MLDS Center
Maryland Longitudinal Data System

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MEMORANDUM

TO: MLDS Governing Board

FROM: Ross Goldstein, Executive Director

DATE: June 2, 2023

SUBJECT: Proposed Changes to Research Agenda and Supporting Procedures

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Education Article § 24-704(g)(5), Annotated Code of Maryland, requires the Governing Board to, "establish the policy and research agenda of the Center." In 2021, as part of the Governing Board's Annual Report, the Board noted that the current Research Agenda was over ten years old and a comprehensive review was needed to consider: the purpose the Research Agenda should serve; whether the current questions/topics are sufficient to address the Center's added scope of work as a result of legislative changes and new data sources; and how can the agenda address questions of social equity?

As a result of this recommendation, MLDS Center staff initiated a year-long process to review the Research Agenda and consider changes and updates to make it a more up-to-date and relevant document for the management of research and reporting using MLDS data. This new proposed Research Agenda will require Governing Board approval.

This memorandum provides an overview of the proposed new Research Agenda and two key supporting documents: *Project Approval and Management Procedures* and *Process for Establishing Annual Research and Reporting Priorities*.

Research Agenda
Overview of the Current Research Agenda
The current Research Agenda contains an introduction that primarily focuses on the requirement for research to include cross-sector data and cross-agency data, with a set of exceptions for when cross-agency data are not required. The current Research Agenda also requires research to include examinations of how results vary by different student subgroups and backgrounds. Finally, the current research agenda provides 21 questions/topics divided into educational stages : (a) K-12 Readiness; (b) Postsecondary Readiness and Access; (c) Postsecondary Completion; and (d) Workforce Outcomes. The Research Agenda has primarily been used as a reference point to ensure that research under consideration addresses the subject matter or theme of a question - but not requiring research to be directly responsive to one of the questions. This practice evolved for several reasons: the questions are overly broad; the questions may not be directly responsive to the questions facing policymakers; the questions did not contemplate new sources of data; and the questions did not contemplate the scope and breadth of new and innovative research and research methods that would be presented to the Center by internal and external researchers. As such, the determination was made to create a new research agenda that could be more responsive to changing data, changing priorities, and unique research opportunities.

New Research Agenda Development
The new Research Agenda is organized into three parts and is intended to work closely with supporting documents:

1. <u>Introduction</u> - This section provides a brief overview of the MLDS Center and its purpose. The introduction also lists the specific research related requirements established in State law and provides the statutory authority for the Research Agenda and the purpose that the Research Agenda fulfills.
2. <u>Research Agenda Categories and Themes</u> - This section establishes and defines four broad categories of inquiry that guide the use of the MLDS for research and reporting purposes. Those categories include: (a) Pathways & Pipelines; (b) Education, Service, & Workforce Outcomes; (c) Program & Policy Evaluations; and (d) Methodological Inquiries. In addition to the categories, this section also provides "cross-cutting themes" that must be addressed in all research and reporting. The themes include: (a) Supports and Barriers, (b) Social Determinants, and (c) Equity and Inclusion. Examples of each category and the types of questions and cross-cutting themes contemplated are provided.
3. <u>Governance</u> - This section covers the applicability of the research agenda, describes how research topics will be reviewed, provides a revision schedule, and explains the requirement for multi-sector research.
4. <u>Supporting Documents</u> - The research agenda clarifies and lists the supporting documents that are intended to help inform and work with the Research Agenda, including: the *Project Approval and Management Procedures* and the *Research and Reporting Priorities and Procedures* document.

To develop the new Research Agenda, staff in partnership with the Research and Policy Advisory Board (RPB) started by reviewing the research agendas of other states. From those research agendas and discussions during RPB meetings, a list of attributes were developed that were determined to be necessary for a new research agenda that will meet the needs of the MLDS Center. Below is a list of each attribute, an explanation of the attribute, and a description of how the attribute was incorporated into the new Research Agenda.

Attribute	Explanation	Implementation
Prioritizes Agency Work	Does the agenda establish priorities? Is it flexible as priorities need to change?	The research agenda establishes broad priorities in describing the types of research and the cross-cutting themes that must be included in all research. The inclusion of the specific legislative mandated requirements in the introduction further establishes priorities.
Invites Innovation	Does the research agenda allow new and different approaches to research?	The Governance section specifically states that the agenda is to be read expansively to allow innovative research.
Defines Purpose of Agency Work	Does the agenda explicitly state the type of research (Study, Descriptive Statistics, Explore, Evaluate, Quasi Experimental, RCT, etc.)	The research categories provide an explicit list of the types of research that constitute acceptable use of the MLDS.
Cross-Sector	Clarifies work is cross-sector	The Governance section specifically lists the sectors and states that all research and reporting must include at least two sectors. This requirement is reiterated in the *Procedures for Project Approval and Management*.

Identifies Stakeholders	Does the agenda clarify the audience who will consume the information produced? Does it clarify how we will engage stakeholders to determine their needs?	This attribute is addressed by the *Research and Reporting Priorities and Procedures*, which describes the process for developing specific research and reporting projects for each fiscal year.
Applicability	Does the research agenda clarify who is held to the agenda? Does it state the specific research, researchers, and organizations the agenda is meant to guide? Does the research agenda clarify if all research must fall within the agenda parameters?	The Governance section details the applicability of the Research Agenda, which includes all research and reporting by the MLDS Research Branch, MLDS Reporting Services, and individuals outside the MLDS Center who seek to conduct research or make inquiries or research requests. This requirement is reiterated in the *Procedures for Project Approval and Management*.
Solution Oriented	Does the agenda focus on solving problems? Does it lead to actionable, policy-oriented information? Does it specifically identify opportunities to be responsive to legislation? Does it clarify which state agencies may benefit?	By providing broad categories instead of specific questions, the Research Agenda can be responsive to the needs of policymakers and new legislative requirements, while ensuring that the cross-cutting themes are always under consideration.
Contextual Data	Does the agenda allow for the inclusion of contextual information on the state and its regions? Does it consider data beyond purely unit record administrative data?	While the agenda does not directly address contextual indicators, one of the examples of methodological research discusses contextual indicators as a potential topic for methodological research.
Data Use	Does the agenda guide data use? Does it provide boundaries around data use? Does it limit certain types of data for use in research and output?	At a basic level, the categories and themes guide data usage. At a more in-depth level, this requirement is managed in the *Procedures for Project Approval and Management* which requires all internal and external research and reports to be vetted internally and externally, both for data use and methodological approach. The Data Gap Analysis and Data Inventory also provide all internal and external researchers with information on data and data limitations.
Data Collection	Does the agenda clarify the data needed AND Does the agenda drive data collection?	The data gap analysis, one of the supporting documents, addresses issues of what data are needed and helps determine the priority for adding new data.
Revision Schedule	Does the agenda have a review schedule that helps it remain relevant?	A revision schedule is included in the Governance section (see item #4) and requires an annual review and update.

Procedures for Project Approval and Management

These proposed procedures take the place of the *Policies and Procedures for External Research Projects*. The key differences are as follows:

1. Applicability - these new procedures apply to ALL projects that seek to use MLDS data. In comparison, the old procedures only applied to research projects proposed by an external researcher or a project that was being funded through a grant. This change was made in recognition of the fact that the application and review process ensures a consistent approach to projects that is transparent and accountable to stakeholders. Currently, projects that are not subject to the procedures are generally still reviewed by the Center's internal review group and most are presented to RPB. Accordingly, this change will provide more structure and formality to the project review process, but will not result in an unreasonable burden for the Center or RPB.

2. Limitation - the old procedures only permitted an application to be submitted by staff or faculty from a Maryland qualifying institution (i.e. an institution that provides unit record data to the Maryland Higher Education Commission). A researcher who is not from a Maryland qualifying institution could only submit an application if the researcher partnered with staff or faculty from a qualifying institution. The new procedures remove this limitation provision. However, the new procedures do require additional consideration be given to a researcher who is not from a Maryland college or university or who is from a private research company, including a determination that the researchers are familiar with Maryland and are conducting a project that meets a specific Maryland research need and consideration of any letters of reference or endorsement from a Maryland researcher or MLDS stakeholder. Accordingly, not being from a Maryland qualifying institution will still be a factor to be considered, but will not disqualify a researcher from applying or being approved or require the researcher to secure a sponsor from a qualifying institution.

3. Data Requests - because of the broad applicability of these procedures, a new section (see 1.4) was added to the new procedures to clarify that the procedures do not apply to data requests.

4. Application - The application process remains substantially the same as the old procedures. However, the new procedures remove the provisions that detail the exact application requirements. Instead, a link to the application is provided in the procedures. This change was made to allow changes to the application as needed without amending the procedures.

5. Review Process - the review process in the old procedures had an Expedited Review Process and a Full Review Process and a set of criteria for determining which review type should be used based on research topic categories and who is making the request. In comparison, the new version establishes a general process whereby the Executive Director makes the determination to approve or reject a project after review and advice from the Center's internal review group and the RPB. The exception to this general rule is as follows:
    a. A unique or novel topic or research method;
    b. A topic that is sensitive or plans to analyze and report data in a way that may be contrary to the manner in which stakeholders generally report and analyze such data; or
    c. Concern or objection from RPB.

    The changes were made to make the review process more straightforward. Also, the changes provide a little more flexibility, but ultimately may result in more oversight by the Governing Board since any project (regardless of how it is classified) that RPB raises concerns about will go

     to the Governing Board. The procedures also provide opportunities for applicants to resubmit their proposal based on feedback during the review process.

6. Project Review Timeline - the project review timeline is essentially the same as the old procedures. The process begins with the Center's internal review group. The new procedures state that a project application submitted at least two weeks prior to the internal review group meeting will be considered at the next meeting. The Center may require a delay in the event that additional work or clarifications are required before the application is reviewed. Finally, the procedures also encourage state agencies to notify the Executive Director before issuing a request for proposals from third parties to conduct a research study that requires the use of MLDS data.

7. Review Considerations - the review considerations in the new procedures are essentially the same as the old version. The primary review considerations include the subject matter of the proposal; the proposed Center product; the intended data use; the qualifications of the project team; and additional considerations (which include the fact that a researcher is not from a Maryland qualifying institution and the funding source for the project).

8. Approved Projects - the approved projects requirements are now contained in one section.

Process for Establishing Annual Research and Reporting Priorities

The *Process for Establishing Annual Research and Reporting Priorities* is a new process that documents the procedures the Center has been following for the past few years to establish its annual priorities. The process lays out a development schedule that includes internal review, RPB review, and culminates with a final review and approval by the Governing Board at the June Governing Board meeting. The process also provides steps for evaluating priorities which include: considering the interests of state policymakers; a review of the Data Gap Analysis; an analysis of the relationship of a topic to the Research Agenda; and a review of staff resources to accomplish the priorities. In addition, considerations for determining the ongoing relevance of topics and whether they should be removed are also provided. The process also addresses how the priority topics are operationalized into a research plan or reporting project. Finally, the following appendices are included:

1. A list of all required, recurring annual output;
2. A list of potential research and reporting topics;
3. A list of the Approved Annual Research and Reporting Priorities from prior years, beginning with 2019-2020;
4. The current year priorities - 2023-2024 (when completed).

July 1, 2023   Research Agenda and Research Governance

Research Agenda
Maryland Longitudinal Data System Center

The Maryland Longitudinal Data System (MLDS) Center receives data from multiple sources to establish a data system that contains detailed information about Maryland students, their educational experiences and outcomes, their interaction with child welfare and juvenile services, the degrees and credentials they obtain, and their workforce experiences and outcomes. State law[1] directs the Center to use the MLDS to conduct research to improve the State's education system and guide decision making by state and local governments, educational agencies, institutions, teachers, and other education professionals.

Specifically, the Center is directed to[2]:
1. Conduct research relating to:
    a. The impact of State and federal education programs;
    b. The performance of educator preparation programs;
    c. Best practices regarding classroom instruction, education programs and curriculum, and segment alignment; and
    d. The impact child welfare programs have on the educational and economic outcomes of students;
2. Analyze social determinants from the following State agencies and appropriate local agencies that impact the education performance of students and indicate the need for wraparound services of students:
    a. The Maryland Department of Health;
    b. The Department of Juvenile Services; and
    c. The Department of Human Services;
3. To the extent practicable, conduct longitudinal studies of the items under this section to evaluate the impact of the Blueprint for Maryland's Future on the State.

As required by state law, the MLDS Governing Board is required to establish a *Research Agenda*.[3] The *Research Agenda:*
1. Delineates the Governing Board's priorities for research topics and areas of analysis;
2. Establishes the parameters for acceptable use of the system;
3. Ensures that the work of the Center is in compliance with the above statutory requirements;
4. Provides guidance to the Center on annual output priorities, and
5. Informs the decision on approval of research and reporting project proposals.

State Law

Research Agenda

Annual Research and Reporting Priorities

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[1] See Education Article § 24-703(f)(4), Annotated Code of Maryland
[2] See Education Article § 24-703(f)(5), Annotated Code of Maryland
[3] *See* Education Article § 24-704(g)(5), Annotated Code of Maryland

Section 1. Research Agenda

Categories

The research agenda at the MLDS Center is guided by four broad categories of inquiry:

- **Pathways & Pipelines:** Research and reports on the entry, transition, and exit points students take into specific education, service and labor sectors. The focus of pathway and pipeline studies are typically descriptive to identify patterns rather than focus on causal relationships.
- **Educational, Service & Workforce Outcomes:** Research and reports on student-level and/or institutional-level characteristics and the importance of these characteristics in predicting outcomes.
- **Program & Policy Evaluations:** Research and reports intended to determine whether a given program or policy has been successful.
- **Methodological Inquiries:** Research and reports intended to improve the selection and application of research and statistical methods when using MLDS data.
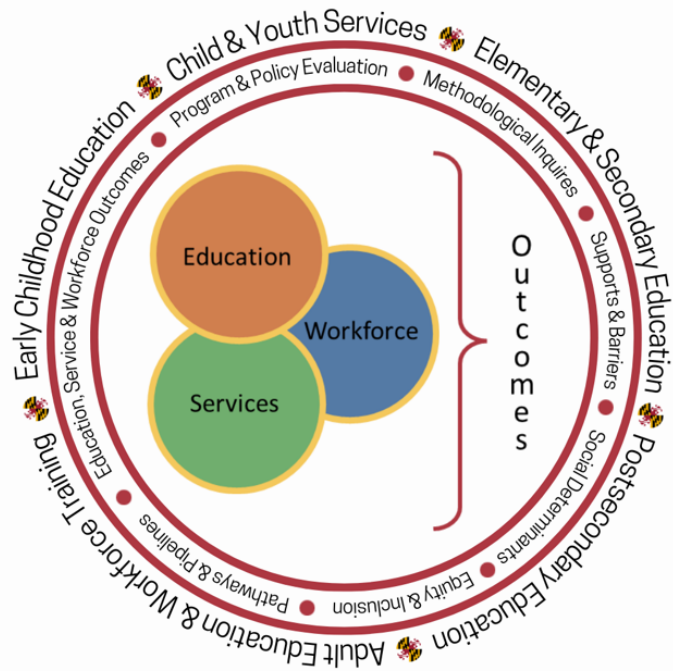
All proposed research, reports and other output must fall within one or more of these broad categories. See chart below for examples of research and reporting questions for each category.
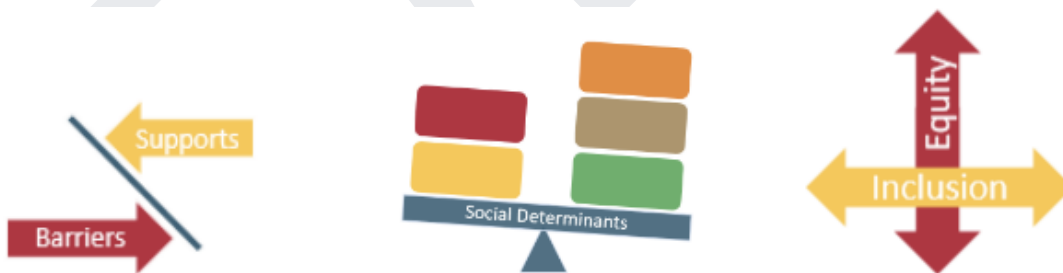
Themes

Further, all research, reports, and other output shall incorporate one or more of the cross cutting themes: Supports & Barriers, Social Determinants, and/or Equity & Inclusion. Cross cutting themes provide a framework to design studies and interpret results produced under all of the research agenda categories. Themes can be incorporated into research, reports or other outputs in a number of ways, for example as descriptive statistics, control variables, interaction terms or as a direct subject of the study.

Supports and Barriers	Social Determinants	Equity and Inclusion
Research and reporting that considers the structural and administrative factors, including policies, that impact progressions between and within education and workforce sectors.	Research and reporting that considers the environmental conditions in the places where people live, learn, and work that affect a wide range of educational or workforce outcomes.	Research and reporting that considers the access and opportunities available to individuals who have been historically under-represented throughout their education and careers.
Examples: ● Applying for financial aid for college ● College admissions applications ● Enrolling in Apprenticeship programs ● Attendance policies in high school ● Discipline policies in high school ● Diversifying the students entering the Nursing pipeline	Examples: ● ● Socioeconomic conditions ● Neighborhood violence ● Same race, ethnicity & gender of teachers and students ● School characteristics ● Community resources ● Outcomes by Racial/Ethnic and/or Gender groups ● Outcomes by economic status	Examples: ● College admission policies ● Geographic distribution of colleges and majors ● Student support structures ● Diverse teacher workforce

Research Agenda Definitions and Examples

Pathways and Pipelines: Study of the entry, transition, and exit points students take into specific education, service and labor sectors. The focus of pathway and pipeline studies are typically descriptive to identify patterns rather than focus on causal relationships.	
Pathways, by definition, are intentionally designed to direct a specific desired or positive outcome or disrupt an unwanted or negative current outcome. The focus of pathway studies is on movement through a planned sequence and whether the planned sequence results in the intended outcome or serves to disrupt an unintended outcome.	1. Do students who complete career and technical education (CTE) programs in high school enter college or the workforce in the subject area of the program? How do those results vary by region? 2. Do students who complete Teacher Academy of Maryland (TAM) education in high school enter teacher education programs in college? Do they end up teaching in Maryland public schools? How do those results vary by demographic group? 3. Do students who complete public administration degrees in college work in the government labor sector? Do the earnings for those in the government sector vary by economic or demographic group? 4. Do students who graduate from college with a healthcare degree obtain a license in the healthcare field and work in the healthcare labor sector? Does the degree and license type vary by demographic group? 5. Does dual enrollment participation in high school increase college enrollment for high school students with lower economic status? 6. Does the tuition waiver for high school graduates in out-of-home placement increase college enrollment?
Pipelines seek to backward map the contributions of planned pathways into the workforce or educational systems and to identify and quantify the contribution of unplanned pathways into the workforce or educational systems.	1. What is the academic preparation of public school teachers? What is the academic preparation of teachers who are retained for more than 5 years? Does retention vary by gender? 2. What is the academic preparation of college students? 3. How many college students in healthcare majors completed healthcare CTE education? 4. How many students enrolled in rural colleges came from rural and urban areas? 5. How many public school teachers of color were themselves taught by a teacher or color? 6. How many college graduates experienced out-of-home placement or were justice-involved? 7. How do students move between college majors and labor sectors? 8. Who completes workforce sequence training and apprenticeship programs? 9. How many college graduates in the healthcare or education labor sectors are out-of-state students? How long do they remain in the Maryland labor market?

Educational, Service, and/or Workforce Outcomes: Study of student-level and/or institutional-level characteristics and the importance of these characteristics in predicting outcomes.	
These studies place outcomes in social, economic or equity context to identify needs for policies or programming to improve outcomes for students and institutions.	1. What is the relationship between concentrated poverty and educational and workforce outcomes? 2. What are the postsecondary and workforce outcomes of students who do not drop out of high school but do not graduate on time (i.e., persisting students)? 3. What is the relationship between student mobility and long-term college and career outcomes? 4. What are the predictors of college enrollment and college degree attainment? Do these vary by different student characteristics? Including justice-involved youth or youth in out-of-home placement? 5. What are the causal effects of schoolwide socioemotional learning programs on long-term educational outcomes? 6. How effective are alternative teacher preparation programs at attracting and retaining teachers? 7. How do neighborhood characteristics influence student outcomes?
Program and Policy Evaluation: Program and policy evaluation is intended to determine whether a given program or policy has been successful. The evaluation may be used to improve program effectiveness, efficiency (distribution of costs and benefits), and/or equity and to inform policy or program changes (including reforming or discontinuing programs), program renewals and/or program expansions.	
These studies are situated within one or more framework. These include *public policy* (i.e., studying the intended outcomes or goals of a policy that leverages the tools of government), *social policy* (i.e., studying the effectiveness of social intervention programs to inform and improve social conditions), or *education program evaluation* (i.e., studying the effectiveness of educational programs or policies).	1. Do subsidies for dual enrollment increase participation for lower economic status high school students? 2. Does the Maryland College Campaign increase college enrollment in selective and highly selective colleges? 3. Does the Nursing Support Grant program increase the production of nurses in underrepresented demographic groups? 4. What are the long-term impacts of the Positive Behavioral Intervention and Supports (PBIS) multi-tiered systems of supports framework? 5. What are the long-term effects of a statewide, top-down ban on suspensions in early grades?

Methodological Inquiries and Measurement: Studies to improve the selection and application of research and statistical methods used when using MLDS data.	

This type of research, like other MLDS research and reporting, must be cross-sector. However, unlike other MLDS research, methodological research is not intended to directly answer program or policy questions but rather improve the tools used to answer those program or policy questions in the future. Methodological work is also intended to improve the selection of descriptive and comparative techniques selected for research and reporting.	1. **Student mobility.** Frequently in educational research hierarchical or multilevel modeling is used to account for the nesting of students within schools. However, in the longitudinal context, students usually belong to multiple schools over time, due to either normative mobility (such as students transferring from elementary to middle school) or non-normative mobility (such as students changing schools due to residential moves). Failing to statistically account for this nesting may lead to erroneous conclusions about effectiveness. To what degree does mobility exist in the MLDS data? What are potential statistical strategies for accounting for this mobility? What are the benefits and drawbacks of these strategies? 2. **Application of data science methods**. Machine learning is a type of artificial intelligence that is becoming increasingly popular in educational research. This approach to discerning patterns and making predictions of outcomes in large datasets may be more efficient than traditional methods. However, relatively little is known about the application of machine learning to data that are multilevel in nature, like that in the MLDS. How can machine learning algorithms be designed that account for multilevel data? Does this approach improve upon prior methods? 3. **Missingness and Time Varying Characteristic**s. What is the best option to address missingness in wage data? When a student has more than one race, ethnicity and/or gender reported, which should be selected? 4. **Classifications and Groupings.** When should race be reported independent of ethnicity? Which racial groups could be pooled to minimize suppression? Should race be analyzed independent of other characteristics or compounded using models such as the Undergraduate Transformative Effectiveness Ratings or UTERM model? Which labor sectors, college degrees and/or college majors can be pooled for research and reporting? How should researchers calculate grade point averages when scales differ by LEA? How should researchers calculate grade point averages when a student attends multiple colleges which may have varying methods for calculating GPAs? 5. **Contextual Indicators.** What are the pros and cons of various contextual indicators that can be used to interpret research and reports? What indicators can be used across multiple states? For example, the Living Wage, lagging wages by six months after degree attainment, measures of "Some College", intersecting college degree-level and college major with labor sector data and patterns of under or over-representation in college majors and labor sectors. 6. **Descriptive statistics.** What are the best practices for reporting descriptive statistics? 7. **Suppression.** What are the implications for suppressing versus perturbing data? 8. **Synthetic Data**. What is the feasibility of creating synthetic data for external use?

Section 2. Governance

1. Applicability – This Research Agenda guides all research and reporting conducted using the MLDS. This includes research and reporting conducted by the MLDS Research Branch, MLDS Reporting Services, and individuals outside the MLDS Center who seek to conduct research or make inquiries or research requests.
2. Design – This is intended to be a broad agenda that defines topics of interest and areas of focus. The Agenda is not an exhaustive list of specific research questions or topics. The Agenda is to be read expansively to allow for the inclusion of innovative research and reporting topics. The goal is not to limit research and reporting but to focus it and ensure that it is relevant to the needs of state or local policy makers.
3. Review Criteria – The MLDS Center reviews all research and reporting projects to ensure they meet the requirements established herein. The project application and review process can be found in the Project Approval and Management Procedures (still under review).
4. Revision Schedule – The MLDS Center will annually review and, if needed, update the Agenda to ensure that it reflects the needs of stakeholders and includes any new data sectors.
5. Limitation – Use of the MLDS requires all analyses to use data from two or more of the following sectors. This requirement originated at the start of MLDS Center governance. The purpose was to ensure that research and reporting with MLDS data went above and beyond the analyses that any one partner agency could complete with its own data linkages. There are two ways that this is operationalized: (a) linking files across agencies; and (b) linking files that are not linked within an agency (e.g., adult education and wage data both come from Labor but represent different sectors).

   - **Early Childhood Education Sector;**
       - ➢ PreK Academic Engagement
   - **K-12 Education Sector;**
       - ➢ Public School Student Education Records (Attendance, Assessments, Grades, Completions, Discipline, etc.)
       - ➢ Public School Characteristics
   - **Adult Education Sector;**
       - ➢ GED/NEDP Exam Results
       - ➢ Apprenticeship
       - ➢ Adult Education
       - ➢ Correctional Education
   - **Justice Involved Youth Sector;**
       - ➢ Juvenile Justice Records
       - ➢ Juvenile Education Records
   - **Child Welfare Sector;**
       - ➢ Out-of-Home Placements
   - **Postsecondary Education Sector;**

➢ College & University Enrollments, Courses, Credits, Grades, Degrees & Financial Aid
➢ College & University Student Workforce Training
- **Other Completions and Credentials Sector; and/or**
  ➢ Industry Certifications
  ➢ Licenses
- **Workforce Sector.**
  ➢ Public School Teacher Characteristics and Credentials
  ➢ Public School Staff Characteristics and Credentials
  ➢ Workforce Earnings
  ➢ Workforce Labor Sectors

6. This Agenda is intended to work in conjunction with the following documents:
   a. Regulations regarding Longitudinal Data Requests (see COMAR 14.36.04.01 et seq.), which take precedence over the Agenda;
   b. Project Approval and Management Procedures;
   c. Research and Reporting Priorities Policy and Procedures;
   d. Data inventory, gap analysis, and known data limitations;
   e. Publically available and supplemental, contextual data;
   f. Limitations on the Use of Data and Limitations of the Data; and
   g. List of research topics from MLDS stakeholders.

Better Data • Informed Choices • Improved Results

| July 1, 2023 | Project Approval and Management Procedures |

Part 1. Introduction

1.1 Purpose

The purpose of the *Project Approval and Management Procedures* is to ensure that:
1. Projects that seek to use the MLDS provide information and analyses that conform to the requirements of Maryland law[1] and the Research Agenda[2] established by the MLDS Governing Board; and
2. Projects are subject to a fair and consistent process of review that includes stakeholder input and feedback to ensure projects:
   a. Squarely address the needs of Maryland policymakers and practitioners;
   b. Necessitate the use of MLDS cross-sector data; and
   c. Are being proposed by qualified individuals.

1.2 Applicability

These procedures are required for all projects that seek to use MLDS data, including projects proposed by staff of the MLDS Center, members of the MLDS Center Research Branch, and researchers or analysts who are not affiliated with the MLDS Center.

1.3 Definitions

1. "Cross-sector" means two or more sectors as established in the MLDS Research Agenda.
2. "Confidential Information" means:
   a. Any information about the data system, including the data dictionary and any documentation with information about database design or schematics that are proprietary or if disclosed could compromise system security; and
   b. Any data that contains personally identifiable information, de-identified individual records, or aggregate information that may be identifiable based on the size or uniqueness of the population or could foreseeably be combined with other publicly available information to reveal identifiable information.
3. "Data System" means all hardware and software that constitutes the MLDS, including virtual machines and other components.
4. "De-identified individual records" means individual student or worker records that have been stripped of personally identifiable information. This includes all records in the MLDS operational data store and all individual records in analytic data files created from the operational data store.
5. "Executive Director" means the Executive Director of the MLDS Center, or the Executive Director's designee.

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[1] Education Article § 24-703(f)(5)-(8) enumerates areas of research for the MLDS Center to conduct. See Appendix A.

[2] Education Article § 24-704(g)(5) requires the MLDS Governing Board to establish a Research Agenda to guide the work of the MLDS Center. The Research Agenda can be found here.

6. "Personally identifiable information" includes an individual's name, Social Security number, driver's license number, state identification number, or other individual identification number such as a passport number, an Individual Taxpayer ID, or a financial or other account number.
7. "Principal Investigator'' means the individual who will serve as the project lead on an MLDS project.
8. "Project Team" means the principal investigator and other researchers who will access and use the data system (including view only access).
9. "Research Branch" means the MLDS Center Research Branch established pursuant to the Memorandum of Understanding between MLDS Center and the University of Maryland, Baltimore.
10. "Research and Policy Advisory Board (RPB)" means the Executive Director's advisory Board established to ensure ongoing input and participation from key stakeholders in the MLDS Center's research and policy agenda, related output and general operations. The RPB Charter and membership is available here.
11. "Unit-record data" refers to any information collected and maintained in the MLDS on individual students or workers.

1.4 Exception - Data Requests

1. These procedures do not apply to a data request fulfilled by Center staff as required under COMAR 14.36.04.01 et seq.
2. A data request is any request from the public for a basic aggregate data table (i.e. a clearly defined cohort and a defined outcome).
3. A data request will be deemed a project if:
    a. It requires advanced statistical analysis;
    b. It requires development of complex constructed variables; or
    c. At the request of the person making the data request, the project is being done by a non-MLDS reporting staff member.
4. Determination - The Executive Director, in consultation with legal counsel, will make the final determination of whether a data request is a project subject to these procedures or a data request.

Part 2. Application

The Principal Investigator (PI) for the project must submit the online application and upload:
1. The completed *Detailed Project Information Form*; and
2. Attaching a curriculum vitae or resume for each member of the project team.

Part 3. Review and Approval Process

3.1 Project Review Process

1. Process Generally
    a. The Executive Director shall make a determination to accept or reject a project after review and advice from:
        i. The Research Director or the Reporting Director;
        ii. The MLDS Center's internal review group; and
        iii. The Research and Policy Advisory Board (RPB).
    b. The review by the Center's internal review group and the RPB shall include:
        i. A presentation by the principal investigator; and
        ii. A review of the application and credentials of the applicants.
    c. At any step in the review process, the project team may elect to amend their proposal and resubmit the proposal for an additional round of review at that step in the process.
2. Exceptions
    a. The Executive Director shall refer a project to the Governing Board for approval if the project:
        i. Involves research or reporting on a unique or novel topic or that uses an approach or method that is dissimilar to other research or output using Center data;
        ii. Addresses a sensitive topic or plans to analyze and report on data in a way that may be contrary to the manner in which stakeholders generally report and analyze such data; or
        iii. Receives a level of concern or objection from RPB members, that the Executive Director determines Governing Board review and approval is required.
    b. When necessary due to time constraints, the Executive Director may approve a project without RPB review if the project is necessary for:
        i. A legislatively mandated report;
        ii. A request by the General Assembly or Governor; or
        iii. A mandatory reporting requirement by a state or local agency to support a state or federal reporting requirement.
    c. The Executive Director shall provide notice to:
        i. <u>The RPB of any project approved pursuant paragraph b of this subsection; and</u>
        ii. The Governing Board of all approved projects.

3.2 Timeline

1. The MLDS Center's internal review group generally meets on the second Tuesday of each month. Project applications submitted two weeks or more in advance of the internal review group meeting will be considered for review at that meeting, unless the

Executive Director and the Research Branch Director, in the case of a research project, or the Reporting Director, in the case of a reporting project, think additional information and work needs to be done to the application.

2. All stages of the review process will be scheduled based on the project needs and the Center's workload. Receipt of the application two weeks prior to the meeting does not guarantee the project will be reviewed at the next meeting.

3. Provide Time for Review and Comment
    a. Project applicants are encouraged to submit requests early and build in time to consult with the Research Director or Reporting Director, who will evaluate the proposal, identify issues, understand data limitations, and work with the applicant to shape the proposal to ensure a favorable review and outcome.
    b. State agencies are encouraged to notify the Executive Director before issuing a request for proposals (RFP) from third parties to conduct a research study that requires the use of MLDS data.

3.3 Conditional Support

While a project is proceeding through the approval process, the Executive Director may provide a conditional letter of support for a grant application, provided that the letter clearly states that final approval is pending the completion of the required review and approval process.

3.4 Review Considerations

1. Overview. The areas of review for each project application are:
    a. Subject matter;
    b. Center product (see section 4.13)
    c. Data use;
    d. Qualifications of the project team; and
    e. Additional considerations.
2. Subject Matter Review. The review of the project subject matter will include a determination of whether the project:
    a. Relates to the audit or evaluation of a State or federal education program;
    b. Aligns to the MLDS Research Agenda and the research areas established in Ed. Art. § 24-703(f)(5)-(8) - see Appendix A;
    c. Provides timely and accurate information about student performance that can be used to improve the State's education system and guide decision makers at all levels;
    d. Contains clear and concise research questions or hypotheses;
    e. Applies appropriate methods and rigorous analysis and research methodologies where appropriate;
    f. Presents a topic that does not duplicate research or reporting that has already been completed or is underway with MLDS data;and
    g. Provides a benefit to the State;

3. Center Product Review. The review of the Center product shall include a determination that the proposed product provides value to the state and allows for the meaningful dissemination of the project findings and outcomes to the appropriate stakeholders.
4. Data Use Review. The review of the data use will include whether the project proposes to use data that are:
    a. Cross-sector;
    b. Aligned with the project request; and
    c. Necessary for the project and are available within the timeline stated and/or there is a plan to obtain such data.
5. Project Team Qualifications Review. The review of the project team qualifications will include whether the project team has the expertise to complete the proposed project, including:
    a. Experience with large administrative data systems;
    b. Familiarity with the methods proposed;
    c. Experience with relevant education and workforce data; and
    d. Knowledge and familiarity with Maryland; and
    e. Capacity (e.g., time; resources) to complete the proposed project.
6. Additional Considerations Review. When applicable, the following additional review criteria will be considered:
    a. For projects proposed by a project team that is not from a Maryland college or university or is from a private research company, the additional review will include:
        i. A determination that the project team is familiar with Maryland and is conducting a project that meets a specific Maryland research need; and
        ii. Consideration of any letter of reference or endorsement from a Maryland researcher or MLDS stakeholder vouching for the researcher's qualifications.
    b. For projects that are receiving funding, the additional review will include:
        i. The source of the funding;
        ii. Whether the funder is on the approved funders list (see Appendix B); and
        iii. If not on the approved funders list, whether the funder could in any way compromise the objectivity and rigor of the research or analysis being proposed.

Part 4. Approved Projects

4.1. Overview

1. Upon approval of the project, the principal investigator will be responsible for fulfilling the following requirements:
    a. Establishing and submitting a project timeline;
    b. Ensuring that the principal investigator and all project team members who need access to the MLDS have submitted a *Staff Authorization and Access Form*;

    c. For research[3] projects:
        i. Comply with the Institutional Review Board requirements as specified in section 4.7 below; and
       ii. Ensure that all project team members have completed the relevant *Collaborative Institutional Training Initiative (CITI) Training*[4] and submitted documentation of course completion.
    d. Finalize and sign off on agreed reimbursement amount or request a waiver;
    e. Review and complete the *Restricted Use Data Agreement (*unless the project is being conducted directly by the MLDS Center or partner agency staff);
    f. Schedule and complete the mandatory new researcher/analyst training; and
    g. Submit quarterly reports.

2. The MLDS Executive Associate will notify the principal investigator of the requirements and will receive and track the progress with completing the required items.

4.2 Project Timeline

In consultation with Center staff, the principal investigator will complete and submit a project timeline that includes the project start date, milestones, and completion. The timeline will take into consideration:

1. When required data will be available for the project; and
2. Whether the project will require the Center to develop analytic data sets and when resources will be available to do so.

4.3 System Access

1. The principal investigator must complete the *Staff Authorization and Access Form.*
2. Other members of the project team should complete the form if they require access to the MLDS.
3. The Staff Authorization and Access Form will be sent to you principal investigator by the MLDS Executive Associate.

4.4 Restricted Use Data Agreement

1. A restricted use data agreement (RUDA) must be executed for each research project being conducted by a researcher or analyst, unless the researcher or analyst is employed by and conducting research for a Maryland State agency.
2. The agreement must be signed by:
    a. An official at the principal investigator's organization with the authority to bind the organization to the agreement; and

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[3] Research has the meaning established in 45CFR46.102(d), "a systematic investigation, including development, testing, and evaluation, designed to develop or contribute to generalizable knowledge."
[4] If researchers have already completed CITI training, they can submit the training certificate for the modules they have already completed. If researchers need to start a new training, we recommend the module: *Ethical and Appropriate Uses of Administrative Data for Research and Evaluation*.

b. If the project team is affiliated with multiple organizations an official at each affiliated organization with authority to bind the organization to the agreement.

4.5 Reimbursement

1. Except as provided in subsection 2, projects shall reimburse the Center for the following costs when incurred by the Center in the administration and support of the project:
   a. Security background checks;
   b. System access, monitoring, data storage, and security;
   c. Compiling a data set for research;
   d. Support from subject matter experts;
   e. Support from Research Branch staff;
   f. Security Monitoring;
   g. Review of materials, including suppression review; and
   h. Technical assistance.
2. Waiver.
   a. A principal investigator may submit a request to the Executive Director to have reimbursement of costs waived or set at a reduced amount.
   b. The Executive Director will review the request and make a determination.
3. Externally Funded Projects.
   a. Externally funded projects should plan to provide funding for reimbursement for the MLDS Center's efforts on the project.
   b. The MLDS Center does not typically accept waivers for projects that are externally funded.

4.6 Training

The project team must complete the MLDS Center training session outlining the MLDS data system, its acceptable use, and the MLDS Center guidelines for suppression requirements.

4.7 Institutional Review Board

1. All project teams must provide the MLDS Center with an approval from their Institution's Institutional Review Board (IRB) or a justification why IRB approval is not required.
2. Approval may include a Non-Human Subjects Research exemption waiver.

4.8 Progress Reports

The principal investigator shall submit quarterly progress reports (see Appendix E) on:

1. Work completed and whether the project is on schedule;
2. Changes to project personnel; and
3. Whether, during the next quarter:
   a. The project team wants to meet with MLDS stakeholders to review findings or ask questions; or
   b. Any data tables will need to be reviewed for suppression compliance.

4.9 Software

1. The MLDS Center provides each researcher with a virtual machine with SAS Studio.
2. The principal investigator may request that the MLDS Center IT Team load other software programs on the virtual machine needed for the project. The principal investigator is responsible for the software license and any costs associated with the software that will be needed in support of the work on the project.

4.10 Data Usage

1. The project team may only use MLDS data for the project as specified in the project application. Access to and use of MLDS data is granted for a fixed amount of time and may be renewed if needed at the discretion of the Executive Director.
2. The Executive Director will immediately terminate access in cases where there is significant risk of unauthorized disclosure of confidential information, violation of security guidelines, or use of data in a manner that is not consistent with project application.

4.11 Project Changes

1. Changes to the approved project plan, require a formal request to the Executive Director (see Appendix F). Changes include:
    a. Changes to or the inclusion of additional research questions;
    b. Changes to the proposed methodology;
    c. Changes to the data sets requested for the project; or
    d. Changes to the project funding.
2. After reviewing the requested amendment, the Executive Director will:
    a. Approve the amendment upon determining that the requested amendment is minor in scope and does not significantly alter the purpose or nature of the project that was originally submitted and reviewed; or
    b. Deny the amendment upon determining that the amendment is substantial in scope and materially changes the purpose and nature of the project beyond what was originally reviewed.
3. If the amendment is denied, the principal investigator may either continue pursuant to the original project application or submit a new application for approval.

4.12 Release of Research or Reporting Products

1. Suppression
    a. The principal investigator and members of the project team are responsible for compliance with Suppression Guidelines for MLDS Center Dashboards, Presentations, and Reports (Appendix G). MLDS Center Staff will review, but not do the suppression work.
    b. The MLDS Center recognizes that there are several techniques used to avoid the disclosure of personally identifiable information. Moreover, there may be a unique situation in which the Guidelines fail to meet the needs of the project and/or

FERPA or UI compliance. In such a situation, where the Guidelines are inadequate, the Center may require the principal investigator to take additional precautions through the application of additional masking techniques. The Center will work with the principal investigator to find the best possible solution to meet both the project needs and disclosure avoidance.

2. Release of Research and Reporting Products
   a. The project team is prohibited from removing any materials from the data system.
   b. When the project team is ready to remove materials from the data system, the principal investigator shall make a request to the Executive Director, using the online suppression review request form.
   c. Review Outcome
      i. The Executive Director will only authorize release of materials upon a determination that:
         ● Confidential information is not disclosed; and
         ● The product is consistent with the project application.
      ii. If release is not authorized because of a determination that confidential information is being exposed, the project team will be directed to fully address the issue and resubmit for review.
      iii. If release is not authorized because the work is inconsistent with the project application:
         ● The principal investigator will be directed to make necessary modifications to the project to conform it to the original project application; or
         ● If the product is substantially different from the original project application, the project will be terminated and the principal investigator will be denied further system access.

4.13 Center Product and Further Development

1. Center Product
   a. All projects must include a Center product. The Center product ensures that the project provides value to the State and allows for the consistent dissemination of the project findings and outcomes to MLDS stakeholders.
   b. A Center product includes:
      i. Presentations (e.g. MLDS Research Series);
      ii. Reports;
      iii. Research summaries;
      iv. Policy Briefs;
      v. Dashboards;
      vi. Data tables;
      vii. A report produced for the General Assembly, Governor, or another state agency; or
      viii. Other content approved by the Executive Director.

    c.   Center products should be developed and delivered in a manner that is appropriate for the intended audience (generally state or local policymakers).

    d.   The Center product must be provided to the MLDS Center. Center staff will review the product and determine whether the product is sufficient or requires additional information. Once finalized, the Center will use and disseminate the product.

    e.   The Center shall provide notification to stakeholders of Center products and offer opportunities for discussion, conversation and questions about the implications and applicability of the findings.

2. Further Development

    a.   The further development of a project under these procedures is subject to the Data Rights and Publication section of either:

        i.   For MLDS Research Branch projects, the interagency agreement between the University of Maryland, Baltimore and the MLDS Center; or

        ii.   For projects by an external researcher, the Restricted Use Data Agreement (See Appendix A) entered into prior to the start of the project.

    b.   Further developed work must be based on the proposed research question and may only use the analytic data set created for the project.

3. Further Developed Works

    a.   As specified in subsection 4 of this section, further developed works are subject to the Data Rights and Publication section of the applicable agreement. The agreements require notification to the MLDS Center and a review period. The notification shall be provided by filling out the Notification of Further Development Form ([here](#)).

    b.   Except as provided in paragraph C of this subsection, further developed works must be made available to the MLDS Center in an electronic format for posting on its website.

    c.   If a further developed work is copyrighted the principal investigator must provide, at no cost, a single copy to the Center and partner agencies.

    d.   The principal investigator shall provide the Center with any additional dissemination plans other than those outlined in the original proposal.

    e.   Further developed works must include the following:

This [research/report/analysis] was conducted using data from the Maryland Longitudinal Data System (MLDS) and with the technical support of the MLDS Center staff. The conclusions of this [research/report/analysis] do not reflect the opinion of the State of Maryland, MLDS Center, the MLDS Governing Board, or its partner agencies.

4.14 Project Closeout

1. Access to the MLDS workstations and secure environment will be rescinded on the approved project end date or an earlier date if the project concludes before the project end date. When access is rescinded, physical access to the workstations will expire

along with login permissions. All researcher folders/workspace files will be kept for a period of five years then destroyed.
2. The principal investigator should complete the project closeout form (see Appendix H).
3. Any materials that the project team wishes to remove from the MLDS, including statistical program code or syntax, must follow suppression review procedures.
4. If a member of the project team leaves the project prior to completion, the project lead must inform the Executive Director immediately so access can be terminated.

Appendices

   A. Legal Requirements
   B. Restricted Use Data Agreement - LINK
   C. Detailed Project Information Form - LINK
   D. Approved Funders List - LINK
   E. Reimbursement Schedule - LINK
   F. Progress Report - LINK
   G. Project Amendment Form
   H. Suppression Requirements - LINK
   I. Project Closeout Form -
   J. Sample Proposal
   K. Sample Output and RPB Presentation
   L. Scoring Rubric

Appendix A

Education Article
§ 24-703
(f) The Center shall perform the following duties:

   (5)   Conduct research relating to:

       (i)   The impact of State and federal education programs;

       (ii)   The performance of educator preparation programs;

       (iii)   Best practices regarding classroom instruction, education programs and curriculum, and segment alignment; and

       (iv)   The impact child welfare programs have on the educational and economic outcomes of students;

   (6)   At the direction of the Accountability and Implementation Board established in Title 5, Subtitle 4 of this article provide:

       (i)   A researcher designated by the Board access to the data in the Maryland Longitudinal Data System in accordance with the procedures for staff authorization and data access established by the Maryland Longitudinal Data System governing board;

       (ii)   Aggregate data tables; or

       (iii)   Research or evaluation;

   (7)   Analyze social determinants from the following State agencies and appropriate local agencies that impact the education performance of students and indicate the need for wraparound services of students:

       (i)   The Maryland Department of Health;

       (ii)   The Department of Juvenile Services; and

       (iii)   The Department of Human Services;

   (8)   To the extent practicable, conduct longitudinal studies of the items under this section to evaluate the impact of the Blueprint for Maryland's Future on the State;

July 1, 2023   Process for Establishing Annual Research and Reporting Priorities

Process for Establishing Annual Research and Reporting Priorities

I.   Overview

To support the mission of the MLDS Center, generating timely and accurate information about student performance that can be used to improve the State's education system and guide decision makers at all levels, the MLDS Center, in consultation with stakeholders, establishes annual research and reporting priorities. The annual priorities guide work of the Center from July 1st to June 30th of each fiscal year. Not all topics selected as priorities may be completed during the year, and, in consultation with stakeholders, some priorities may change as the Center is asked to undertake more pressing work.

This document outlines the process for developing annual research and reporting priorities, engaging stakeholders in the development of annual priorities, and submitting the priorities to the Governing Board. Once approved, priorities are posted to the MLDS Center website and included in Appendix III of this document.

II.   Process for Selecting Priorities

The timeline and key components of the annual priorities development and selection process are provided in the table below. There are two forums involved in the development and selection of annual priorities for submission to the Governing Board:

1. Output meeting: Internal staff meeting held on the second Tuesday of each month.
2. Research and Policy Advisory Board (RPB) meeting: External stakeholder meeting held on the first Thursday of each month (except in January, July and August).

Month	Meeting	Activity
February	Output Meeting	Internal staff discuss progress on the current fiscal year's priorities and determine if any research or reports slated for the current fiscal year will not be completed as planned. Those items are noted for possible consideration for the next fiscal year.
March	Output Meeting	Internal staff discuss possible new topics that may be of interest to stakeholders. Sources for topics may include grant funding opportunities, new legislation, new data added to the Center, new annual reports at the state or federal levels, and/or new initiatives of data sharing partners.

The list of potential research and reporting topics is also reviewed to determine if any topics on the list should be advanced for consideration. See Appendix 2.

Internal staff review the List of Required Annual Output in Appendix 1 to determine if legislatively mandated output on the |

Month	Meeting	Activity
		list has been sunsetted or should be referred to the Department of Legislative Services for consideration for termination.
		Internal staff will also review existing dashboards to determine if they should continue to be refreshed or if they are no longer useful and should be removed.
		For output produced for external stakeholders, the Director of Reporting Services will contact the stakeholders to confirm the output is still required.
April	Output Meeting	After the conclusion of the legislative session MLDS staff complete two tasks: 1) outreach to the staff of the Department of Legislative Services to discuss possible data requests or research required for the next legislative session, and 2) review new and amended legislation to determine if any new reporting requirements have been established for the MLDS Center or if the MLDS Center has been added to any new commissions. These are discussed at the Output meeting for consideration in the annual priorities. Internal staff select possible priorities and possible removals to present at the May RPB meeting.
May	RPB Meeting	Preliminary priorities are presented at RPB for consideration. RPB attendees provide additional recommendations for internal staff consideration. RPB members are encouraged to discuss other possible priorities within their organization to present at the June RPB meeting. Legislatively mandated output and other output that is under consideration for removal will be presented to RPB for comment.
May	Output Meeting	Based upon RPB feedback, internal staff select final priorities and removals to present at the June RPB meeting. The scope and number of research and reporting priorities selected each year is contingent upon the amount of staff time that must be allocated to required output and updates to existing dashboards. See Appendix 1.
June	RPB Meeting	The priorities and removals are again presented to RPB. RPB makes final recommendations on priorities and removals for presentation at the June Governing Board meeting.
June	Governing Board	Presentation of annual research and reporting priorities.

Month	Meeting	Activity
July	n/a	Post approved priorities to MLDS Center website and include in Appendix III of the *Process for Establishing Annual Research and Reporting Annual Priorities*.

III.   Process for Evaluating Priorities and Removals

The following guidelines are used during internal staff Output meetings to evaluate and select potential research and reporting priorities:

1. Priority and Interest to State Policy

   a. The primary consideration given in selecting topics is whether or not the research or report is of interest to state policymakers and is a topic that may be time-sensitive. Topics tied to legislation or other state policies are moved to the top of the list for priorities under consideration.

2. Data Gap Analysis

   a. The Data Gap Analysis is reviewed to determine if any prior data gaps have been closed so that a topic that had been previously waitlisted (See Appendix II) can be advanced.

   b. As the research and reporting priorities are being discussed the Data Gap Analysis will be reviewed to determine if a current data gap restricts work on a potential priority. If those topics cannot be undertaken but are considered important for the Center, the topic will be added to Appendix II for consideration in the future.

   c. Discussion of priority topics may also identify new gaps to the Data Gap Analysis. The Data Gap Analysis is presented to the Governing Board each June to determine priority gaps to focus on closing.

3. Relationship to the Research Agenda

   a. All priorities must fall within the Center's Research Agenda and be consistent with requirements for producing longitudinal, cross-sector analysis.

4. Duration of time and available staff resources

   a. Each topic on the potential list is reviewed to determine if it is feasible to undertake the work in a year or if the topic requires multiple years to be completed.

   b. Each topic on the potential list is reviewed to determine if there are internal staff with sufficient expertise and time to undertake the work.

5. Removals

 a. All existing research and reports (including dashboards) will be reviewed to determine their relevancy to state policy priorities. The review will determine if each output should:

  i. Be updated with additional years of data or expanded with new data points;

  ii. Be removed or archived; or

  iii. Be retained without updates.

IV. Process for Submitting Priorities to Governing Board

 a. Governing Board meeting: Quarterly meeting held on the second Friday of March, June, September and December. Annual priorities are presented at the June meeting.

 b. Notice is given to the Board on the priorities selected for the year via memorandum in advance of the meeting. The memorandum provides a brief description of each item on the priority list.

 c. During the Board meeting, Board members may comment on the priorities and suggest adjustments/refinements to the priorities or recommend additional priorities.

V. Operationalizing the Annual Plan

The Director of Reporting Services and Director of Research will review the annual research and reporting priorities and develop specific questions to operationalize the topics identified in the plan. Each topic will be assigned to an output category (Center Report, Dashboard, Research Report, etc.).

In the case of research output, where sufficient data exist to proceed, the Director of Research will discuss the priorities with the MLDS Center research team and identify expertise for the project. If the needed expertise or sufficient effort is not available on the current research team, the Director of Research will seek a faculty member at a Maryland public institution with expertise in the stated research area to become staff of the Center and begin research on the project.

The Director of Reporting Services will work with the Center Chief Information Officer to assign all other output projects and develop a timeline for production.

Updates on progress toward completing annual research and reporting priorities will be provided by the Director of Reporting Services and Director of Research at the December and March Research and Policy Advisory Board meetings and Governing Board meetings. Updates are also provided in the Monthly Report to the Governing Board.

Appendix I: Recurring Required Annual Output

a. *Annual Report on the Maryland Longitudinal Data System Center*, produced to fulfill Education Article, §24-705, Annotated Code of Maryland.

b. *Dual Enrollment in Maryland*, produced under the College and Career Readiness and College Completion Act of 2013 (CCR-CCA) (see Education Article § 24-703.1, Annotated Code of Maryland).

c. *Annual Report on the Workforce Outcomes of Maryland Public High School Graduates*, produced to fulfill The Career Preparation Expansion Act (CPEA), Chapter 695 of 2017 (see Education Article § 21-205, Annotated Code of Maryland).

d. *High School Pathway* (produced annually for the Department of Legislative Services)

e. *Dual Enrollment Courses and Credits* (produced annually for the Department of Legislative Services)

f. *Maryland Scholar*s (produced for Maryland Business Round Table)

g. *Literacy, Adult, and Community Education System* (LACES) report for the Maryland Department of Labor

h. *Individuals with Disabilities Education Act* (IDEA) report for the Maryland State Department of Education

i. *Strengthening Career and Technical Education for the 21st Century Act* (informally known as Perkins V) report for the Maryland State Department of Education

j. Morgan State University accreditation report

k. Towson University annual report on Bachelor's degree graduate wages.

l. *Traditional Educator Preparation Program Report* (TPAR) for the Maryland State Department of Education

m. Teacher Education accreditation reports (*Council for the Accreditation of Educator Preparation* or CAEP and *Association for Advancing Quality in Educator Preparation* or AAQEP) for Maryland Public and State-Aided Independent postsecondary institutions

n. *Out–Of–Home Children and Participation in Higher Education* required to fulfill Education Article, §24−703.1, Annotated Code of Maryland.

o. *Performance Accountability Report* (PAR) for sixteen community colleges in Maryland

p. *Progress in Increasing the Preparation and Diversity of Teacher Candidates and New Teachers in Maryland Report* to the Accountability and Implementation Board pursuant

to the Blueprint for Maryland's Future (See Chapter 33 of 2022 and see Education Article § 5-413, Annotated Code of Maryland).

q. *Student Financial Aid - Outreach Plan and Reporting*

r. Dashboards

    i. *College and Workforce Outcomes for Maryland Public High School Graduates*

    ii. *College and Workforce Outcomes for Maryland Public High School Graduates with Financial Aid in the First Year of College*

    iii. *Dual Enrollment Trends of Maryland Public High School Students*

Appendix II: List of Potential Research and Reporting Priorities

This list is a list of topics or questions that have been proposed by stakeholders or have arisen from research and reports already completed by the MLDS Center. The topics and questions are stated broadly. Stakeholders, including the Research and Policy Advisory Board, will be engaged to further develop the topic/question should it be selected for inclusion on the list of annual priorities.

The list will be reviewed annually in preparation for establishing annual Research and Reporting Priorities.

Topic	Requestor
Maryland's production of high school and college graduates that meet the needs for Maryland's workforce demands (e.g., STEM; Pre-K teachers; Diverse teacher workforce).	
What are the labor market outcomes for Maryland Associate's Degree Graduates who enrolled at a half-time status? How much are adults (age 25+) that attend college part-time earning while in college?	MHEC
What majors and degree levels are filling career positions that have at least 10% projected growth by Labor?	
What is the debt to earnings ratio of Maryland postsecondary graduates?	MHEC
Employment outcomes for students that stop-out after completing 24-30 credits without conferral of certificate (costs to support reverse transfer/near completers initiative). Employment outcomes for students that stop-out after completing 48-60 credits without conferral of Associate's degree (costs to support reverse transfer/near completers initiative).	MHEC
What are the college and career outcomes for high school graduates with the CTE and USM course of study completion diploma?	
Did the change in Maryland's minimum wage impact career tracks for high school graduates?	DLS
What happened to students who received the student loan tuition credit?	MHEC

What happened to students who received training from the Nursing Support program?	MHEC
What are the workforce outcomes for students who participate in the College Promise program?	MHEC
What is the relationship between mobility in K-12 schools and future mobility in college and the workforce?	
Do dually enrolled students subsequently enroll in college at the same institution of dual enrollment?	
What are the long-term outcomes of students who are involved in both the juvenile services and human services sectors?	
Can we replicate: ● https://www.nytimes.com/interactive/projects/college-mobility/city-college-of-new-york ● http://www.equality-of-opportunity.org/documents/	Internal

Appendix III: List of Approved Annual Research and Reporting Priorities

Reporting Services Priorities, 2019-2020

New Priorities	Required	Other Output
- Critical workforce areas ○ Nursing ○ Teachers ○ Computer Science - Earnings for high school and college graduates ○ Transfer Associate's degrees ○ Career Associate's degrees ○ Bachelor's degrees	- Reports ○ Dual Enrollment Report ○ Annual Report ○ The Career Preparation Expansion Act of 2018 Report (SB978) - Other ○ Department of Legislative Services ○ Data Request	- New / Expansions ■ Teachers - *Regulatory Reporting* ■ Nursing - *Maryland Health Services Cost Review Commission* ■ Dual Enrollment - *College Graduation and Course-taking patterns* ■ Computer Science for All ■ Five Year Outcomes ■ Career Preparation Expansion Act ■ GED/NEDP ■ College Degrees to Careers - Revisions ■ Initial Postsecondary Enrollments - In-State vs. Out-of-State Enrollments ■ Initial Postsecondary Enrollments - Types of Institutions

Research Branch Priorities, 2019-2020

Priority 1: In-Depth Statistical Analyses • Studies that support causal inferences about the effects of different pathways from high school into college and the workforce, including examination of the Bridge Plan for Academic Validation (research request by MSDE) and additional focus on dual enrollment and early college initiatives. • Studies that further examine and disentangle the role of student and school-level poverty on long-term academic and workforce outcomes.	• Studies that examine the relationship between characteristics of teacher preparation programs and/or individual teachers (in aggregate) and student outcomes. • Studies that examine the relationship between student characteristics and workforce outcomes in critical workforce areas. • Studies that explore statistical methods and best practices for incorporating wage data when data are missing not at random (e.g., for federal employees). • Studies that examine the causal effect of attending a 4-year college on long-term college and workforce outcomes. • Studies that examine the early elementary school predictors of long-term academic and career outcomes.	• Further development of connections/partnerships and research questions related to the addition of behavioral data and data from the Department of Juvenile Services. • Maryland's production of high school and college graduates that meet the needs for Maryland's workforce demands (e.g., STEM; Pre-K teachers; Diverse teacher workforce) • **Priority 2:** Develop technical documentation to guide staff on the use of the System, data, appropriate methods, and best practices. • **Priority 3:** Applications for external funding to support priorities 1-2.

Reporting Services Priorities, 2020-2021

Priority Areas	Required Output	Other Output

Critical workforce areas
• Nursing
• Teachers
• Computer Science
 	
Earnings for high school and college graduates
• High School Graduates
• Associate's degrees
• Bachelor's degrees
	Reports
	• Dual Enrollment
	• Annual Report
	• The Career Preparation Expansion
	• Cyber Warriors
	Other Requirements
	• DLS: Dual Enrollment and Pathway
	• MBRT: Scholars
	• LACES
	• CTE & Special Education
	• Data Requests
		• Teacher Dashboards
		• Nursing Dashboards
		• Apprenticeship - *Preliminary*
		• Bachelor's Degree
		• Associate's Degrees
		  • Transfer vs Career
		
		• High School to College Series
		  • Wages
		  • Some and Still College
		  • In/Out-of-State & Online
		  • Four-Year, Community College, and State-Aided

Research Branch Priorities, 2020-2021

Priority 1: In-Depth Statistical Analyses		
• Pathways from high school into college and the workforce • Disentangling the roles of student and school poverty • Teacher preparation/characteristics (e.g., demographic match to student) and student outcomes • Critical workforce areas	• Incorporating wage data when missing not at random • Causal effect of attending a 4 year college • Early elementary predictors of long-term outcomes • K-12 discipline and DJS overlap • Production of high school and college students that meet workforce demands	• **Priority 2:** Develop technical documentation to guide staff on the use of the System, data, appropriate methods, and best practices. • **Priority 3:** Applications for external funding to support priorities 1-2.

Reporting Services Priorities, 2021-2022

New Collections Exploration	Required Annual Output	Dashboards

• Apprenticeship
〰 Child Welfare
〰 Juvenile Delinquency
 	
Five-Year Out Reports
 • Bachelor's degrees
 • Apprenticeship
 	
Legend:
• Planned
〰 Tentative
✓ Completed
➤ In-Progress
	• Reports (4)
	  • CPEA, Dual Enrollment, Child Welfare, & Financial Aid Outreach
	• Data Tables (11)
	  • MHEC/Postsecondary: CyberWarriors, PAR, MFR, Morgan, & NWCS
	  • DLS: Dual Enrollment & Pathway
	  • Other: MBRT Scholars
	  • MSDE: Perkins & Special Education (IDEA)
	  • Labor: LACES (OCTAE)
	• Data Requests
		• Teacher Dashboards
		  • TPAR, CAEP, AAT, etc.
		• Associate's Degrees
		• Apprenticeship
		• Bachelor's Degree
		• High School to College Series
		  • Juvenile Delinquency Filter
		• Dashboard Refresh

Research Branch Priorities, 2021-2022

Priority 1: In-Depth Statistical Analyses to Inform Policy		Priority 2: Methodological Documentation
Priority 1: **In-Depth Statistical Analyses** **to Inform Policy** • Pathways from HS to WF • Concentrated Poverty • School Staff Demographics • Early elementary predictors of outcomes • K-12 Discipline and DJS overlap and outcomes • Effects of attending a 4-year college (15 to Finish) • Critical workforce areas (e.g., teaching)	• Production of students to meet workforce demands • Update dual enrollment report • Update remedial ed report • School resource officers (SROs) and student outcomes **RPB Suggested Topics:** + Early Childhood + CTE → Workforce + HS → Apprenticeship + Apprentice and Adult Ed → Wages + Causal eval of teacher prep + PYD outcomes for DJS involved students + LARP eval	**Priority 2:** **Methodological** **Documentation** → Data Science → Student Mobility → Missing Wages **Priority 3:** **Partnerships** → Morgan State → External Researchers **Priority 4: External Funding** • IES • NSF Legend • Planned → In-Progress + Suggested

Reporting Services Priorities, 2022-2023

New Collections Exploration	Required Annual Output	Dashboards

● Child Welfare
● Juvenile Services
● NonCredit Workforce
 	
Ten-Year Out Reports
● CPEA, Associate's & Bachelor's
 	
Legend:
● Planned
ʆ Tentative
✓ Completed
➢ In-Progress
	● Reports (6)
	  ● CPEA, Dual Enrollment, & Child Welfare
	  ● Financial Aid Outreach
	  ● Progress on Preparation and Diversity of New Teachers & Teacher Candidates (AIB)
	  ● Commission to Study the Healthcare Workforce Crisis
	● Data Tables (14)
	  ● PAR + PAR Pilot, MFR, & Morgan
	  ● DLS: Dual Enrollment (2) & Pathway
	  ● Other: MBRT Scholars
	  ● MSDE: Perkins & Special Education (IDEA)
	  ● Labor: LACES (OCTAE)
	  ● TPAR, CAEP, & AAQEP
	● Data Requests
		● Teacher Dashboards
		● High School to College Expansion: *Immediates* Only
		  ● In-State/Out-of-State
		  ● Community College, Four-Year Public, State-Aided Independent
		  ● Wages by NAICS
		  ● Majors and Degrees
		● Dual Enrollment Expansion
		  ● Overall populations
		  ● College graduation
		● Dashboard Refresh (70+)

Research Branch Priorities, 2022-2023

Priority 1: In-Depth Statistical Analyses to Inform Policy		Priority 2: Methodological Documentation
Priority 1: **In-Depth Statistical Analyses to Inform Policy** ➔ Pathways from HS to College to WF ➔ Concentrated Disadvantage/Composition ➔ School Staff Demographics ➔ Early elementary predictors of outcomes ➔ K-12 Discipline and DJS overlap and outcomes ➔ Positive outcomes for DJS students ➔ College credit accumulation and persistence for high school graduates ➔ Critical WF areas (e.g., teaching; STEM; healthcare) and production of students to meet these needs ➔ CTE → PS and WF outcomes	⁺ Research contributions to Preparation and Diversity of New Teachers & Teacher Candidates (AIB) ⁺ Research contributions to child welfare report Legend ● Planned ➔ In-Progress ⁺ Suggested	**Priority 2:** **Methodological Documentation** ➔ Data Science ➔ Multilevel Models ➔ Student Mobility ➔ Missing Wages **Priority 3:** **Partnerships** ➔ Morgan State ➔ External Research ➔ Microsoft; DHS; DJS **Priority 4: External Funding** ● Foundations ● IES ● NSF

Reporting Services Priorities, 2023-2024

<forthcoming>

Research Branch Priorities, 2023-2024