Governance Council members shall consist of the representatives of all Partnering Agencies who are contributing primary data for merging. Agencies who have or intend to start the onboarding process for contributing primary data may attend and participate in all meetings, but do not have voting privileges until they are on boarded to VLDS.

- a. The Data Governance Council shall appoint a facilitator to coordinate meetings and keep minutes.
- b. Member vacancies shall be filled by the agency head or designee of a Partnering Agency’s organization; until a representative is appointed the agency head or designee shall have authority to vote on behalf of their respective member organization. At least one member of each subcommittee shall be a member of the Data Governance Council.

### 3.1.3 *Fees*

- a. Once a new agency becomes a VLDS Partnering Agency, then an Onboarding Fee is payable to the agency who is the fiscal agent.

- b. The Onboarding Fee is approximately \$20,000, and subject to revision as vendor charge estimates are modified.
- c. The Onboarding Fee covers the cost for such services as new partner education, database consultation, file cleanup (de-duping), a onetime data match with cleansing for just the new agency, development of a data adapter, installation, testing and troubleshooting.
- d. The new onboarding agency is responsible for securing and purchasing any licenses that are determined necessary.
- e. The mechanism for the payment of fees is determined by the agencies in the financial exchange.
- f. The fee can be waived if agreed to by unanimous vote of the Data Governance Council and other funds are available to cover the costs of onboarding, except as directed and funded by the General Assembly.

### *3.1.3 Member Expectations*

All members of the Data Governance Council are expected to:

- a. Ensure that appropriate resources are aligned to support the work of VLDS.
- b. Ensure that a true statewide focus is maintained.
- c. Ensure their attendance or that of designated representative.
- d. Advocate for VLDS to key stakeholders, including the Virginia General Assembly.

## **3.2 Decision Making**

### *3.2.1 Voting*

The Data Governance Council is the final authority on issues escalated from a sub-committee. The voting rights and process will adhere to the following:

- a. Data Governance Council members are authorized to vote on behalf of their respective agency.
- b. Data Governance Council members are all given equal voting power in the form of a single vote on all issues.
- c. Data Governance Council members are authorized to delegate voting rights to an alternate.
- d. Voting alternates shall be designated by the absent voting member or the absent member's agency head or designee in advance of or during a meeting.
- e. Data Governance Council decisions shall be made by consensus, which is defined as "Can you live with it?" In other words, a decision is approved if all representatives can "live with" the decision

### *3.2.2 Appeals*

Data Governance Council decisions, or the inability of the Data Governance Council to reach a decision on an issue, may be appealed by a voting member, agency head, or designee by:

- a. Alerting the Data Governance Council at a scheduled or emergency meeting of the intention to appeal, in an effort to resolve the issue within a Subcommittee or
- b. Presenting the issue to the Data Governance Council by the Subcommittee Chairperson or the Data Governance Council Chairperson.

### **3.3 Meetings**

In order to maintain a continued Data Governance effort and to address VLDS issues in a timely manner, the Data Governance Council shall meet no less than monthly to consider and resolve issues of the VLDS brought forward by sub-committees. The meeting process will adhere to the following:

- a. Data Governance Council members or alternates are expected to attend all Data Governance Council meetings.
- b. Meetings can be attended by voting members, alternates, and other invitees. Official business can only be conducted if a member or authorized alternate is present from each member organization.
- c. If more than one-half of the voters present are alternates, then a quorum does not exist and no official business can be conducted.
- d. Representatives should be notified of meetings by the facilitator at least one calendar week in advance of the meeting; however, attendance at a meeting by a representative shall waive any defect in the notice provided (if not feasible to provide one week's notice, then the Data Governance Council may meet on an emergency basis).
- e. Attendance at meetings may be in person or by telephone or other electronic means.

## **4 Technical Sub-Committee**

### **4.1 Authority**

The purpose of the Technical Subcommittee is to ensure the continued technical development, maintenance, and operation of the VLDS and its ability to ensure privacy and comply with current and emerging standards for technology. The Technical Subcommittee may establish sub-committees as needed. The Technical Subcommittee is charged with addressing topics that have a direct impact on the process and structure of the VLDS. The Technical Subcommittee ensures the decision-making processes and technology related work of the VLDS are properly controlled.

- a. The Technical Subcommittee shall consist of representatives appointed by the Data Governance Council, including members of the development teams.
- b. Unless otherwise authorized by the Data Governance Council, all decisions made by the Technical Subcommittee must be reviewed and approved by the Data Governance Council before becoming official.

## Definition: Technical Governance

Technical governance is a process and structure whereby technology related decisions reflect the objectives and needs of the organization. Technical governance ensures the decision-making processes and technology related work of the VLDS are properly controlled.

The Technical Subcommittee shall:

- a. Provide insight, vision, and leadership to the Data Governance Council.
- b. Serve as the authority for escalation of issues and recommendations to the Data Governance Council.
- c. Oversees the implementation of decisions made by the Data Governance Council as it relates to technical issues.

### 4.2 Membership

The Technical Subcommittee members shall consist of a representative from each of the Partnering Agencies who are contributing primary data for merging. Agencies that have or intend to start the onboarding process for contributing primary data may attend and participate in all meetings, but do not have voting privileges until they are on boarded to VLDS.

- a. The members of the Technical Subcommittee shall be appointed by the respective agency head, Data Governance Council representative for the respective agency, or by a designee of their respective organizations (i.e. Head of the IT Department).
- b. The Technical Subcommittee shall appoint a chairperson to coordinate meetings and keep minutes.
- c. Member vacancies shall be filled by the agency head or designee of a Partnering Agency's organization; until representatives are appointed, the agency heads or designees shall have authority to vote on behalf of their respective member organizations at the Subcommittee level.

### 4.3 Member Expectations

All members of the Technical Subcommittee are expected to:

- a. Ensure that appropriate resources are aligned to support the work of VLDS.
- b. Ensure that a true statewide focus is maintained.
- c. Ensure their attendance or that of designated representative.
- d. Advocate for the VLDS to key stakeholders, including IT staff at each Partnering Agency or an agency in the process of onboarding.
- e. Report to the Data Governance Council regarding data issues, new data regulations, and new policies affecting VLDS and or the data being contributed to the exposure database.

- f. Communicate with their respective agency heads regarding activities and decisions of the Data Governance Council
- g. Support and advocate data management and governance practices to agency staff

#### **4.4 Decision-Making Process**

##### *4.4.1 Voting*

The Technical Subcommittee is the final authority on issues to be escalated to the Data Governance Council. The voting rights and process will adhere to the following:

- a. Technical Subcommittee members are authorized to vote on behalf of their respective member organizations.
- b. Technical Subcommittee members are all given equal voting power in the form of a single vote on all issues.
- c. Technical Subcommittee members are authorized to delegate voting rights to an alternate.
- d. Voting alternates shall be designated by the absent voting member or the absent member's agency head or designee in advance of or during a meeting.
- e. Technical Subcommittee decisions shall be made by consensus, which is defined as "Can you live with it?" In other words, a decision is approved if all representatives can "live with" the decision.

##### *4.4.2 Appeals*

Data Governance Council decisions, or the inability of the Data Governance Council to reach a decision on an issue, may be appealed by a voting member, agency head, or designee by:

- a. Alerting the Technical Subcommittee at a scheduled or emergency meeting of the intention to appeal, in an effort to resolve the issue within the Technical Subcommittee or
- b. Presenting the issue to the Data Governance Council by the Technical Subcommittee Chairperson.

#### **4.5 Meetings**

In order to maintain a continued Data Governance effort and to address VLDS issues in a timely manner, the Technical Subcommittee shall meet no less than quarterly to consider and resolve issues of the VLDS brought to their attention. The meeting process will adhere to the following:

- a. Technical Subcommittee members or alternates are expected to attend all Technical Subcommittee meetings.
- b. Meetings can be attended by voting members, alternates, and other invitees. Official business can be conducted if a member or alternate is present from each member organization.

- c. If more than one-half of the voters present are alternates, then a quorum does not exist and no official business can be conducted.
- d. Representatives should be notified of meetings by the chairperson at least one calendar week in advance of the meeting; however, attendance at a meeting by a representative shall waive any defect in the notice provided. If not feasible to provide one week's notice, then the Technical Subcommittee may meet on an emergency basis.
- e. Attendance at meetings may be in person or by telephonic or other electronic means.

## **5 Research Sub-Committee**

### **5.1 Authority**

This Committee oversees the VLDS research agenda and verifies that continued progress is taking place with each research project. This committee reviews the burning questions submitted by each partnering agency and recommends a consolidated version for approval by the Data Governance Council. This Committee is responsible for each project's research schedule and the overall schedule of projects active in VLDS at any given time. The purpose of research schedule oversight is required so as to not overload the sponsors or VLDS and to validate that the research aligns to the approved burning questions. It is the responsibility of this committee to verify that each Research Study has been reviewed at least once by a designated Research Review Committee and/or a Peer Review Committee. The Research Review Committee/or Peer Review Committee is composed of persons who have a stake in the specific research purpose and who can make valid recommendations when proofing the draft of the research study. The Research Committee logs any IRBs that may be required and also logs and archives the deliverables per the research sponsor's recommendation. The sponsor of the research project is to report to the Research Subcommittee if any research or research team member is not meeting the agency's expectations, timeline and budget and the Research Subcommittee will propose action to the Data Governance Council based on the voting outcome from the Research Sub-Committee. Any researcher on the "blacklist" in VLDS is approved first by the Research Subcommittee by a recommendation from a participating agency and then submitted to the Data Governance Council for vote. All final approvals come from the Data Governance Council.

The mission of the Research Subcommittee is to ensure the research findings and publications are:

- a. In keeping with the approved research purpose.
- b. Are aligned to VLDS Burning Questions.
- c. Accurate from a statewide perspective as well as from the individual agency's view.

The purpose of the Research Subcommittee is to:

- a. Look for ways to foster more research through communications and marketing to the research community.
- b. Offer various types of assistance to VLDS researchers.
- c. Make researchers more aware of what VLDS can do and what research the participating agencies would like to have done using VLDS.
- d. Make it easier for researchers to use VLDS.

Objectives:

- a. Define high level VLDS Burning Questions and have them posted to [vlds.virginia.gov](http://vlds.virginia.gov).
- b. These questions have a broad scope encompassing all partner agencies, are high-level in nature, and are not agency-specific. They should allow for a wide array of research projects that could address something of interest and value to one or more VLDS partnering agencies.
- c. Encourage agencies to develop their specific research agendas which should also be made available on the VLDS web site, but are shown separate from the high level Burning Questions. The agency research agenda could be presented in the form of agency-specific burning questions, a short narrative, or something else.
- d. Identify ways to foster more collaboration between agencies with the goal of developing a shared research agenda among two or more agencies. That could also develop into something that could be shared on the VLDS web site for prospective researchers.
- e. Provide potential researchers with more information about the categories or types of data available through VLDS. The updated Researcher's Guide now includes a Partner Agency and Data Diagram, which gives the researcher a graphical representation of the partner agencies and the data elements provided by each agency to the respective exposure databases.
- f. Foster more VLDS research by providing more assistance to researchers who have approved research proposals.
- g. Provide a description of the basic technical knowledge and qualifications a person will need in order to work with the VLDS.
- h. Encourage the development of some basic data quality reports that show range of values, frequency of missing values to accompany the VLDS Data Dictionary.
- i. Work with universities and researchers who have already used VLDS to develop ideas for data quality reports and system functionality that would help researchers when beginning their data query designs.
- j. Develop a process or protocols for VLDS data specialist to review researcher queries before the researcher runs them to help reduce problems caused by poorly designed queries.
- k. Consider requiring agencies sponsoring research to conduct a peer review from outside research entity before results can be published. The focus would be on proper use of data, not on conclusions of the research.

## 5.2 Membership

The Research Subcommittee members are designated by the agency head, Data Governance Council representative, or designee of their respective organizations.

### Definition: Research

**Research** comprises "creative work undertaken on a systematic basis in order to increase the stock of [knowledge](#), including knowledge of humans, culture and society, and the use of this stock of knowledge to devise new applications."<sup>[1]</sup> It is used to establish or confirm facts, reaffirm the results of previous work, solve new or existing problems, support [theorems](#), or develop new [theories](#). A research project may also be an expansion on past work in the field. To test the validity of instruments, procedures, or experiments, research may replicate elements of prior projects, or the project as a whole. The primary purposes of [basic research](#) (as opposed to [applied research](#)) are [documentation](#), [discovery](#), [interpretation](#), or the [research and development](#) (R&D) of methods and systems for the advancement of human knowledge

<sup>[1]</sup>OECD (2002) Frascati Manual: proposed standard practice for surveys on research and experimental development, 6th edition. Retrieved 27 May 2012 from [www.oecd.org/sti/frascaticomanua](http://www.oecd.org/sti/frascaticomanua)

## 5.3 Member Expectations

All members of the Research Subcommittee are expected to:

- a. Report to their respective Data Governance Council representatives regarding research issues, new research regulations, and new policies affecting research as well as help propose resolutions
- b. The Research Subcommittee shall appoint a chairperson to coordinate meetings and keep minutes.
- c.
- d. Communicate with their respective agencies regarding activities and decisions of the Data Governance Council and their potential impact upon their agencies' systems
- e. Communicate with the Data Governance Council of any impact that a research study would have upon the Commonwealth or the Partnering agencies.
- f. Regularly evaluate the quality of the research being provided for use by the VLDS
- g. Identify opportunities to share and re-use research in accordance with policies implemented by the Data Governance Council
- h. Provide the Data Governance Council with recommendations related to research conducted using VLDS.
- i. Track federal and state legislation involving research and translate this impact for the VLDS

## 5.4 Decision-Making Process

#### 5.4.1 *Voting*

The Research Subcommittee is the final authority on issues to be escalated to the Data Governance Council. The voting rights and process will adhere to the following:

- a. Research Subcommittee members are authorized to vote on behalf of their respective member organizations.
- b. Research Subcommittee members are all given equal voting power in the form of a single vote on all issues.
- c. Research Subcommittee members are authorized to delegate voting rights to an alternate
- d. Voting alternates shall be designated by the absent voting member or the absent member's agency head or designee in advance of or during a meeting
- e. Research Subcommittee decisions shall be made by consensus, which is defined as "Can you live with it?" In other words, a decision is approved if all representatives can "live with" the decision

#### 5.4.2 *Appeals*

Data Governance Council decisions, or the inability of the Data Governance Council to reach a decision on an issue, may be appealed by a voting member, agency head, or designee by:

- a. Alerting the Research Subcommittee at a scheduled or emergency meeting of the intention to appeal, in an effort to resolve the issue within the Research Subcommittee or
- b. Presenting the issue to the Data Governance Council by the Research Subcommittee Chairperson.

### **5.5 Meetings**

In order to maintain a continued Data Governance effort and to address VLDS issues in a timely manner, the Research Subcommittee shall meet no less than quarterly to consider and resolve issues of the VLDS brought to their attention. The meeting process will adhere to the following:

- a. Research Subcommittee members or alternates are expected to attend all Research Subcommittee meetings.
- b. Meetings can be attended by voting members, alternates, and other invitees. Official business can be conducted if a member or alternate is present from each member organization.
- c. If more than one-half of the voters present are alternates, then a quorum does not exist and no official business can be conducted.
- d. Representatives should be notified of meetings by the chairperson at least one calendar week in advance of the meeting; however, attendance at a meeting by a representative

shall waive any defect in the notice provided. If not feasible to provide one week's notice, then the Research Subcommittee may meet on an emergency basis.

- e. Attendance at meetings may be in person or by telephonic or other electronic means.

## 6 Communications Subcommittee

### 6.1 Authority

A representative of any partnering agency may be the chairperson on this committee. The members of Communications Committee manage all of the strategic public facing communications as it relates to VLDS. The objective of this committee is to guarantee that there be a positive and consistent message whenever VLDS is referenced. This includes but is not limited to creation, publication and maintenance of VLDS Press Releases, monthly VLDS blogs and any journalistic articles relative to VLDS. This committee tracks the existence of VLDS articles in the media and post links to these on the VLDS web site tab labeled "NEWS". The committee is also responsible for working closely with researchers to create, edit and publish "One-pagers" for each completed VLDS Research Study. The Communication Committee identifies the source for funding Mail-chimp subscription fees. This committee is also responsible for keeping the Media Kit current. All templates (PowerPoints, One-pagers, and other assorted Word Documents) on the VLDS website are to meet Section 508 and at least Level A Conformance to WCAG 1.0. If a change is requested for a template or any other communication document; it must come to the Communication Subcommittee for approval. The Media Kit and templates can be found on the DOE I drive under the folder, "2009 SLDS Project Artifacts". If access to DOE's I drive is lacking, the documents may be procured by submitting a request to [ResultsHelp@doe.virginia.gov](mailto:ResultsHelp@doe.virginia.gov).

#### Definition: Communications

**Communications management** is the systematic [planning](#), implementing, monitoring, and revision of all the channels of [communication](#) within an [organization](#), and between organizations; it also includes the [organization](#) and dissemination of new communication directives connected with an organization, [network](#), or [communications technology](#). Aspects of communications management include developing corporate communication [strategies](#), designing internal and external communications directives, and managing the [flow of information](#), including [online](#) communication

The Communications Subcommittee shall:

- a. Provide insight, vision, and leadership to the Data Governance Council on matters related to VLDS Communications.

- b. Serve as the authority for escalation of issues and recommendations to the Data Governance Council as it relates to Communication issues.
- c. Oversees the implementation of decisions made by the Data Governance Council as it relates to Communications issues.
- d. Creates or delegates the creation of articles for the VLDS blog.
- e. Maintains the Media Kit.
- f. Is responsible for updating all templates and master documents.
- g. Creating, maintaining and publishing One-Pagers for each research study.

## **6.2 Membership**

The Communications Subcommittee members shall consist of the representatives of all Partnering Agencies who are contributing primary data for merging, and the fiscal agent for the VLDS. The VLDS webmaster services are provided by the Operations and Maintenance provider. Agencies that have or intend to start the onboarding process for contributing primary data may attend and participate in all meetings, but do not have voting privileges until they are onboarded to VLDS. Agencies are encouraged to designate their communications or public relations leads as members of this subcommittee.

- a. The initial agency members of the Communications Subcommittee shall be appointed at the organizational meeting of the member organizations; thereafter, members shall be appointed by the agency head or designee of their respective organizations for an annual term
- b. The Communications Subcommittee shall appoint a chairperson to coordinate meetings and keep minutes
- c. Member vacancies shall be filled by the agency head or designee of a Partnering Agency's organization; until representatives are appointed, the agency heads or designees shall have authority to vote on behalf of their respective member organizations at the Subcommittee level.

## **6.3 Member Expectations**

All members of the Communications Subcommittee are expected to:

- a. Ensure that appropriate resources are aligned to support the work of VLDS.
- b. Ensure that a true statewide focus is maintained.
- c. Ensure their attendance or that of designated representative at Data Governance meetings.
- d. Advocate for the VLDS to key stakeholders, including IT staff at each Partnering Agency or an agency in the process of onboarding.
- e. Report to the Data Governance Council regarding data issues, new data regulations, and new policies affecting VLDS and or the data being contributed to the exposure data base.

- f. Communicate with their respective agency heads regarding activities and decisions of the Communications Sub-Committee.
- g. Support and advocate data management and governance practices to agency staff

## **6.4 Decision-Making Process**

### *6.4.1 Voting*

The Communications Subcommittee is the final authority on issues to be escalated to the Data Governance Council. The voting rights and process will adhere to the following:

- a. Communications Subcommittee members are authorized to vote on behalf of their respective member organizations
- b. Communications Subcommittee members are all given equal voting power in the form of a single vote on all issues
- c. Communications Subcommittee members are authorized to delegate voting rights to an alternate
- d. Voting alternates shall be designated by the absent voting member or the absent member's agency head or designee in advance of or during a meeting
- e. Communications Subcommittee decisions shall be made by consensus, which is defined as "Can you live with it?" In other words, a decision is approved if all representatives can "live with" the decision

### *6.4.2 Appeals*

Data Governance Council decisions, or the inability of the Data Governance Council to reach a decision on an issue, may be appealed by a voting member, agency head, or designee by:

- a. Alerting the Communications Subcommittee at a scheduled or emergency meeting of the intention to appeal, in an effort to resolve the issue within the Communications Subcommittee or
- b. Presenting the issue to the Data Governance Council by the Communications Subcommittee Chairperson.

## **6.5 Meetings**

In order to maintain a continued Data Governance effort and to address VLDS issues in a timely manner, the Communications Subcommittee shall meet no less than quarterly to consider and resolve issues of the VLDS brought to their attention. The meeting process will adhere to the following:

- a. Communications Subcommittee members or alternates are expected to attend all Communications Sub-Committee meetings.

- b. Meetings can be attended by voting members, alternates, and other invitees. Official business can be conducted if a member or alternate is present from each member organization.
- c. If more than one-half of the voters present are alternates, then a quorum does not exist and no official business can be conducted.
- d. Representatives should be notified of meetings by the chairperson at least one calendar week in advance of the meeting; however, attendance at a meeting by a representative shall waive any defect in the notice provided. If not feasible to provide one week's notice, then the Communications Subcommittee may meet on an emergency basis.
- e. Attendance at meetings may be in person or by telephonic or other electronic means.

## 7 Legislative Sub-Committee

### 7.1 Authority

A representative of any partnering agency may be the chairperson on this committee. This committee is comprised of a member from each participating agency who is most keenly aware of the actions or pending actions within and between the Virginia General Assembly and their respective agency. The members of this committee explore the ways and means for obtaining funding through the General Assembly to finance the maintenance and expansion of VLDS. This committee formulates the VLDS Sustainability Plan and works with fiscal agents within each Partnering agency to ensure that funds are available to meet the needs of VLDS. This committee is also aware of federal regulations or pending regulations to their respective agencies that would in turn have an effect on VLDS; members from this Subcommittee work with the Bill Sponsors and Patrons to contribute language for the bills that would affect their agency and VLDS. The Legislative Subcommittee shares information and makes recommendations and proposals the VLDS Data Governance Council for all matters related to the codification and funding of VLDS.

#### Definition: Legislative

**Legislative Subcommittee** provides legislative strategic advice on public policy and the legislative process for matters that affect VLDS. The members of the Legislative Subcommittee serve as the liaison between the Commonwealth of Virginia's General Assembly or the US federal legislative bodies and the VLDS Data Governance Council membership. The VLDS Legislative Subcommittee helps VLDS stakeholders understand bills, actions and the legislative process that may have touch points with VLDS. This committee develops effective strategies to deal with legislative, regulatory and political issues in matters related to the use of data provided by the VLDS partnering agencies.



The Legislative Subcommittee shall:

- a. Provide insight, vision, and leadership to the Data Governance Council on matters related to legislation affecting VLDS.
- b. Serve as the authority for escalation of issues and recommendations to the Data Governance Council as it relates to VLDS legislative issues.
- c. Oversees the implementation of decisions made by the Data Governance Council as it relates to VLDS legislative issues.

## **7.2 Membership**

The Legislative Subcommittee members shall consist of the representatives of all Partnering Agencies who are contributing primary data for merging, and the fiscal agent for the VLDS. Agencies that have started or intend to start the onboarding process for contributing primary data may attend and participate in all meetings, but do not have voting privileges until they are on boarded to VLDS.

- a. The initial agency members of the Legislative Subcommittee shall be appointed at the organizational meeting of the member organizations; thereafter, members shall be appointed by the agency head or designee of their respective organizations for an annual term
- b. The Legislative Subcommittee shall appoint a chairperson to coordinate meetings and keep minutes
- c. Member vacancies shall be filled by the agency head or designee of a Partnering Agency's organization; until representatives are appointed, the agency heads or designees shall have authority to vote on behalf of their respective member organizations at the Subcommittee level.

## **7.3 Member Expectations**

All members of the Legislative Subcommittee are expected to:

- a. Ensure that appropriate resources are aligned to support the work of the VLDS.
  - b. Ensure that a true statewide focus is maintained.
  - c. Ensure their attendance or that of designated representative.
  - d. Advocate for the VLDS to key stakeholders, including IT staff at each Partnering Agency or an agency in the process of onboarding.
  - e. Report to the Data Governance Council regarding legislative issues, data regulations, and legislative policies affecting VLDS and or the data being contributed to the exposure data base.
- 

- f. Communicate with their respective agency heads regarding activities and decisions of the Data Governance Council and the VLDS Legislative Sub-Committee.
- g. Support and advocate for VLDS legislative strategies and governance practices to agency staff.

## **7.4 Decision-Making Process**

### *7.4.1 Voting*

The Legislative Subcommittee is the final authority on issues to be escalated to the Data Governance Council. The voting rights and process will adhere to the following:

- a. Legislative Subcommittee members are authorized to vote on behalf of their respective member organizations.
- b. Legislative Subcommittee members are all given equal voting power in the form of a single vote on all issues.
- c. Legislative Subcommittee members are authorized to delegate voting rights to an alternate.
- d. Voting alternates shall be designated by the absent voting member or the absent member's agency head or designee in advance of or during a meeting.
- e. Legislative Subcommittee decisions shall be made by consensus, which is defined as "Can you live with it?" In other words, a decision is approved if all representatives can "live with" the decision

### *7.4.2 Appeals*

Data Governance Council decisions, or the inability of the Data Governance Council to reach a decision on an issue, may be appealed by a voting member, agency head, or designee by:

- a. Alerting the Legislative Subcommittee at a scheduled or emergency meeting of the intention to appeal, in an effort to resolve the issue within the Legislative Subcommittee or
- b. Presenting the issue to the Data Governance Council by the Legislative Subcommittee Chairperson.

## **7.5 Meetings**

In order to maintain a continued Data Governance effort and to address VLDS issues in a timely manner, the Legislative Subcommittee shall meet no less than quarterly to consider and resolve issues of the VLDS brought to their attention. The meeting process will adhere to the following:

- a. Legislative Subcommittee members or alternates are expected to attend all Legislative Sub-Committee meetings

- b. Meetings can be attended by voting members, alternates, and other invitees. Official business can be conducted if a member or alternate is present from each member organization.
- c. If more than one-half of the voters present are alternates, then a quorum does not exist and no official business can be conducted

## **8 Becoming a VLDS Partnering Agency**

The VLDS was designed to be an extensible system that can partner with agencies that would like to share their data with the VLDS. This section outlines information, benefits, expectations, and requirements necessary to become a Partnering Agency that contributes to and/or consumes VLDS data.

### **8.1 Benefits of VLDS Membership**

As a longitudinal data system, the VLDS provides unique opportunities for agencies to share and merge data. As a Partnering Agency, agencies will be able to:

- a. Provide input on the VLDS mission.
- b. Join their data with the data from other VLDS Partnering Agencies.
- c. Generate reports in various data standards.
- d. Generate reports to meet state and federal reporting requirements.
- e. Utilize VLDS to identify potentially low quality data within their system.
- f. Utilize VLDS to inform policies and other key initiatives.

### **8.2 Onboarding**

Agencies or organizations that would like to become a Partnering Agency must go through the VLDS Partnering Agency Onboarding Process, which includes:

- a. Becoming familiar with the VLDS policies and procedures.
- b. Signing the VLDS Data Sharing Memorandum of Agreement.
- c. Signing and agreeing to the policies and procedures of the VLDS Book of Data Governance.
- d. Designating representatives for the VLDS Data Governance Council and each of the Sub-Committees.
- e. Complying with the Communications requirements outlined in the VLDS Communications specification documents, including the Exposure Database Guidelines and Lexicon Specifications.
- f. Providing (directly or through hosting agreement) an Exposure Database with appropriately limited credentials for accessing the data to be contained therein.
- g. Exposing the data to be shared via the Exposure Database.
- h.

The Partnering Agency Onboarding Process must undergo review and recommendation by the Data Governance Council; a Data Governance Council recommendation to add a Partnering Agency must be approved by the Data Governance Council.

### **8.3 Data Sharing Policy**

The VLDS program will provide onboarding Partnering Agencies a set of communications specification documents that articulates and provides an overview of the VLDS system and an explanation of the matching process. The VLDS Data Sharing Policies include, but are not limited to, the following:

- a. When sharing data with VLDS, Partnering Agencies shall be mindful of the limits of the data and the standards used to collect the data. Even though data audits will not be conducted by the VLDS system, providers shall remain mindful that they are subject to regularly conducted audits by the Commonwealth.
- b. The VLDS has adopted language from the Data Quality Campaign's (DQC) 10<sup>th</sup> Essential Element pertaining to "a state data audit system assessing data quality, validity, and reliability"; specifically, the system shall:
  - a. Adopt and clearly communicate a set of data definitions and standards to all entities submitting data to the VLDS
  - b. Require Partnering Agencies to conduct regular data quality check to ensure their data's integrity
  - c. Provide training and professional development on data definitions and standards to participating units in the Commonwealth

### **8.4 Communications Requirements**

In order for Partnering Agency data to work with the VLDS, Partnering Agencies will be required to meet the Communications requirements outlined in the communications specification documents, including the Exposure Database Guidelines and Lexicon Specifications. The VLDS Data Governance Council, the Technical Subcommittee and the third party O&M provider's team will provide assistance and support to the onboarding Partnering Agency's implementation team to implement these communications requirements. High-level communications requirements include, but are not limited to the following:

- a. A Partnering Agency must create or provide a database to hold the data to be used by the VLDS. This exposure database should reside behind the agency's existing security measure along with the VLDS Data Adapter.
- b. The exposure database must contain the Partnering Agency's data elements in tables that it wishes to expose to the VLDS including those data elements required for joining with other VLDS data.
- c. A Partnering Agency will need to create tables inside its exposure database to hold Lexicon Metadata values.
- d. Applicant's data must adhere to a level of data quality as defined by the Data Governance Council.

#### Definition: Exposure Database

An agency database that contains a Partnering Agency's data elements in tables that it wishes to expose to researchers, including those data elements required for joining with other VLDS data.

#### Definition: Data Adapter

An application that resides behind a Partnering Agency's firewall with their exposure database. It provides secure access to VLDS stats, monitoring, and system logs.

### 8.5 VLDS Network Diagrams

The following are diagrams of the VLDS Network Configuration. There are two options for VLDS Agency Partners, depending on whether or not the agency is inside or outside of the COV (Commonwealth of Virginia) network.

{Excluded for Public Dissemination}

## 9 Burning Questions

The VLDS project has agreed up on a list of priority policy questions and topic areas to guide the research and analysis conducted with data from the VLDS. The following list provides agency leaders with the priorities as recommended by the Data Governance Committee.

### 9.1 Burning Issues

VLDS is designed to address questions that are pivotal to Virginia citizens and policymakers. The burning issues listed below identify critical research needs across participating agencies.

Impact of health, social service, education, and workforce pipeline on Virginia's economy;  
Return on investment of health, social service, education, and workforce opportunities and programs;

Alignment of health, social service, education and workforce programs to known and projected employers' needs;

Pathways to the workforce, patterns of employment, and factors or conditions that predict success; and

Factors or conditions that have the greatest impact on educational achievement and later productivity

In addition to the burning issues, each agency provides a research agenda specific to their most salient research needs. Agency research agendas are updated frequently and ensure studies aligns with time-sensitive, high priority agency research needs.

## **9.2 Research Process**

Conducting research with VLDS requires several steps.

### **1. Receive preliminary approval.**

Researchers interested in VLDS should work with a sponsoring agency to develop and refine research questions consistent with the burning issues and the respective agency's research agenda. Agencies determine on a case-by-case basis whether they will support a research project. These decisions are typically determined by:

- Alignment with the VLDS burning issues and agency research agenda;
- Sufficient resources within the agency (e.g., personnel time) to support a research project;
- Whether the research question is being investigated through other ongoing studies;
- The researchers' level of experience with administrative data and longitudinal data systems; and
- Whether VLDS contains data of sufficient quality and completeness to address the proposed research question.

### **2. Set up your research proposal and gain formal approval.**

The VLDS portal is user friendly and provides easy steps to receiving your data. Once you receive preliminary approval of your project, you will be provided access to the VLDS researchers' portal and can submit a formal research request. You will complete a description of your project, add researchers (each one will need to sign and nondisclosure agreement), and select data fields you'd like to receive. If data are requested across multiple agencies, each agency will need to approve and sign the data agreement. Once this approval is complete, you will be provided access to develop and execute your query.

### **3. Develop your research query.**

This is an important process that requires frequent collaboration with the agency(ies) to ensure you understand the data fields you'd like and the amount of data you need.

### **4. Conduct your research.**

Once you receive the data, set up times to check in with the agency to ask questions or check on findings you discover. Often, agency staff can explain why data may be missing or why data distributions may be different than expected.

5. Communicate your findings.

Talk to your sponsoring agency about a plan to communicate your findings. Agency staffs are required to review data tables prior to publication but may also identify opportunities to share research findings through the VLDS blog, Insights conference, or briefings with decision makers or legislators.



## 10 Appendix

### 10.1 Definitions of Key Terms

Term	Definition	Last Modified
<b>Data Governance</b>	Data governance is both an organizational process and a structure; it establishes responsibility for data, organizing program area staff to collaboratively and continuously improve data quality through the systematic creation and enforcement of policies, roles, responsibilities, and procedures <sup>2</sup>	2012.02.27
<b>Technical Governance</b>	Technical governance is a process and structure whereby technology related decisions reflect the objectives and needs of the organization. System governance ensures the decision-making processes and technology related work of the VLDS are properly controlled	2012.09.01
<b>Data Governance Council</b>	The individuals and processes with responsibility for establishing and enforcing policies and guidance involving VLDS data	2012.02.27
<b>Data Adapter</b>	An application that resides behind a Partnering Agency's firewall with their exposure database. It provides secure access to VLDS stats, monitoring, and system logs	2012.09.01
<b>Partnering Agency</b>	A Partnering Agency is an agency or organization that is contributing primary data to the VLDS for the purposes of merging records with other agencies' data	2012.09.01
<b>Federated Data System</b>	A federated data system is a system that interacts with multiple data sources on the back-end and presents itself in a single data set on the front-end, without creating a traditional "data warehouse" to store records. Users querying a federated data system cannot tell that they are in fact querying many different data sources at the same time	2012.09.01
<b>Exposure Database</b>	An agency database that contains a Partnering Agency's data elements in tables that it wishes to expose to researchers, including those data elements required for joining with other VLDS data	2012.09.01

### 10.2 Revision History

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<sup>2</sup> National Forum on Education Statistics (2011). *Traveling Through Time: The Forum Guide to Longitudinal Data Systems. Book Three of Four: Effectively Managing LDS Data* (NFES 2011–805). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

Version	Reason for Changes	Date Modified	Modified by
0.1	First draft	2012.02.27	Henry Paik
0.2	Second draft	2012.03.06	Henry Paik
0.3	Third draft	2012.05.23	Henry Paik
0.4	Precursor to V1.0	2012.06.14	Henry Paik
0.5	Edits to V1.0	2012.06.25	Matt Bryant
1.0	Finalization of V1.0	2012.09.01	Henry Paik
1.1	Membership Language	2013.09.19	Will Goldschmidt
1.2	Updated entire Document to reflect current VLDS organizational structure, policy and procedures; specifically naming and describing the 4 sub-committees (Legislative, Communications, Research and Technical). Changed the nomenclature to Data Governance Council instead of Data Governance Committee.	2015.08.20	Elsie Dawson
1.3	Incorporated feedback from DG Council members. Minor typos and changed some language to enhance clarification.	2015.09.17	Elsie Dawson
1.4	Edited out the last paragraph in Section 2 regarding public portal for external users. Removed "Draft" watermark.	2015.10.15	Elsie Dawson
1.5	Changed Burning Questions table to Revised Language. Changed Font to Ariel 12,13, & 15	2015.11.24	Elsie Dawson
2.0	Language added to show addition of two new Partnering Agencies (DARS and DHP). Diagrams align to VLDS 2.0. Document uses VLDS approved template. James Rothrock signature required for DARS & Craig Herndon for VCCS. Added alternate text to images in document for the visually impaired.	2015.05.19	Elsie Dawson
2.1	Language added 1) to show additional agency, Office of Children's Services, 2) reflect onboarding fees 3) to state that any partnering agency may be chairperson to Subcommittee	2017.03.31	Elsie Dawson