CIO-110 Enterprise Data Management Policy

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Office of the Chief Information Officer Enterprise Policy

CIO-110: Enterprise Data Management Policy

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Policy Statement: This policy establishes controls related to Enterprise Data Management. The policy provides guidance in decision-making and practices that optimize resources, mitigate risk, and maximize return on investment.

Definitions:

- High-Value Data Elements - Data that can increase agency accountability and responsiveness; improve public knowledge of the agency and its operations; further the core mission of the agency; create economic opportunity; or respond to need and demand as identified through public consultation.
- Metadata - Data that provides information about other data. For example, metadata may include definitions of database objects such as fields, base tables, views, synonyms, value ranges, indexes, users, and user groups.

Policy:
The purpose of this policy is to manage Commonwealth data as an asset, focused on maintaining data integrity, confidentiality, availability, and security to maximize its benefit.

The following principles apply to establish data management standards and a framework for practice that safeguard data and maximizes its efficient use:

- Data are business and technical resources that can be managed as assets.
- There are costs associated with the collection, management and protection of data. Every effort should be made to avoid redundant data collection and management activities.
- Data sharing reduces redundant data collection and can improve the reliability of data for multiple users.
- While data should be maintained and managed as close to the data source as possible, data standards must be maintained to ensure the data can be relied upon by multiple users.
- Providing accessibility to data across organizational silos promotes the reduction of data management redundancy, and enhances the services and offerings that the Commonwealth of Kentucky, its agencies, and its partners can provide.

Responsibilities:
The Commonwealth's Chief Data Officer (CDO) is responsible for development, implementation, and maintenance of standards and best practices to manage Commonwealth data efficiently. The CDO shall coordinate and oversee the sharing of data and shall implement effective data governance strategies designed to maintain data integrity, confidentiality, availability, security, and to promote access to data.

For data sharing, agencies shall use a Data Use Agreement (DUA) template approved by the Chief Information Officer (CIO), the Chief Compliance Officer (CCO), the Chief Information Security Officer (CISO), and the CDO. Any proposed deviations from the approved template for Data Use Agreements need to be authorized by the CDO, CISO, CCO, and CIO prior to execution.

Data Stewardship:
The CDO shall ensure that data, information and analytics conform to Commonwealth data quality standards. The Office of Data, Information, and Analytics (ODIA) led by the CDO shall ensure practices and policies are developed and maintained to align with data quality best practice.

The CDO is the chief steward of all data within the Commonwealth. The CDO shall establish and publish a catalog of standards to be followed, and guidance regarding their use. The CDO shall also support procurement activities to ensure that data standard requirements are captured in solicitations and contract awards.

The ODIA shall:

- Develop and maintain an inventory of data sharing agreements and an inventory of data sources and datasets.
- Make the catalog accessible to authorized staff across the Commonwealth agencies. The catalog shall be updated when data sources/datasets are added, modified or removed. The catalog shall be reviewed for accuracy at least once per year.

The CCO and CISO shall establish a process to maintain sensitive information separately and provide access on a need-to-know basis. The CDO shall invoke that process as necessary in support of managing data as an asset.

Executive branch agencies shall designate at least one Agency Data Steward that: reports directly to the Cabinet Secretary or Agency Head; acts as the liaison to the CDO/ODIA; and is responsible for data stewardship within the agency.

In accordance with ODIA guidelines, Agency Data Stewards shall:

- Assist in the development of the initial data inventory, including identification of high-value data elements, and shall ensure their agency supports the maintenance of the inventory in a timely fashion.
- Develop and maintain a data source inventory describing and categorizing the data created or collected by the state agency, including geospatial data used in a state agency's geographic information system (GIS)
- Develop and maintain an open data catalog and machine-readable open datasets
- Develop and maintain an inventory of all interfaces that describes inbound or outbound datasets generated, aggregated, stored, purchased, or shared by the state agency
- Submit agency's data warehousing, data analytics, and data visualization plans to the CDO for approval prior to procurement or execution of such activities
- Have authority to enforce Commonwealth Data Management Policy, Data Management Standards, and Data Quality Policies and Standards, within the agency
- Participate in Commonwealth Data Governance and Management workgroups and subcommittees as appropriate
- Participate in Commonwealth Data Plan activities and lead Agency Data Management planning, including the development of roadmaps and tracking, reporting, and managing roadmap implementation.

All data-sharing partners to the Commonwealth, as well, shall designate a Data Steward (or the equivalent) and provide data inventory and maintenance support within the limits of their data sharing agreement.

Executive agencies shall:

- Use the Commonwealth Master Data Agreement that provides terms and conditions for the exchange of data between Commonwealth agencies as prescribed by the CCO
- Submit copies of existing data sharing agreements, including details of involved datasets to the ODIA.

Data Management Practice:
The CDO shall develop and publish a data management framework for use across agencies, including strategies, tools, and practices for data warehousing, data modeling, and analytics.

The ODIA shall be the lead organizational entity within the Executive Branch in ensuring data is available, reliable, consistent, accessible, secure, and timely to support the Commonwealth's mission and activities, by:

- Establishing and maintaining enterprise data governance
- Aligning and standardizing data models, and leading the reduction of duplicative data collections
- Managing an open government data effort including coordinating and managing how the Commonwealth offers interaction with Commonwealth data sources
- Creating, managing, and delivering public data products, and developing, establishing, and overseeing methodologies and technologies for delivering and sharing data
- Developing and facilitating strategies for decreasing the cost of data management while increasing the value of Commonwealth data
- Improving how the Commonwealth collects, uses, manages, and publishes data
- Leading Commonwealth efforts to track data collections, data purchases, databases, physical data models, data warehouses, and linkages between datasets
- Improving data quality, developing data quality measurements, and managing the measurement of data quality
- Facilitating the creation and conduct of a Commonwealth data working group which includes Commonwealth agencies, state, regional, and local public entities, and public institutions of higher education. The working group shall implement effective data governance strategies designed to further data sharing, maintain data confidentiality, integrity, availability, security, and promote access to data.

Agency Data Stewards (and their equivalents) shall collaborate with the ODIA in developing practice and standards. As specific strategies and standards are implemented, Data Stewards shall lead implementation and governance activities within their respective agencies.

Compliance, Monitoring and Review:
The ODIA and CCO shall share compliance and monitoring authority for all data management activities. Any exception to policy, standards, or practice shall be resolved at the lowest level practical.

The CDO shall develop and publish a data management exception policy and process.

Data Stewards shall liaison with their agency for any data management exceptions.

Open Data Management and Reporting:
The CDO shall develop communication strategies to promote and develop business rules, guidelines and practices for data management and sharing within the Commonwealth, to include state, local government, academic institutions, and private interests.

In support of developing public data products and promoting data sharing, the CDO may request reports from, or liaison with external entities, to document available or planned data repositories and to facilitate data sharing.

Cataloged metadata shall be publicly available if there are no information security, sensitivity, or regulatory concerns. Issues precluding the publication of data sources or datasets shall be identified, and conditions for

accessing that metadata will be established. Such data will be provided on a need-to-know basis.

Authority: KRS 42.726 authorizes the Commonwealth Office of Technology (COT) to develop policies and compliance processes to support and promote the effective applications of information technology within the executive branch of state government.

Applicability: All executive branch agencies and non-executive branch agencies using COT-managed infrastructure or services shall adhere to this policy. This includes employees, contractors, consultants, temporaries, volunteers, and other workers within state government.

Responsibility for Compliance: Each agency shall ensure that staff within their organizational authority are made aware of and comply with this policy. The agency is responsible for enforcing it. Unauthorized and/or neglectful actions regarding this policy may result in disciplinary action up to and including dismissal. COT may require additional service charges for remediation efforts due to non-compliance with this policy.

Maintenance: COT's Office of Data, Information, and Analytics (ODIA) is responsible for maintaining this policy. Organizations may modify this policy to fulfil their responsibilities, but shall obtain approval through an exception request. Staff should refer to their internal policy, which may have additional information or clarification.

Review Cycle: COT's ODIA will review this policy at least every two years.

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