

Data Governance Program

2025 Annual Report

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Presented to:

Joint Standing Committee on State and Local Government

Presented by:

Department of the Secretary of State

Permanent Commission on the Status of Racial, Indigenous and Tribal
Populations

Department of Administrative and Financial Services



**Permanent
Commission**
RACIAL, INDIGENOUS
& TRIBAL POPULATIONS

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Introduction

The Data Governance Program was established by [PL 2021, Chapter 717](#) (An Act to Promote Equity in Policy Making by Enhancing the State’s Ability to Collect, Analyze, and Apply Data) and further clarified by [PL 2023, Chapter 581](#) (An Act to Amend the State’s Data Governance Program).

[1 MRSA §547](#) requires that “the Secretary of State, or the secretary's designee, Commissioner of Administrative and Financial Services, or the commissioner's designee and the Permanent Commission on the Status of Racial, Indigenous and Tribal Populations established by Title 5, section 12004-J, subsection 19 shall jointly report on the status of the program and the consultations under subsection 3 to the joint standing committee of the Legislature having jurisdiction over state and local government matters annually by February 15.” The listed entities collaborate together as the Data Governance Working Group.

Contained in this report are the results of the activities conducted by the Data Governance Working Group in 2024.

Executive Summary

In May 2022, Governor Mills signed Public Law Chapter 717, establishing a data governance program. During the 131st Legislature, the law was amended by [PL 2023 c. 581](#) to promote consistent collection of racial and ethnic demographic data to promote equity through informed data-driven decision making in future state policy and law.

Data Governance refers to policies relating to access and use of data, while Data Management includes the processes, tools, and enabling technology. To reflect this, the term “Data Governance Program” is expanded to the more comprehensive “Data Management and Governance Practice.”

At its core, Data Management and Governance Practice (DMGP) is the exciting modernization path of how we think about, collect, track, share, use and record data. Creating an environment wherein live data can be safely and securely shared between State agencies and with the public to improve policies, programs and services for the people of Maine through, as examples, racial impact statements, disparate impact statements, data-driven decision making, financial analysis, and grant applications. DMGP will provide coordination for data collection, sharing, and usage across all state agencies through a collaborative process. DMGP will create state-wide policies on data usage, procedures for collecting and sharing data, and ongoing enforcement of established practices; standardize data formats, data categories and technology capabilities across agencies and systems; improve overall data quality; and ensure data collection practices align with best practice privacy requirements. This practice will help us find out: where each agency is collecting their data; what kind of data each agency is collecting, including a very specific list identified by Legislators; and, if those systems the State is using to collect that data are out of date and will need to be replaced. Ultimately, as disparate data systems and data align and interact, State government will be able to consistently and more timely contribute quality data that will inform and promote policies, practices and services for our State of Maine constituents.

This year's activities supported the goal of State agencies using data to make decisions to improve programs and services, identify gaps, and create racial/disparate impact statements.

Specifically, per PL 2023, chapter 581 (An Act to Amend the State's Data Governance Program):

- Each state agency shall designate an employee with the responsibility to oversee the agency's compliance with the data governance;
- Inventory the collection and availability of demographic data fields by the state agency, including, but not limited to, gender, location, race, ethnicity, birth sex, citizenship, socioeconomic status, education, sexual orientation, veteran status, disability status and age;
- Develop a definition and standard for certain demographic data fields, including, but not limited to, gender, location, race, ethnicity, birth sex, citizenship, socioeconomic status, education, sexual orientation, veteran status, disability status and age.

Additionally, items committed to in last year's report:

- The Chief Data Officer will create state-wide data policies and standards for four data domains including Quality, Metadata, Interoperability, and Reference/Master Data.
- Host a series of interactive workshops and discussions to educate departmental state agency designees.

Key Take-aways:

- There are now 120 departmental state agency designees – agency Data Stewards – for coordinating statewide DMGP work.
- Of the 143 responding entities, 76% of those identified, demographic data is collected across 263 systems for a variety of purposes.
- Approximately 25% of State agencies share data. This can be internally within the same agency, between different agencies, or with external stakeholders.
- Although important work and a good start, this year's activities do not yet position State agencies to improve data quality or availability. The Chief Data Officer will continue to engage agency Data Stewards in 2025 to gather use cases for them to improve data for various programmatic and business needs, including federal reporting and grant applications.
- Without dedicated funding, there is a limit to the progress that can be made. The same is true for training Generative Artificial Intelligence (Gen AI) tools, which require quality data to be most effective.

On The Horizon:

The Data Governance Working Group recognizes that organizational cultural change is crucial to the advancement of data governance initiatives. Through communication, education and training, the working group will establish a structured approach to implement changes, ultimately fostering a collaborative environment of working together towards a common goal of enhancing data quality, data privacy, and making data-informed decisions.

Greater access to quality data can empower decision makers to strive for equity and improve outcomes in program and service delivery. A robust Data Management and Governance Practice intersects with:

- Cybersecurity
- Privacy
- Systems Procurement
- Business Continuity
- Records Retention
- Legislation
- Budgets
- Artificial Intelligence

Future efforts include:

- Continued review of and recommendations to successfully overcome barriers to data sharing, including legal, systemic, and data format.
- Develop a master data sharing agreement, consistent with MaineIT's security, privacy, and accessibility requirements as well as other best practice considerations, to enable data to be shared securely across departments and/or with the public.
- Annual review and adoption of 1 MRSA §547 13 demographic data definitions.
- Review, recommend, and adoption of 1 MRSA §547 demographic data standard formats.
- Ongoing inventory of count, purpose, technical life expectancy, format and expectations of all data systems, including identifying the number of disparate systems that perform the same business function.
- Delineate clear roles and responsibilities for agency Data Stewards as well as engagement expectations of the Chief Data Officer with these data governance assets.
- Chief Data Officer will confer with the Bureau of Human Resources to determine feasibility of separate classifications encompassing the roles and responsibilities of agency Data Steward and agency Data Officer.
- Chief Data Officer will engage with stakeholders across agencies to identify use cases where effective data governance can add significant value to programs, services, business processes, data sharing, or reporting.
- Publish data governance policies and standards for Executive Branch.
- Conduct tailored workshops and training sessions to educate agency data stewards to advance data governance standards and principles

Long-term, the establishment of a statewide Data Management and Governance Practice will enable State of Maine government technology to share live data between departments and with the public. Access to quality data promotes trust and confidence and presents an opportunity for departments to talk about their programs in an informed way. Allowing for data-driven decisions improves the parity of programs, services and business processes within Maine State Government and ultimately better serves the people of Maine.

Data Governance Working Group

The Data Governance Working Group was established as a response to PL 2021 Chapter 717. It is not the data governance program itself but provides guidance on statewide data governance initiatives. Its members are only required to confer on a quarterly basis; however, all parties involved believe that conferring on an ongoing basis best serves the State's interests.

This group consists of members from the following entities:

- Department of the Secretary of State (Secretary of State, Maine State Archives, Information Systems, Permanent Commission on the Status of Women)
- Permanent Commission on the Status of Racial, Indigenous, and Tribal Populations
- Department of Administrative and Financial Services (Office of the Commissioner, Office of the State Economist, Chief Data Officer)

This group has evolved and continued to meet throughout the year to collaborate, evaluate, and assess best practices to help guide the Data Management and Governance Practice and ensure that equity is considered in every aspect. Members of all three entities contributed to the creation and facilitation of two workshops to assist agency Data Stewards with responding to surveys.

Data Management and Governance Practice (DMGP)

The Data Management and Governance Practice (DMGP) is the official designation of the statewide data governance program, as initially established by [PL 2021 Chapter 717](#). The decision was made to add “management,” which includes the tools used in data governance. It is a collaboration between the Chief Data Officer and agency Data Stewards, who are collectively responsible for implementing and executing statewide data initiatives.

Since State agencies own their data, per [5 MRS §1982 \(9\)](#), DMGP employs a federated data governance model, which is a de-centralized approach to manage data across the State of Maine. This means that the central governing body led by the Chief Data Officer sets standards, while individual agencies, through their Data Stewards, are given discretion on how to implement and apply these standards. Since it spans across all Executive Branch agencies, it is referred to as a *practice*, rather than a program.

The goal of the DMGP mirrors that of the Data Governance Working Group and the legislation: to create an environment wherein live data can be safely and securely shared between State agencies and with the public to improve policies, programs and services for the people of Maine. Examples include racial impact statements, disparate impact statements, data-driven decision making, financial analysis, and grant applications.

As the designee of the Commissioner of the Department of Administrative and Financial Services, the Chief Data Officer participates in the Data Governance Working Group. This ensures smooth communication between the two entities.

Agency Data Stewards

As described above, DMGP adopted a federated model to data governance, in which each Executive Branch agency designates Data Steward(s) with the responsibility to oversee compliance with DMGP policies and standards and engage in the statewide data initiatives, such as this year's demographic data inventory process. Because State agencies own their data, pursuant to [5 MRS §1982 \(9\)](#), they have a vested interest in using it more effectively to improve decision making.

This federated model will allow Executive Branch agencies to have consistent statewide policies and standards to improve shareability, quality, and interoperability, while maintaining a degree of autonomy with their own data. Statewide policies and standards set forth by the Chief Data Officer (CDO) will serve as defaults for Executive Branch agencies. This empowers agencies to create and maintain data policies and standards that are more detailed than the statewide ones while adhering to the minimum requirements set forth in CDO policies and standards. This is similar to how the Teleworking policy is coordinated within the Executive Branch: The Bureau of Human Resources has a baseline policy, and agencies may be more detailed. This approach promotes collaboration and discussion.

Over 120 individuals were identified as Data Stewards by their agencies to participate in the activities required by PL 2023 Chapter 581 in 2024. Going forward, roles and responsibilities for Data Stewards will be clearly defined to help them be effective participants in statewide data initiatives. This is included in the Chief Data Officer's Road Map for the DMGP, which will be explained in further detail in the section entitled, "Data Management and Governance Roadmap 2025 and Beyond."

Data Management and Governance Practice Year 2

DMGP Accomplishments

In 2024, DMGP, in partnership with the Data Governance Working Group, spearheaded activities prescribed by PL 2023, Chapter 581 by engaging agencies across the State of Maine. While the focus was exclusively on demographic data this year, DMGP gained deeper insights into how data is managed at the agency level, as well as what systems and formats are used for the collection of demographic information.

As part of its ongoing mission to work with agency Data Stewards, the DMGP will coordinate with the Data Governance Working Group to provide training and workshops to improve data literacy. This will promote understanding and consistency among State agencies.

Workshops

The Data Governance Working Group conducted two workshops to familiarize Data Stewards with legislative requirements, explain how data governance can benefit their agencies, and provide instructions for completing the associated surveys as part of a statewide demographic data inventory.

- Workshop #1 (9/11/24): Introduction to Data Management and Governance and Demographic Data Survey
- Workshop #2 (10/30/24): Demographic Data Survey Discussion and Data Systems Inventory

Topics and concepts included: data definitions; inventorying the data systems; discussion about preliminary findings; and formatting options for demographic data. In 2025, the Data Governance Working Group will host additional workshops to provide Data Stewards with information and improve data literacy. Topics will correspond to activities outlined in the DMGP Road Map, which is a plan for making progress towards the goal of State agencies using and sharing data to improve decision making.

Survey and Inventory

The Data Governance Working Group collaborated with agencies through two surveys to understand the collection process of demographic data and the related systems.

The Demographic Data Survey was designed to provide a bird's eye view of demographic data collection and use among State agencies.

The Data Systems Inventory is more detailed and concerned with how the 12 demographic categories listed in PL 2023 C 581, plus Tribal Affiliation, which the Data Governance Working Group added by consensus, are expressed in data systems.

- 26 unique state agencies were asked to provide information about the data systems they use that contain demographic data. Responses were received from 23.
- Within the 23 responding unique state agencies, there are 189 separate entities identified, including bureaus, offices, divisions, boards and commissions.
- Of the 189 entities identified, there was a response rate of 143, or 76%.
- The Data Systems Inventory is the source of most figures contained in this report.

Demographic Data Definitions

Data Governance Working Group members collaborated to develop demographic data definitions. As envisioned by Public Law 2023, chapter 581, having common definitions for demographic categories makes apples-to-apples comparisons of data easier to achieve.

As part of the broader DMGP effort, a sub-committee was created with the goal of drafting working definitions for the 12 demographic categories outlined in [PL 2023 c 581](#), plus Tribal Affiliation. The Data Governance Working Group felt that the inclusion of Tribal Affiliation as a demographic data category would be beneficial to agencies interested in using data to improve decision making and potentially reduce disparate impacts. The subcommittee - comprised of representatives from the Permanent Commission on the Status of Racial, Indigenous, and Tribal Populations, the Permanent Commission on the Status of Women, and the Maine Office of the State Economist, and stakeholders - worked collaboratively to examine widely accepted definitions for these terms, drawing in particular on:

The US Office of Management and Budget (OMB), a federal agency that outlines demographic data standards that are used for federal data collection, including the US Census and federal reporting requirements;

The National Academies of Science, Engineering, and Medicine, a Congressionally chartered suite of organizations that provide independent, objective advice to policymakers; and

The American Psychological Association, a scientific and professional organization that informs individuals working in the space of clinical and social psychology.

The Data Governance Working Group will refine the definitions below based on deeper analysis of responses from the Data Systems Inventory. A broader sense of how state agencies within Maine are defining and operationalizing these terms in their own work informs state-wide standards that will allow for improved data sharing and more systemic data analysis.

The subcommittee deliberated on their findings and consulted with individuals working directly with demographic data in Maine, including from the Maine Health Data Organization and the Justice for Children Taskforce. Following these deliberations, the subcommittee proposed the following working definitions:

Age: The amount of time in years that has passed since an individual was born.

Birth Sex: A multidimensional construct based on a cluster of anatomical and physiological traits that include external genitalia, secondary sex characteristics, gonads, chromosomes, and hormones.

Citizenship: The legal status bestowed upon an individual because of their affiliation - by birth, law, or naturalization - to a sovereign nation, country, state, territory, community, or commonwealth and all the rights and responsibilities thereof.

Disability: A physical or mental impairment that limits full participation and enjoyment in activities resulting from interactions among individuals' bodies; their physical, emotional, and mental health; and the physical and social environment in which they live, work, or play.

Educational Attainment: The highest level of education that an individual has completed.

Ethnicity: A characterization of people based on having a shared culture (e.g., language, food, music, dress, values, and beliefs) related to common ancestry and shared history.

The Data Governance Working Group incorporated guidance from the Federal Office of Management and Budget to create a demographic data definition for Ethnicity. This will be a living definition that will require annual review. The working group recognizes that State agencies receiving Federal funding must strike a balance between reporting requirements and providing options that accurately reflect Mainers. One long-term solution is the creation of data/schema crosswalks to enable State systems with options that do not necessarily perfectly align with Federal options to satisfy reporting requirements.

Gender: a multidimensional construct that links gender identity, which is a core element of a person's individual identity; gender expression, which is how a person signals their gender to others through their behavior and appearance (such as hair style and clothing); and cultural expectations about social status, characteristics, and behavior that are associated with sex traits.

Location: the spatial context in which human activities, business operations, and natural phenomena occur.

Race: the social construction and categorization of people based on perceived shared physical traits that result in the maintenance of a sociopolitical hierarchy.

Sexual Orientation: A person's sexual and emotional attraction to another person and the behavior and/or social affiliation that may result from this attraction.

Socioeconomic Status: A broad reaching concept that encompasses an individual's position within a social hierarchy, including quality-of-life attributes and opportunities.

Veteran Status: A person who served in the active military, naval, or air service, and who was discharged or released under conditions other than dishonorable.

Tribal Affiliation: This was included as a category of interest by the Data Governance Working Group, which will coordinate with stakeholders to develop a definition in 2025.

Data Standards

MaineIT hired a consultant to assist with the creation of high-level data standards for Metadata Management, Data Quality Management, Interoperability and Integration, and Master and Reference Data Management. These data standards were created using MaineIT's template and will be aligned with the baseline policy on data governance, which will be published by the Chief Data Officer in 2025.

DMGP SharePoint

The Data Management and Governance Practice established a SharePoint site as a one-stop resource for agency Data Stewards to help them acclimate to the role, and includes recorded workshops, legislation, reports, and direct support through the DMGP. All Executive Branch staff can access this SharePoint Site.

Because this is a marathon and not a sprint, and it will be years before DMGP is mature within the State of Maine government, this safeguards learnings, process, reporting, policies, challenges and successes.

Stakeholder Outreach

Stakeholder outreach was conducted primarily with State of Maine agencies, through Data Stewards. Members of Disability Rights Maine and the Justice for Children Task Force contributed to creating demographic data definitions for the 13 categories. As envisioned by statute and the

recommendation of the Data Governance Working Group, DMGP will create a formal stakeholder engagement process in the future.

Lessons Learned

Pace – The Data Governance Working Group set an ambitious goal for Data Stewards to submit responses to the Data Systems Inventory by November 30, 2024. Based on feedback, DMGP edited the Data Systems Inventory and extended the response window to January 10, 2025, to allow agencies to indicate if a data system containing demographic data had already been accounted for in another bureau/office/division. This reduced the likelihood of data systems being duplicated while making it easier for Data Stewards to submit responses for all entities in their agency.

Scale – 26 unique State agencies, comprising the entire Executive Branch of Maine State Government, were asked to participate in the demographic data inventory process.

While limited in scope to just demographic data, it cannot be stressed how significant this effort was, as it required advanced communication and planning from the Data Governance Working Group, buy-in and support at various leadership levels, and active participation by Data Stewards.

Each agency was asked to identify one or more Data Stewards to attend two workshops and complete two surveys to provide information about their systems that collect demographic data. For larger agencies with multiple bureaus, offices, and divisions, this required coordination. As the work being performed by Data Stewards progresses along the DMGP Road Map, agencies will benefit from having the right scale to address the complexity of their data systems, business processes, policies, and procedures.

The Department of Health and Human Services' approach to the demographic data inventory was highly successful. DHHS identified 40 individuals as Data Stewards and assigned two leads to coordinate activities. DMGP met early with DHHS to review the Data Systems Inventory and get feedback for improving the survey prior to launch. Throughout this process, the DHHS data leads and DMGP remained in constant communication. DMGP will build upon this organizational model for implementing future data governance efforts.

Engagement – The workshops and surveys helped establish direct communication between the DMGP and agency Data Stewards. The Chief Data Officer will increase outreach efforts in 2025 to normalize conversations about agencies' needs beyond the demographic data inventory. This will assist the DMGP in identifying use cases for future statewide data governance initiatives, such as longitudinal studies for youth outcomes.

Barriers to sharing data with other agencies were identified (such as legal restrictions) as well as the need to develop data sharing agreements and Memoranda of Agreement (MOA's) to enable data to be shared across departments and/or with the public and under what circumstances.

Engagement with agency Data Stewards came from a place of wanting to understand existing practices to establish a baseline and ultimately provide overarching policies and standards to Executive Branch agencies.

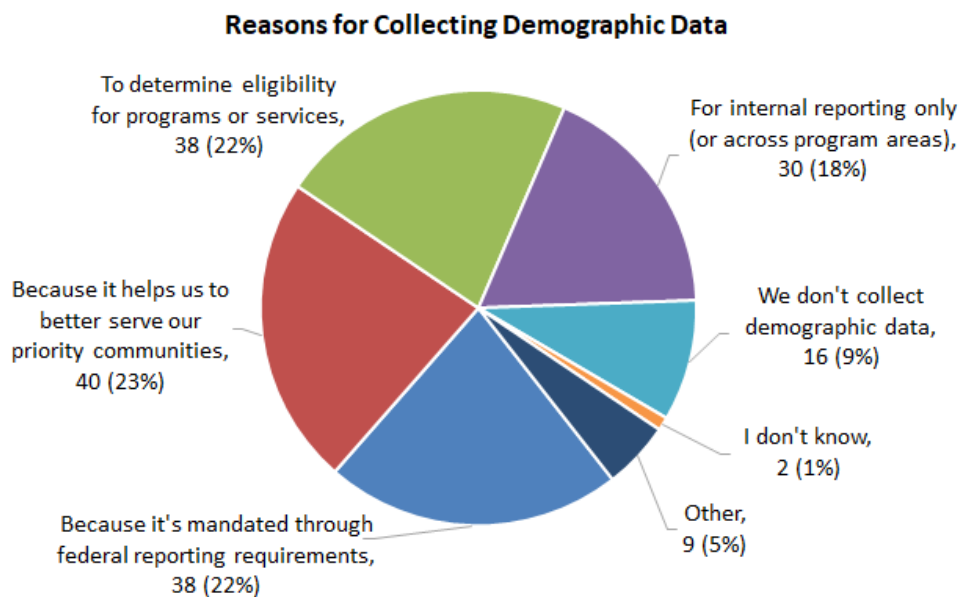
The Data Governance Working Group recognizes that organizational cultural change is crucial to the advancement of data governance initiatives. Through communication, education and training, the working group will establish a structured approach to implement changes, ultimately fostering a collaborative environment of working together towards a common goal of enhancing data quality, ensuring data privacy, and to make data-informed decisions.

Analysis and Recommendations

Demographic Data Collection

State agencies collect demographic data, with roughly the same percentage to determine eligibility for programs and services (22%), improve service delivery (23%), and adhere to Federal reporting requirements (22%). This question was asked in the Demographic Data Survey.

This survey allowed a text box response for those that selected “Other.” Among responses received for this option, two themes emerged: Communication and Outreach, and Compliance with Maine State law.



*Source: Demographic Data Survey

Data Systems

For the purposes of this year's activities, only systems that contain demographic data were in scope. The 146 responsive separate State entities self-reported 263 unique systems that contain demographic data.

As part of larger DMGP efforts to understand where all of the data is, MaineIT reviewed its application inventory. While estimated to be 1,800, the actual number in MaineIT's application inventory is 1,200 unique systems. This number includes systems that are in either the testing or production (live) environment. All are subject to MaineIT's security, accessibility, and performance standards.

There are more than 1,200 active data systems and sources in use by State agencies. First, some of the 263 systems self-reported as containing demographic data are not owned or operated by the State of Maine and therefore are not included in the MaineIT application inventory. Second, because of the prevalence of *unstructured data*. According to Gartner Consulting, approximately 80% of an organization's data is unstructured, meaning that it is not stored in a structured database format and does not follow a predefined data model. Within the State of Maine, unstructured data exists as files such as Microsoft Excel spreadsheets, Word documents, and PowerPoint presentations. A data cataloging tool will be necessary to provide a comprehensive total of the number of systems and sources, including those that are unstructured.

Data Sharing

The Data Governance Working Group wanted to know what barriers to sharing data exist between State agencies.

Responses to the more detailed Data Systems Inventory show a wide variety. Compliance with State or Federal laws was cited as the number one barrier to sharing data (37% or 96/263). Other reasons included: outdated technology/legacy systems (10% or 26/263), data siloes (9% or 23/263), underdeveloped data governance (6% or 15/263), and the lack of data sharing agreements/MOAs (3% or 8/263). There is data sharing happening. 25% of respondents to the Demographic Data Survey indicated they are sharing data among State agencies and/or external stakeholders, using various policies and procedures.

An effort for 2025 DMGP progress will be to develop a standardized template, consistent with MaineIT's security, privacy, and accessibility requirements as well as best practice considerations, to ensure data sharing quality and confidence.

Analysis and Trends

- Data Stewards were asked to name all systems their agency operates that contain demographic data, which demographic data categories each system uses, and the formats/options of these demographic data categories. Responses were received from 23 of the 26 State agencies identified to participate in this statewide demographic data inventory process. Within these agencies, there was a response rate of 76%, 143 out of 189 entities.

This total includes bureaus, offices, divisions, boards, and commissions. 14 agencies provided responses for all their entities

- 9 agencies provided partial responses (42 entities unaccounted for)
- 3 agencies did not respond (4 boards/commissions entities unaccounted for)

Of the 143 responding, there were 263 data systems identified as including demographic data. Follow-up by the DMGP in 2025 will occur with Data Stewards for any categories wherein “Other” or “I don’t know” responses were significant to inform evaluation and determination of standard formatting recommendations.

System Type

Microsoft products accounted for approximately 20% of all systems identified, including: Excel spreadsheets, Access databases, Word documents, and Outlook emails. This is the same percentage as all other third-party solutions combined. While there were custom-built systems included in the responses, they were not statistically significant.

DMGP is committed to identifying opportunities to adopt enterprise-wide systems, which improve interoperability, standardization, and integration while being cost-efficient.

Responses by Category:

Gender – of 263 systems, 97 include Gender. “Male” and “Female” were options in all 97 systems with responses for this category. “Non-Binary” and “Other Gender” options were present in 27% and 43% of these systems, respectively.

Location – was the most represented among the demographic data categories, with 233 of 263 (89%) data systems containing some form. Formats include: (primary, physical, mailing, shipping) address, PO Box, APO/FPO, GIS coordinates, and “Other”. The number of systems and variety of options will be challenging when creating common data definitions and standards.

Race – was present in 81 of the 263 systems, or 31% overall. Distribution was fairly even. The following options were present in all 81 of these systems:

- American Indian or Alaskan Native
- Asian
- Black or African American
- White

The following options were slightly less represented:

- Multiracial (50/263 systems – 62%)
- Native Hawaiian or Other Pacific Islander (72/263 systems – 89%)
- Other Race (53/263 systems – 65%)

Ethnicity – is included in 75 of 263 systems, or 29%. Hispanic/Latino was an option in all 75 systems. Non-Hispanic/Latino was an option in 91% of these systems.

Birth Sex – out of 263 systems, 48 (18%) include this category. “Male” and “Female” options were present in all 48 systems. 20 contained an option for “Other,” or 42% of responses.

Citizenship –40 out of 263 systems, or 15%, include this category. Citizenship yielded the greatest percentage of “Other” option, indicated a need for further evaluation before finalizing standard format.

Socioeconomic Status – was present in some form in 70 of the 263 systems (27% of total responses). Occupation (57/263 – 81%); Income (49/263 – 70%); Location (46/263 – 66%); Education (26/263 – 37%); Wealth (21/263 – 30%); Health (15/263 – 21%); Other (4/263 – 6%); Political Participation (2/263 – 3%).

Sexual Orientation – was the least represented among all demographic data categories, within 8 of the 263 (3%) data systems. Due to the relatively low representation, there is less variety in formatting, which may make it easier to create a common definition and standard for this category.

Education – This data is present in 39 of 263 (15% of total) systems. Master’s Degree, Bachelor’s Degree, Doctorate’s Degree, and Associate’s Degree/GED were included in 26 or more systems. “Other” appeared in 17 systems (44%).

Veteran’s Status – was represented in 50 of the 263 systems (19% of total). “Other” was the most common response, with 28 systems (56%) represented, which will lead to further discussions as DMGP reviews and recommends standard formatting options.

Responses included:

- 40% (20 systems) contained “Active Duty” status
- 30% (15 systems) included “Disabled Veteran”
- 12% (6 systems) for both the “Active Duty-Wartime” and “Campaign Badge Veteran” options.
- 14% (7 systems) for both the “Discharged” and “Released from Service Under Conditions Other than Dishonorable” options
- 10% (5 systems) for both the “Armed Forces Service Medal Veteran” and “Recently Separated Veteran”

Disability Status – was present in 34 of the 263 systems (13% of total). There was fairly solid representation among all options. The Physical Disability and Mental Disability options were in 75% and 71% of these systems, respectively. “Other” was chosen for half of these systems.

Age – Respondents indicated that Age is tracked in 116 of the 263 systems (44% of total). Out of these, the majority (94%) capture “Date of Birth”, 10% express age as a function of “Today’s Date (Minus Date of Birth)”, and 8% use an “Age Range”.

Tribal Affiliation –was included in the Data Systems Inventory by Data Governance Working Group consensus. It appeared in 35 of the 263 data systems, or 13% of total.

Maine’s indigenous tribes had the highest representation, with 77% of these systems having both “Penobscot Nation” and “Passamaquoddy Tribe” as options. This was followed closely by “Mi’kmaq Nation” and “Houlton Band of Maliseet Indians”, which were present in 74%.

Slightly over half of all responses (57%) indicated that the system uses “Other Federally Recognized Tribe” as an option, while (23%) systems have “Other non-Federally Recognized Tribe”.

Data Management and Governance Roadmap 2025 and Beyond

DMGP is a marathon, not a sprint. To incrementally move toward the goal of creating an environment wherein accurate, live, like-formatted data can be safely and securely shared between State agencies and with the public to improve decision making, DMGP has created a Road Map for 2025 and Beyond that outlines broad strategic initiatives to be implemented in the next five to ten years. Some activities can be completed in the short-term without dedicated funding; long-term success will require the State to invest in data governance. Part of future efforts will be the development of a budget map.

Multiyear plan and long-term dependencies high level view - moving towards being a data driven organization

1 Policies and Standards (2025-26)

- Establish the Data Governance policy, standards, and priorities for the DMGP program by defining the roles and operating model required for a successful DMGP program
- Define the potential benefits of governance over the data and analytics to support critical business processes, decisions across state agencies to ensure the business outcome improvement. Gradually expand the scope to additional departments as organizational adaptation develops.

2 Metadata Management (2026-28)

- Institute inventory of data (data catalog) for each agency to increase data standardization, data discovery and accessibility across agencies
- Adopt metadata management solutions and data lineage by identifying and leveraging tools that support metadata analytics, and enhance the capabilities of AI-driven applications and models

3 Data Quality Management (2026-30)

- Establish data quality management foundation and best practices to increase trust in data, improve operational efficiencies, data integration and interoperability, and AI adaptation
- Instrument use case driven approach to formalize data quality standards and best practices by collaborating with the agencies; deploy data quality management tools and processes to scale data quality capabilities and automation across agencies and departments

4 Data Integration (2026-30)

- Categorize current data integration / data management capabilities across agencies, and develop an integration strategy methods to combine data from different sources into a single, unified view by defining an operating and architecture model, and implementation plan to deliver prioritized and sequenced initiatives
- Define the end-to-end data integration strategy and architecture for data acquisition, interoperability, management, analytics, and data science / machine learning

5 Master and Reference Data (2030 and beyond)

- Identify key drivers, needs, use cases, and benefits of master and reference data at SOM; analyse and assess data ecosystem for agencies, and develop “Case for Master and reference data” strategy, including architectural patterns, and integration with other IT initiatives across agencies
- Define future state framework, establish conceptual architecture, pilot and beyond for master data dependent use cases; determine master and reference data tool solution, accelerate and expand rollout for various business use cases and data domains

Change Management & Communication (Continuous)

- Improve data proficiency / literacy with emphasis of data management governance and quality best practices
- Provide end-user training to increase policy adherence and ensure a more effective governance of data

Developing and maturing data governance requires integration of various transformational business and technology initiatives through collaboration with agencies across the State of Maine. There are technical challenges that must be identified and overcome, as well as a cultural shift in perspective of how State government thinks about, collects, tracks, shares, uses and records its data.

Progress on data governance is already happening. Efforts to advance this work will require a continued inventory of what data exists, how that data is collected, strategies to facilitate better data sharing, and implementing data quality management and data integration practices. Ongoing education and training of and with agency Data Stewards is also a key component.

DMGP efforts will focus on creating policies and standards based on best practices about data collection and storage, with the goal of increasing consistency of data.

DMGP continues to undertake significant work to ensure the State of Maine's emerging data governance practice considers equity at every stage of data collection, storage, and usage, in accordance with the statutory mandate. Establishing a Community of Practice to incorporate stakeholder feedback, as referenced in statute, will allow DMGP and agency Data Stewards to provide quality data that the public can trust to identify potential disparate impacts in programs and services.

Phases 1 and 2 of the Road Map must be completed in order. Progress can be made concurrently with other phases. Phase 5 (Master and Reference Data Management) will be a continuous process, requiring strong organizational change management and participation from agency Data Stewards.

1. Policies and Standards (2025 – 2026)

A data governance policy encompasses a clear decision structure, including components such as an enterprise data council, working groups, data officers, and data stewards. It outlines the responsibilities of various roles involved. By establishing this clear decision structure and defining the roles and responsibilities of key stakeholders, State agencies can adhere to a robust data governance framework, thereby supporting effective data management and optimizing data utilization.

Data governance policies and standards provide a structured approach to managing data across various agencies and play a crucial role in empowering state agencies to improve their data and analytics capabilities. This work can be completed without dedicated funding.

By implementing data governance policies and standards, agencies can ensure that the data they collect and use is accurate, consistent, and reliable. This is essential for making informed decisions and providing high-quality services to the public. Data Governance standards and guidelines also enable agencies to share information more efficiently, leading to better coordination and collaboration in addressing state-wide issues with increased transparency and accountability. Data governance standards help protect sensitive information by implementing robust security measures and privacy controls, which are crucial for safeguarding personal data and maintaining compliance with legal and regulatory requirements. Data governance policies empower employees

to better understand and utilize data in their daily work, leading to more informed and data-driven decisions.

2. Metadata Management (2026 – 2028)

Metadata can be simplified as "data about data." It provides information about other data. Metadata management is the process of handling and organizing metadata to ensure that data is easily accessible and understood by users. It enables the creation of a catalog or inventory of data assets, facilitating easy discovery and retrieval of information. Metadata management also establishes clear definitions to ensure consistency and understanding across the organization. By effectively managing metadata, the State of Maine (SOM) can improve data discovery, data integration and interoperability, enhance data quality, ensure data compliance, and support better decision-making. Dedicated funding is required to complete this foundational work, since tools will be needed to identify and analyze metadata attributes from 1,200+ unique systems. This work cannot be done by the Chief Data Officer or agency Data Stewards without these tools.

3. Data Quality Management (2026 - 2030)

Data Quality Management is the process of ensuring that the data is accurate, complete, reliable, and relevant. It involves a set of practices, policies, and technologies aimed at maintaining high data quality throughout the entire data lifecycle, from creation and collection to usage and deletion. Data Quality Management warrants that data meets predefined quality criteria and business rules by verifying its accuracy, completeness, and consistency at the time of entry or transfer. It also helps consolidate data from different sources to provide a unified and consistent view.

By effectively managing data quality, agencies can ensure their data is trustworthy, which is vital for making informed decisions, enhancing operational efficiency, and maintaining regulatory compliance. Similar to Metadata Management, this will require dedicated funding.

4. Data Interoperability and Integration (2026 - 2030)

Data interoperability and integration are crucial for enabling seamless data exchange and collaboration across various systems, platforms, and agencies. By implementing robust data interoperability and integration practices, agencies can unlock the full potential of their data, enhance operational efficiency, and achieve better outcomes.

- Data interoperability refers to the capability of different systems and applications to communicate, exchange, and use data meaningfully. This is achieved by adopting common data standards, formats, protocols, and application programming interfaces (APIs), along with other mechanisms that facilitate interaction and data sharing. These practices ensure consistency and compatibility across various systems.
- Data integration involves combining data from multiple sources to provide a unified and comprehensive view. This process includes data consolidation, transformation, mapping, and synchronization.

This phase is where the enabling technology takes center stage. API's will be needed to allow legacy systems to communicate and share data with new systems that adhere to data policies and standards. Data crosswalks will allow data to conform to potentially different Federal and State definitions and standards.

5. Master and Reference Data (2030 and beyond)

Master Data and Reference Data are two important types of data that organizations manage to ensure consistency, accuracy, and reliability of information.

- Master Data represents the critical entities within an organization, which are used across multiple business processes and systems. These entities are often shared and referenced by various departments and applications. Master data is essential for maintaining a single version of the truth, ensuring that all systems and processes refer to the same, accurate data. Examples of master data include Customers (patients, residents, clients), Employees, and Locations.
- Reference Data is a subset of master data that consists of static or slowly changing data used to categorize or classify other data within an organization. It provides context and meaning to transactional and master data. Reference data helps ensure consistency and standardization across different systems and processes by providing a common set of values for categorization and classification. Examples of reference data include Country Codes, State Codes, Budget Codes, and Tax Identification Numbers.

Effective management of master and reference data is crucial for agencies to maintain data accuracy, consistency, and reliability across various systems and processes. It establishes a single source of truth for critical business entities by minimizing data duplication and inconsistencies, streamlining operations, and enhancing data integration. By effectively managing master and reference data, organizations can improve data quality, enhance decision-making, and ensure smooth and efficient operations.

6. Organizational Change Management (Continuous) Organizational Change Management (OCM) is an approach to transitioning individuals, teams, and organizations from a current state to a desired future state. It involves managing the impact of changes and ensuring smooth and successful implementation to promote buy-in. By clearly defining the vision and objectives of the change initiative and developing a comprehensive change management plan, agencies can effectively manage process or system change, minimize resistance, and achieve successful and lasting transformation through communication and training.

OCM is vital for the successful implementation of data governance initiatives across agencies. By integrating OCM with data governance program, agencies can effectively manage the human aspect of change to ensure the successful and lasting implementation of data governance practices through effective communication and end-user training. This approach enhances policy adherence and promotes more effective data governance by managing data responsibly, which leads to improved data quality, better decision-making, and enhanced operational efficiency. The change management process can begin in 2025 with input from the Project Management Office.

Future Efforts

Data Steward Roles and Responsibilities

The Data Management and Governance Practice is a federated model, consisting of the Chief Data Officer and agency Data Stewards. To assist with this year's DMGP activities, State agencies identified over 120 employees to attend workshops and complete surveys as Data Stewards. The official job titles of these individuals ranged from Deputy Commissioner to Office Assistant.

Each State agency is responsible for maintaining adequate staffing to implement policies and standards as established by the Chief Data Officer and develop agency-specific policies and standards to align with programmatic and business needs. For larger agencies, it is recommended that a lead be identified to coordinate the activities of all Data Stewards. This role would be known as the agency Data Officer.

Due to this year being the kickoff of DMGP activities, the roles and responsibilities of "Data Stewards" are not clearly defined. In 2025, DMGP will delineate clear roles and responsibilities for agency Data Stewards as well as engagement expectations of the Chief Data Officer with these data governance assets. As DMGP goes down the path of implementing its road map, there will be an increasing need for Data Stewards to possess technical knowledge of data, systems, and related concepts. This will likely necessitate a conversation about dedicated positions at the agency level to support this increasingly complex and large-scale work.

Enterprise Systems

Part of the DMGP's strategy as outlined in last year's report is to encourage the adoption of enterprise systems to meet 80% of State agencies' business/program needs, while allowing them to customize the rest. This is known as "Enterprise Scale."

Enterprise systems increase the efficiency of State resources by lowering costs, while enabling apples-to-apples comparisons of data. They also allow agencies with smaller budgets to have access to systems they would not be able to procure on their own, or free up funds for other uses.

One such opportunity would be identifying the number of disparate systems that perform the same business function, such as issuing licenses. Each of these may be managed by a different vendor in a proprietary ecosystem, making it much more difficult and expensive to establish interoperability and enable data sharing. As described in last year's report to this committee, a sunset and on-ramp strategy gives agencies sufficient time to replace existing systems with enterprise systems, when applicable.

Use Cases

Based on the responses to both surveys, it will be beneficial to meet with individual agencies in 2025 to obtain more information about how they want to use data to enhance programs and services or streamline business processes. To accomplish this, the Chief Data Officer will reach out

to agency Data Stewards and identify use cases to help agencies use data to improve decision making.

Head Count

Although not required at this stage, dedicated positions will likely be needed in the future to fully mature data governance and to help agencies use data to improve decision making.

As agencies build capacity and move further along the DMGP road map, the nature of the work becomes increasingly complex. In order to support their agencies, Data Stewards will need to possess technical knowledge of business processes, data, systems, and related concepts.

To assist with conducting this year's statewide demographic data efforts, agencies identified over 120 State employees as Data Stewards. Although some agencies do have dedicated positions to deal with data quality, analytics, and business intelligence, most of these 120 positions were taking on this additional role for the purposes of the demographic data inventory for this year. In 2025, the Chief Data Officer will provide clarity around roles and responsibilities for agency Data Stewards.

While the DMGP will provide workshops and training to improve data literacy, and mature data stewardship, it is incumbent upon State agencies to provide adequate staffing to meet their agency's data governance needs.

For larger agencies with multiple bureaus, offices, and divisions, it may be necessary for a single individual to coordinate the activities of Data Stewards. This dedicated position would be known as a Data Officer. In 2025, DMGP will confer with the Bureau of Human Resources and agency Data Stewards to determine what existing position best encompasses these responsibilities.

Future Funding and Generative Artificial Intelligence (Gen AI)

To achieve the goal of safely and securely sharing live data between State agencies and with the public to improve decision making and reduce disparate impacts, the State will need to invest in DMGP activities.

Phase 1 of the DMGP Road Map (Policies and Standards) can be fully accomplished by 2026 without dedicated funding. All other phases will require funding to acquire tools necessary to identify and analyze metadata attributes from 1,200+ unique data systems, ensure compliance with policies and standards, and allow data systems to communicate and share data.

With respect to Generative Artificial Intelligence, these tools are only as good as the data they rely on, making data governance absolutely critical. Robust and effective data governance practices are the foundation of Generative Artificial Intelligence, especially with regard to Metadata and Data Quality Management, which are Phases 2 and 3 of the DMGP Road Map, respectively. Large language models need to be trained on quality data to prevent bias and improve accuracy. While this year's demographic data inventory was a step in the right direction, an ongoing investment must be made in the Data Management and Governance Practice for the State of Maine to realize the transformative potential of the use of Gen AI managed systems.

Cost Estimates:

The cost of tools, software solutions, and skilled professionals to assist with conducting data governance activities such as data cataloging and data quality management vary widely based on several factors including the platform cost, available alternatives, volume of data and complexity, number of users, specific features, number of data systems explored, and ongoing support and maintenance of the tool.

Implementing Data Cataloging and Data Quality management tools for an organization can initially cost between \$600,000 and \$1,500,000 per year for the first 1 to 2 years, depending on the scope, specific requirements and technical compatibility. Given the various programmatic and business needs of State agencies, a comprehensive assessment is essential to gather requirements and accurately estimate costs and determine the most cost-effective and suitable tool. Ultimately, this would follow the Office of State Procurement Services' process for a request for proposal (RFP) and include support from the Office of Project Management to ensure alignment with the DMGP Road Map. Please note that this would only cover Phases 2 (Metadata) and 3 (Data Quality).

DMGP Action Steps for 2025

Despite the tremendous progress made in 2024, statewide data governance is still an emerging function. Over this year and the next, the DMGP will build upon successes from the demographic data inventory to advance data governance efforts by establishing a framework and operating model with a clear decision-making structure, policies and state-level data standards; and partner with Data Stewards to create agency-specific policies and standards to address their unique business needs.

The following are activities the DMGP can complete in 2025 without dedicated funding:

1. Establish Strategy, Framework, and Operating model
 - Define a state level data council, committees and working groups for decision-making.
 - Outline roles and clear responsibilities for agency Data Stewards/Data Officers as well as engagement efforts of Chief Data Officer with these data governance assets.
 - Enable council and working groups by forming a group of representatives from agencies to advance data governance efforts.
2. Establish Clear Policies, Standards and Procedures
 - Publish Executive Branch baseline data governance policy, and standards for Metadata, Data Quality management, Interoperability and Integration, and Master and Reference Data.
 - Create a master data sharing agreement by collaborating with agencies to ensure it meets privacy and security needs for safely sharing data.
3. Organizational Change Management, Data Literacy, and Data-Driven Culture

- Publish data governance policies and standards for Executive Branch.
- With the help of the project management office (PMO), conduct tailored workshops and training sessions to educate agency data stewards to advance data governance standards and principles.
- Engage with stakeholders across agencies to identify use cases where effective data governance can add significant value to programs, services, business processes, data sharing, or reporting.
- Promote data governance best practices through communication and guidance.

Data Governance Working Group Action Steps for 2025

- Consult with DMGP to identify training opportunities for agency Data Stewards, develop content and facilitate workshops for Data Stewards to enhance data literacy and other topics of interest.
- Engage with stakeholders to create a common data definition for the Tribal Affiliation category.

Appendix

Glossary of Terms

Data Catalog - collection and classification of metadata

Data Governance - the ability to use demographic, socioeconomic, and spatial data to make better-informed policy decisions for programs and services

Data Inventory – types of data an organization currently collects, and what data it needs, but does not currently collect

Data Literacy - the ability to read, understand, create and communicate data in context, including an understanding of data sources and constructs, analytical methods and techniques applied, and the ability to describe the use case, application, and resulting value

Data Management - the processes, tools, and enabling technology that support Data Governance

Data Maturity – level of sophistication of an organization’s data management and governance policies, procedures, and practices. In the absence of written policies and procedures, it defaults to what is actually being done

Data Maturity Assessment – process by which organizations identify current practices and policies, data systems, data inventory, data catalog, and prohibitions and restrictions around legal or ethical sharing of data

Data Quality - The degree to which data is accurate, complete, timely, consistent with all requirements and business rules, and relevant for a given use

DMBOK – Data Management International’s Data Management Body of Knowledge model. It contains 10 core domains:

- Data Quality
- Data Architecture
- Data Modeling and Design
- Data Storage and Operations
- Data Security
- Data Integration and Interoperability
- Document and Content Management
- Reference and Master Data
- Data Warehousing and Business Intelligence
- Metadata

Gap Analysis - comparison between the current state of an organization’s data management and governance policies and practices and its aspirational state

Integration – unification of multiple data systems and technologies into one. Although some integration will occur, this will not be DAFS’s primary approach as there are currently over 1,200 disparate data systems, and centralizing all of this data into a single entity would likely create a security concern

Interoperability - the ability of disparate data systems to work effectively together and share data. DAFS’s vision of the Data Management and Governance Practice is to support interoperability among the State’s various data systems, rather than merge them into one (integration)

Metadata – “Data about data.” This includes the purpose, date of creation, quality, location, author, file size and name. Much of this information can be de-identified to promote legal and ethical sharing of data.

Master and Reference – Master and Reference data establish a single source of truth for critical business entities by minimizing data duplication and inconsistencies, streamlining operations, and enhancing data integration. This data is the backbone of all financial systems. When this information is inconsistent across different parts of an organization, essential business functions suffer. Examples of master and reference data include budget units, merchant category codes, payroll information, office locations, and tax identification numbers.

Prohibitions and Restrictions - the laws, policies, and other safeguards or barriers that prevent an organization from sharing data

Structured Data – Data that has a standardized format (usually a predefined data model) that makes it easier to access for reporting and other purposes.

Unstructured Data - Data that is not stored in a structured database format and does not follow a predefined data model. Examples include Microsoft Word documents, Excel spreadsheets, and PowerPoint presentations.

Responses to the Data Systems Inventory by Agency

Demographic Data Category	Total Count of Systems Collecting Demographic Data/ By Agency
Department of Administrative and Financial Services	
Location	67
Socioeconomic Status	25
Age	13
Veteran Status	10
Disability Status	10
Tribal Affiliation	7
Other	7
Gender	7
Citizenship	7
Ethnicity	5
Education	5
Birth Sex	5
Race	4
Department of Agriculture, Conservation and Forestry	
Location	40
Socioeconomic Status	14
Age	3
Gender	2
Birth Sex	1
Education	1
Other	1
Race	1
Sexual Orientation	1
Department of Corrections	
Age	8
Birth Sex	8
Citizenship	8
Education	8
Ethnicity	8
Gender	8
Location	8
Race	8
Socioeconomic Status	8

Tribal Affiliation	8
Veteran Status	8
Department of Defense, Veterans and Emergency Management	
Location	2
Age	1
Gender	1
Socioeconomic Status	1
Veteran Status	1
Department of Education	
Age	4
Education	3
Ethnicity	3
Race	3
Veteran Status	3
Gender	1
Location	1
Department of Health and Human Services	
Location	58
Age	56
Gender	49
Race	44
Ethnicity	41
Birth Sex	21
Disability Status	18
Socioeconomic Status	17
Citizenship	15
Veteran Status	14
Tribal Affiliation	13
Education	10
Other	6
Sexual Orientation	4
Department of Inland Fisheries and Wildlife	
Location	17
Age	3
Gender	2
Tribal Affiliation	2
Citizenship	1
Disability Status	1

Veteran Status	1
Department of Labor	
Age	5
Gender	5
Location	4
Race	4
Disability Status	3
Education	3
Ethnicity	3
Socioeconomic Status	3
Veteran Status	3
Other	2
Department of Marine Resources	
Age	3
Location	3
Citizenship	2
Education	2
Gender	2
Tribal Affiliation	2
Veteran Status	2
Birth Sex	1
Race	1