

Enterprise Data Strategy: Empowering Data Informed Diplomacy

This strategy represents the close collaboration of bureaus and offices across the Department to develop a holistic approach to building a foundation of data capabilities and assets. As the Department’s first data strategy, it is a critical step toward improving our ability to use data to inform diplomacy while upholding the highest levels of scientific and data integrity. This strategy, and a following implementation plan, are set on a three-year time horizon to create momentum, deliver rapid return on its efforts to support the Department’s workforce, and provide accountability to American taxpayers.

FROM VISION TO ACTION ~ To facilitate actionable progress to enhance the Department’s data capabilities, four Goals serve as foundational targets to guide how the Department will reach its Vision. Each Goal seeks to build on and scale identified opportunities for improvement to create meaningful impact for the Department and ensure efficient implementation timelines. The thirteen specific Objectives represent actions that the Department needs to take to reach its Goals. These bold yet achievable steps will help drive action toward the Department’s Vision over the next three years.

The Department will use milestones and performance metrics in the implementation plan which will remain an internal and deliberative Department document, to regularly review and monitor its progress toward meeting the Goals outlined in this strategy. Upon successful completion of its first-ever data strategy, the Department will evaluate the progress made and use that to inform future iterations of the data strategy or similar strategic plans.

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U.S. Department of State (DOS)

Stakeholder(s):

Brian P. McKeon :

U.S. Deputy Secretary of State for Management and Resources

Enterprise Data Council (EDC) :

Building data capabilities throughout the Department requires a broad organizational effort and alignment to both create and sustain the changes outlined in this strategy. As the coordinating and advisory body for the Department's data, the Enterprise Data Council (EDC), chaired by the Chief Data Officer (CDO) and comprised of representatives from across the Department including the Evaluation Officers and Statistical Official, will oversee the implementation of this Strategy and regularly report progress to the Deputy Secretary of State for Management and Resources (D-MR). The EDC, M/SS, and the Department's Center for Analytics (CfA) will support the

continuous stakeholder engagement crucial to embedding positive change at all levels of the organization.

Center for Analytics (CfA) :

To execute this strategy, the CfA and designated EDC Liaisons representing bureaus and offices across the Department will develop an implementation plan. This implementation plan will include a portfolio of sequenced activities that balance quick wins to build momentum with longer-term efforts to enact lasting organizational change. Assessments of the impact, feasibility, and key dependencies of each Objective will inform the timeline to complete the portfolio of activities. Similarly, the plan will leverage and enhance established efforts across the Department to meet its Goals and Objectives and create new data capabilities where needed to reach the desired end-state.

Vision

Data is a critical instrument of diplomacy, the Department's global workforce is empowered with the skills and tools to derive actionable mission insights from data, and its data assets are securely shared and effectively managed.

Mission

To build a foundation of data capabilities and assets

Values

Principles:

The 'SAGES' Guiding Principles support the overall data strategy by providing a clear value framework for prioritizing implementation activities and addressing challenges that arise. These Guiding Principles were informed and validated by stakeholders across the Department.

Sharing:

Data is appropriately shared across the Department through collective stewardship to enable analysis across the enterprise and enhance its value. Effectively shared data empowers the workforce to derive its own insights from cross-cutting data and reduces duplicate purchases of datasets.

Application:

Data is broadly understood and applied to inform evidence-based decisions at all levels and missions across the globe. Decisions that factor in end user needs will enable the workforce to blend their expertise with data insights more easily.

Governance:

Effective oversight and management of data enables the Department's applications through improved data quality, simplified use, and investment decisions prioritized by mission impact. Clearly managed and accurate data builds trust and reduces the reporting burden on the end user.

Ethics:

Data is responsibly collected, stored, and utilized to provide accountability to the U.S. taxpayer and uphold the highest levels of scientific and data integrity. Implementing leading industry standards in ethical data capabilities minimizes bias, fulfills the Department's obligations to the U.S. people, and models the importance of incorporating democratic values in technology on the world stage.

Security:

Data is safeguarded through industry leading security practices at each classification level to protect U.S. national interests at home and abroad. As malicious actors seek to gain unlawful access to sensitive data, decisions that advance security will remain paramount to protecting national security and privacy.

1. Culture

CULTIVATE DATA CULTURE

IMPERATIVE ~ The Department's workforce does not have the data skills needed for each role in the future.

SOLUTION ~ Recruit, train, and incentivize a workforce and workplace where data is routinely sought, valued, and fluently utilized for decision-making at all levels and geographies.

IMPACT ~ Increased data fluency empowers employees to pair data skills with mission expertise to advance American diplomacy and operational efficiency.

1.1. Fluency

Strengthen Data Fluency

To prepare its workforce for an increasingly datadriven world, the Department will invest in data fluency initiatives to enhance data and analytic skills at all levels and across the enterprise. Currently, the Department's workforce has various levels of knowledge, skills, and abilities for using data to complete tasks and make decisions. Going forward, roles will require greater data fluency than currently available. This Objective will encompass training courses and support materials tailored to needs for exploring, understanding, and interpreting data, as well as identifying new ways to stimulate the creative and impactful uses of data to advance diplomacy.

1.2. Collaboration

Enhance Data Collaboration

The Department will create channels to share institutional data and knowledge across the enterprise and incentivize cross-bureau data collaboration. While the global workforce has deep expertise in the mission and operations of the Department, they do not have access to forums to learn from the Department's data experts and identify the datasets they need. To enable data collaboration, the Department will scale secure forums and channels to pair proficiency in missioncritical knowledge domains with data practices to extract new benefits from the Department's data.

1.3. Hiring

Hire for the Future

The Department will evolve its hiring practices to include requisite data skills. Data skillsets must be an integral component for a wider range of key positions. If data skills gaps are left unaddressed, the Department's hiring will be unable to keep pace with evolving data needs. As a complement to the Data Fluency efforts focused on upskilling the existing workforce (Objective 1.1), the Department will institute requirements for the data skills needed in specific roles by updating job postings and position descriptions and creating a new series of data science positions to meet identified data skills capabilities.

2. Analytics

ACCELERATE DECISIONS THROUGH ANALYTICS

IMPERATIVE ~ The Department's global workforce lacks tools for conducting advanced analytics and creating products to derive insights.

SOLUTION ~ Empower the Department's global workforce to utilize data by providing easy access to the Department's data assets, modern analytics tools, and customer service to enable their use.

IMPACT ~ Providing the workforce with data tools and analysis enables evidence-based decision-making across mission and operational activities.

2.1. Products

Deliver Analytic Products

The Department will expand the ability of the workforce to better use widely available enterprise analytics resources. While the proliferation of analytics products has benefitted individual bureaus, offices, and posts, potential users in other parts of the enterprise lose valuable time searching them out or building redundant ones. To bring products to potential users, the Department will market existing analyses, dashboards, and other data products, while establishing user feedback mechanisms to enable continuous improvement and identification of new products that can drive mission-centric decisions. In cases where multiple stakeholders have similar analytic needs to meet mission requirements, the Department will encourage joint development of products to break down silos and maximize return on investment.

2.2. Tools

Provide Modern Analytic Tools

The Department will expand the secure use of modern analytic tools, such as visualization software, geospatial data capabilities, cloud platforms and programming languages, to derive new types of insights from its data. Skilled data users must have appropriate analytic tools for their business needs. A more integrated approach to providing the workforce with the right tools, will enhance opportunities to extract value from data. To better support users, the Department will facilitate access to enterprise analytic tools, streamline approval and licensing processes for new tools, and define responsibilities for the training needed to accelerate their use for mission-driven analysis.

2.3. AI & ML

Pilot and Scale AI and ML Applications

The Department will explore equipping its workforce with AI and ML capabilities to inform foreign policy decisions and increase operational efficiency. The Department must establish policies and processes that ensure AI and ML capabilities are applied ethically, protect privacy, reduce bias, promote transparency, and align to legislative and executive requirements. (Footnote 1) The Department will also catalog ongoing AI and ML initiatives and capitalize on these successes by harnessing interagency partners' accomplishments to complement the Department's mission set, piloting new use cases, scaling existing capabilities, and sharing expertise across the Department.

3. Data

ESTABLISH MISSION-DRIVEN DATA MANAGEMENT

IMPERATIVE ~ The Department does not have the technologies needed to enable effective management and oversight of its data.

SOLUTION ~ Implement a common technical approach to effectively create, collect, store, protect, and share data across the Department, the interagency, and with the public.

IMPACT ~ Mission-driven data management improves the depth, breadth, and quality of analysis possible with the Department's data, while making more efficient use of the resources needed for maintenance throughout its lifecycle.

3.1. Access

Enable Access to Data

The Department will establish simple, streamlined, and secure access to authoritative internal and external datasets for Department users across the globe. Presently, the Department employs a federated approach to data management, and this landscape at times prevents bureaus, offices, and posts from accessing potentially useful data assets or from knowing they exist. Recognizing the need for an enhanced cybersecurity posture and requirement to ensure security of classified and sensitive data – such as Personally Identifiable Information (PII) – the Department will develop a secure common platform for select datasets with integrated records management, transparent data lineage, and clearly identifiable systems of record to maintain the integrity of shared data.

3.2. Architecture

Define Data Architecture

The Department will design data architecture to reinforce data integration, standardization, security, and quality across the enterprise. It will leverage existing IT modernization efforts and partnerships with the IT Executive Council (ITEC), The Bureau of Information Resource Management (IRM), and other bureau IT organizations to ensure these required data capabilities have been implemented to enable data sharing, data management, and faster reporting times.

3.3. Standards

Define and Implement Data Standards

The Department will define and implement data standards, such as web services, data discovery, and metadata, that are broadly understood and used to describe, ingest, record, and format data. An enterprise approach to data standards is needed, as current approaches are bespoke to specific data products and are not applied uniformly nor broadly understood. By drawing upon established Department and international standards and adapting them for the enterprise, data owners, stewards, and users will gain clarity on their roles in applying standards to data. The standards will enable greater discovery, utility, security, and efficacy of the Department's data.

3.4. Quality

Establish Data Quality Program

The Department will deploy the framework, tools, and processes necessary for upholding the highest levels of scientific and data integrity and improving data quality to enable the development of trustworthy and accurate data that can be readily blended, analyzed, reported, and shared across the enterprise and with the public. Decision-making must be based on reliable data, yet with limited guidance on data entry and associated review processes, the Department's data quality is inconsistent. To reinforce data integrity and continually enhance its data, the Department's Data Quality Program will promote systematic measurement and evaluation of data quality characteristics, such as accuracy and timeliness. This program will also support necessary process improvement efforts for data entry.

4. Governance

ENHANCE ENTERPRISE DATA GOVERNANCE

IMPERATIVE ~ The Department lacks comprehensive policies and procedures to provide management and oversight of data across the enterprise.

SOLUTION ~ Enable management oversight and coordination of DoS data through effective stewardship, policies, process controls, and investment decisions that appropriately value data.

IMPACT ~ Consistent data governance throughout the Department advances the ability of Bureaus and Offices to more easily manage, share, and use the Department's data, while reducing the time and resources required to do so.

4.1. Operating Model

Institute Data Governance Operating Model

The Department will codify and operationalize the guidance and support provided to data governance functions. Across the enterprise, this guidance will enable bureaus, offices, and posts to implement collective, comprehensive, and efficient oversight over the Department's data, while applying industry-leading practices to maximize return on investment. To accommodate diverse levels of data maturity and needs for data governance, the Department must tailor an enterprise data governance operating model that accounts for these differences. It must likewise establish processes for collaboration between bureaus, offices, posts, and the Enterprise Data Council to create and enforce data standards and policies, while supporting nimble working groups dedicated to addressing the Department's most pressing data challenges.

4.2. Policy

Develop Data Policy

The Department will collaboratively establish and systematically refine its data policies to reflect regulatory requirements and industry leading practices. As federal guidance around data evolves to provide more clarity on the actions agencies must take to improve data capabilities, strengthen cybersecurity, enhance transparency, and provide accountability to the U.S. taxpayer, the Department must continually re-align its internal policies for compliance. Likewise, industry leading data practices and data governance tools must inform decisions around how the Department governs and manages its data. The Department will establish a methodology to update its policies that ensures continuous compliance with federal legislation such as the Geospatial Data Act, the Open Government Data Act, the Foreign Aid Transparency and Accountability Act, and the Foundations for EvidenceBased Policymaking Act of 2018.

4.3. Metrics

Measure the Organizational Value of Data and Analytics

The Department will systematically assess the value of data and analytics initiatives, from creation and analysis to mission and operational decisions. As the volume of data and enabling tools continues to grow, it will be incumbent upon all stakeholders to ensure data and analytics initiatives are targeted to effectively and efficiently support the Department's mission. And as those targeted endeavors drive successful Department priorities, they will promote a virtuous cycle of increased data and analytics use in other critical decision-making areas.

Administrative Information

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