The IC Data Strategy 2023-2025

The IC Data-Driven Future: Unlocking Mission Value and Insight


UNITED STATES INTELLIGENCE COMMUNITY
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From the Director of National Intelligence

Data, and our ability to manage it properly, is fundamental to our work and to maintaining our advantage in an increasingly complex and interconnected global security environment. The Intelligence Community (IC) needs a common strategy for how to leverage all collected and acquired data to operate, collaborate, and communicate securely at speed, while also ensuring that we do so lawfully and consistent with our values. In the next decade, we will be pushed even further and faster by expected and unexpected evolutions in technology, particularly of the internet and artificial intelligence. The IC Data Strategy will allow us to harness and accelerate our efforts in mutually reinforcing ways across the U.S. government, with our foreign partners and our private sector and academic partners, to make data interoperable and discoverable, and thereby unlock mission value and insight to ensure continued decision advantage and actionable intelligence.

Avril D. Haines

From the Principal Deputy Director of National Intelligence

Our mission is to provide senior policymakers with the insights they need to make informed decisions about the challenges in our ever-changing world. We must think and act strategically, with an eye on how data and technology influence our long-term needs. Everything starts with the data. We need to develop end-to-end data management plans with intentional and deliberate action from the point of collection and acquisition of data to exploitation and dissemination. The IC Data Strategy drives deliberate planning to accelerate the delivery of relevant data to those that need it, when they need it, both now and in the future.

Dr. Stacey A. Dixon

From the Intelligence Community Chief Data Officer

To stay ahead of the diverse, complex, and growing threats and opportunities facing the nation, the IC must embrace the ongoing digital and data transformation and plan for it. The IC Data Strategy directs our collective energy to make data securely accessible and interoperable across boundaries and domains. We will transform the workforce into one capable of recognizing and realizing the value of data. These efforts will expand the ability to discover, access, and leverage the IC's data securely at the speed of mission.

Lori Wade

IC Data Strategy 2023-2025

Mission	Vision	Values
Enable secure discovery, access, and use of IC data for mission value and insight at speed and scale.	A data-driven IC optimized and positioned for decision and operational advantage.	Interoperability, Sharing, Partnership, Innovation, Protective of Privacy and Civil Liberties

Strategic Focus Areas

The IC Data Strategy's strategic focus areas provide the overarching direction for driving intelligence outcomes. Taken together, these four focus areas will allow the IC to unlock mission value and insight, and leverage our data to operate, collaborate, and communicate securely and at the speed of mission, while performing this mission in a manner consistent with our nation's principles and values.

- Perform End-to-End Data Management
- Deliver Data Interoperability and Analytics at Speed and Scale
- Advance All Partnerships for Continued Digital and Data Innovation
- Transform the IC Workforce to be Data-Driven

To bridge the gap between where we are today and optimizing for the future, we have taken a step back to see what we need to do as a Community to accelerate our data and digital transformation over the next three years so that end-to-end data management is core to what we do and not seen as merely an enabling function. The IC Chief Data Officer (IC CDO) and IC Chief Data Officer Council (IC CDOC) will identify the strategic steps the IC can take now to drive significant progress in addressing our data challenges while reinforcing the Principles of Professional Ethics for the IC, which embody our core values. Appreciating that the pace of digital innovation is so fast, we will employ an active and iterative strategy development approach going forward—agility and continuous learning will be central to planning for our future strategic imperatives.

Introduction

In this hyper-connected, data-driven digital world, the intelligence challenges we face are much more complex and interconnected than ever before. The rapid improvements in commercial software, sensors, data curation, data management, and computing technologies are making it more difficult for government entities to anticipate the need for, acquire, and manage these capabilities at the same pace that our adversaries and the global community are able to integrate them into their systems. Our Nation has entered a new period of strategic competition. It is no longer just about the volume of data, it is about who can collect, access, exploit, and gain actionable insight the fastest, as they will have the decision and intelligence advantage.

It is important to understand the ongoing data and digital evolution, and recognize the opportunities and the threats inherent in it. The opportunities and vulnerabilities cross every facet of the IC. It is imperative for the IC to act on these opportunities and plan for the steps needed to counter and mitigate the threats. Embracing the complexity of the challenges in front of us, we will focus on data curation and advanced analytics to ensure data is consumable by both humans and machines. We must reduce the time from collection and data acquisition to mission insight based on a foundation of end-to-end data lifecycle management. Improving our capabilities and the associated outcomes requires changes to historical, system-centric paradigms, years of legacy practices, culture, critical partnerships across organizations, and disciplines.

To date, we have not significantly prioritized data as a strategic and operational IC asset. The central challenge remains that the IC is not fielding data, analytics, and artificial intelligence (AI)-enabled capabilities at the pace and scale required to preserve our decision and intelligence advantage. Addressing the challenge requires an integrated and data-centric approach, focused on the holistic data flow lifecycle from collection and acquisition, to transporting, ingesting, curating, exploiting, disseminating, and disposing of IC data. With the IC Data Strategy guiding us forward, the IC will plan for and expand capabilities for data sharing, improve data usability, develop a data-savvy workforce, and continue to innovate toward a data-driven IC enterprise, incorporating privacy and security protections by design.

Strategic Focus Areas

Perform End-to-End Data Management

Create end-to-end data management plans for the collection and acquisition of all data, to enable and reduce the time of secure data flow from collection to actionable insight.

Foundational data management planning will improve the IC's ability to increase mission value from data.

Going forward, all collection or acquisition of data will need to include an end-to-end data management plan, from the point of collection or acquisition of data through exploitation, dissemination, and disposition, with consideration for its ethical and appropriate use, consistent with law and policy.

End-to-end data management planning will establish needed interoperability standards, data handling instructions, tagging and conditioning, attributes and machine readable labels, data privacy and compliance, and data science and engineering. IC data management planning shall, therefore, include minimum common standards for the use, protection, dissemination, interoperability, and generation of IC data.

To address the continued data challenges across the IC, we have to work together to put into place the ability to discover, access, and leverage the IC's data at the speed of mission and across all missions. End-to-end data management brings intentional and deliberate action at the point of collection and acquisition of data, embedding it into the vast amount of planning already inherent in these processes and workflows. When the IC brings together the operators and the data professionals with the Information Technology (IT) privacy and security teams at the beginning to develop a deliberate life cycle plan for data, this ensures the data will flow to the places and people that need it in a secure and timely manner.

Deliver Data Interoperability and Analytics at Speed and Scale

Adopt and mature existing data services, add new services and capabilities, and ensure data is AI-ready and consumable by both humans and machines.

To make data more interoperable, the IC will implement a data-centric framework that shifts the current focus from a system-centric to a data-centric architecture. A data-centric architecture assures that the primary functional role of an IT architecture enables secure and timely discovery, analysis, production, and dissemination of data to enhance the effectiveness of the intelligence lifecycle. Data-centric principles ensure that IT architecture considers the data management lifecycle from point of acquisition through exploitation until disposition.

The adoption of a data-centric focus is core to developing machine-assisted data discovery, precise and unambiguous data interpretability, data interoperability, AI- and machine-assisted analytic workflows, community collaboration, clearly defined measures of data quality, and to preserving integrity and provenance. The data-centric operating model will define integration and standardization requirements as well as elements of supportability for participants. The associated architectural elements of a data-centric framework will provide

clear guidance for models, entities, ontology, information exchange, and metadata standards. These technical but essential details will enable the IC to maximize intelligence value from all its data, while complying with legal or policy limitations and our high ethical standard.

Shared analytical modeling and the use of training data first support increased adoption of AI and automation at the point of data collection, acquisition, or ingestion. New and improved automation will assist with data preparation and labeling, and help reduce the time it takes to ingest new IC data sets from weeks, to days, to hours, and to minutes. These efforts will provide mission users faster access to quality data to address and respond to intelligence needs as world events evolve.

Advance All Partnerships for Continued Digital and Data Innovation

Strengthen IC partnerships with the private sector and academic partners to promote a more sophisticated and integrated understanding of the evolving data and digital landscape, while also promoting innovation intended to support every aspect of this Strategy's Vision of a data-driven IC that is optimized and positioned for decision and operational advantage.

The IC's existing partnerships with foreign partners and allies continue to advance as we focus on data interoperability at speed and scale, consistent with our respective legal frameworks, to find and fuse data and make it consumable by both humans and machines. However, based on the speed of data and digital innovation and the changing and increasing national security attack surface, direct partnerships with the private sector and academia are more critical for the IC now than ever before.

Recognizing the need for stronger collaboration with entities outside of the IC, we must directly partner with the private sector and academia to address core focus areas.

- By understanding how data and the digital landscape are evolving, the IC can more effectively organize itself for future data and analytic issues, integrate data from the public and private sectors, and develop new approaches to partnering, contracting, and licensing;
- By leveraging innovative data processes and tools—particularly those involving Artificial Intelligence (AI)—the IC can more effectively manage, use, store, and secure data;
- By capitalizing on the talent and skills of individuals in the private sector and academia, the IC can build new models for future data creation and management, and adapt our practices over time based on continuous education and training.

The IC is generally in pursuit of greater insight into, and collaboration with, non-state actors that increasingly matter for U.S. national security and global transnational domains. The partnerships with the private sector and academic partners that are necessary in the context of this data and digital revolution form one key part of this greater trend. As elsewhere, the IC's success collecting, processing, analyzing, and disseminating data in support of the national security will depend on our ability to effectively leverage these partnerships.

Transform the IC Workforce to be Data-Driven

Develop IC officers who are capable of recognizing, discovering, and sharing data to enable mission value and actionable intelligence.

As part of transforming the IC into a data-driven workforce, the IC needs to increase the capabilities and skills of their employees at all levels, including leadership. Each year it becomes more and more important for the IC to have a workforce that can understand, analyze, reason, assess, communicate, and make decisions with and about data. A data-savvy workforce will be more knowledgeable about the data we collect and produce, and how to apply it to every aspect of our work.

Improving data acumen will create a culture that values data as foundational for all missions. Focused efforts to embed data acumen into IC agency development programs will advance the data-related skills of the entire IC workforce and leadership by strengthening awareness, education, training, and professional development.

Data acumen has to become a core skill for every member of the workforce—not just for data professionals. The workforce and supporting contractors need to know, understand, and value data utilization and sharing for mission value and insight. A data-savvy workforce is important as we decisively drive forward our evolving mission capabilities with the ever-changing digital and data landscape for not only AI, but also other emerging technologies to come.

Way Forward

Everything we do starts with data. We must work together to put into place the ability to discover, access, and leverage the IC's data at the speed of mission to retain decision and intelligence advantage. The IC's response to current and future threats requires significant agility and refinement of data-driven activities for upcoming fiscal years. To develop this agility starting in 2023, the IC CDO and the IC CDO Council will develop an *IC Data Strategy Annual Action Plan* to identify discrete activities and milestones, develop metrics, and track results. To ensure we are advancing progress against the strategy and optimizing for the future, similar one-year action plans will be created for each of the subsequent out years.


United States Intelligence Community

IC Data Strategy
2023-2025