



Defense Technical Information Center
STRATEGIC PLAN
FY 2023 to FY 2028



MESSAGE FROM THE DTIC

ADMINISTRATOR

The **Defense Technical Information Center (DTIC)** is built around the imperative that when our Nation sends our military into harm's way it is our responsibility to give them the tools to succeed and return home safely. Over the term of this five-year Strategic Plan, we will keep this responsibility at the forefront of our plans and actions. With the continued support of Office of the Under Secretary Defense for Research & Engineering (OUSDR&E), DTIC will improve our ability to preserve, curate, and share knowledge from Department of Defense's (DoD) \$16B/year investment in science and technology (S&T).

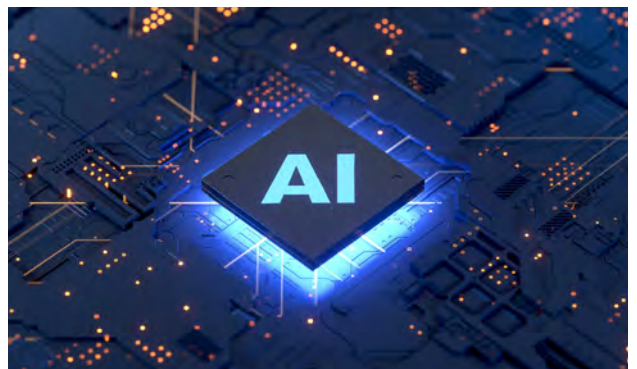


Current State and Limitations:

DTIC's information technology (IT) readiness has been impacted by mission creep and the cost of state-of-the-art technologies in an environment of negative budget growth from 2010 to 2020. We have seen additional impacts from DoD network protections that added latency and blocked access, and contract structures that lack access to on demand cloud resources and robust failover, and access to key subject matter experts. Community content submission is spotty. Feedback includes the complexity of the submission system, lack of awareness of the requirement, and perceived lack of value in submission. Further, the current DTIC search has not kept pace with industry best practices, leverages multiple tools with inconsistent user interface and lacks analysis and visualization features our customers have come to expect in commercial environments. Data set management is new to DoD and our disconnected authoritative collections create complexities for discoverability, portability and content security for our customers.

Strategic Approach:

DTIC has initiated a major modernization and revitalization effort and will migrate into Air Force Cloud One and where available, leverage Software as a Service (SaaS) to reduce IT infrastructure and cybersecurity operations and maintenance costs. We will simplify and implement ecommerce technology in the submission pipeline and fully support bulk uploads from the Services systems. DTIC will develop comprehensive submission and usage metrics dashboards and work directly with R&E to promote submission advocacy with the Services. We will adopt the most current commercially available artificial intelligence (AI) enabled search solution in Cloud One, with advanced user interface and mobile device access. DTIC is establishing a dedicated analysis cell to provide users insights and trend prediction. We will leverage a cross-Service working group with DoD Chief Digital and Artificial Intelligence Officer (CDAO) and Advana on standards and best practices for building and sharing high quality AI-ready data sets.



“We will adopt the most current commercially available **ARTIFICIAL INTELLIGENCE (AI)** enabled search solution in Cloud One...”

Future State Vision:

As we fully onboard Cloud One, DTIC will leverage high availability network connections, efficient downloads, on-demand compute and storage to execute machine learning (ML) driven analytics and visualizations, and commercial user tools. Fully integrated Service submission pipelines provide DTIC with the ability to notify Services of missing content as well as usage/reference statistics available to report to authors/submitters/senior leaders. AI-augmented commercial search will analyze user activity and provide recommendations and ML-driven interrogation of DTIC collections will discover insights not readily apparent using current analysis techniques.

Christopher E. Thomas

Administrator

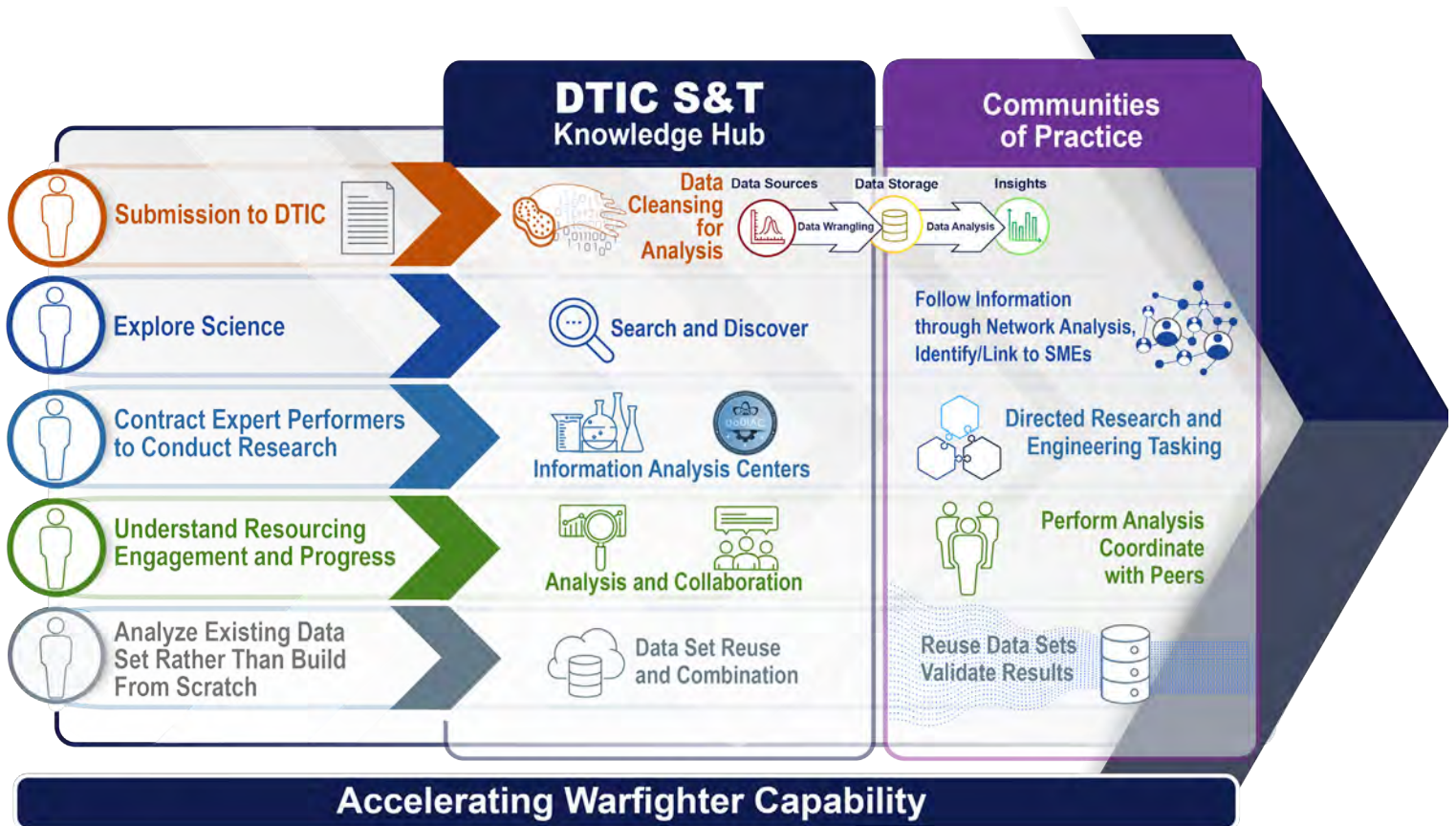


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1. Introduction

Thirty years ago, DTIC helped transform DoD communications with the standup of DefenseLINK, the DoD homepage and first official DoD website. Soon after, DTIC utilized the web to rapidly provide S&T research information to customers around the world. DTIC has provided hundreds of thousands of researchers, scientists, and decision-makers across DoD, industry, and academia access to these records; this includes supporting more than a billion downloads. Today, technology places us at another inflection point allowing the DoD S&T community to again leap forward with DTIC as a critical resource. Our holdings of more than 4.7 million research artifacts over the past 75 years are the living record of S&T accomplishment and the base of next generation capability to our warfighters.

Building on technology advances, DTIC will continue its transformation from an information repository to a 21st century knowledge providing organization that will capture, structure, enhance, analyze, and share the Department's investment in science and technology. This is what pushes us to transform into a knowledge providing organization, delivering full situational awareness of science and technology (S&T) activity. DTIC must provide users with access to the computational power offered in the cloud and analytic solutions supported with AI/ML tools. DTIC makes S&T more efficient and increases our S&T Return on Investment (ROI). This ROI is measured in the speed of new capability delivered to our warfighters, the overmatch capability the U.S. brings to the fight, and the success and safety of our forces deployed.

1.1 Problem Statement

Readiness and Availability: DTIC platform readiness is degraded by mission creep and resource short falls. System availability is negatively impacted by data center capacity limits activity as well as DoD network latency that hampers user login and corrupts downloads. Limited capacity and legacy data center architecture hinders our adoption of modern commercial solutions to meet core needs.

Response: Build on the Air Force Cloud One DevSecOps (DSOP) environment to speed development and deployment and reduce infrastructure operation demands. Leverage Cloud One ever-green Software and Platform as a Service (SaaS/PaaS) solutions to provide user access to the latest commercial applications.

Content Submission: The current DTIC platform lacks modern e-commerce features. The submission processing is manually intensive, delays posting, and lacks bulk upload for technical reports. Submission is mandatory but lacks a compliance mechanism and is not part of Services authoritative document pipelines.

Response: Drive the multiple content submission solutions currently hosted on DLA and DTIC platforms to a single, intuitive interface to anticipate customer needs and transfer submission burden to the application interface.

Search & Analysis: DTIC's current search implementation has not keep pace with commercial competitors and the user interface is inconsistent as they navigate through multiple tools. Users must conduct multiple searches

to find a relevant document. The search engine lacks analysis features designed to anticipate customer needs, provide answers (not just documents) and visualizations.

Response: Leverage cutting edge SaaS solutions to simplify the user discovery experience and design a seamless transition between content discovery and S&T portfolio analytics. Utilize built-in and DTIC developed ML solutions to focus search returns for each customer and user profile.

Data Sets: Data set management is new to DoD, with complexities around discoverability, portability, quality, access rights, and classification through compilation and aggregation.

Response: Work directly with DoD CDAO to establish and maintain S&T data governance procedures in both Cloud One and Advana. Implement digital persistent identifiers to better connect data sets and utilize ML to derive S&T knowledge graphs that enhance data set quality and discoverability, while supporting early identification of data set classification risks.

1.2 Scope

The DTIC Strategic Plan applies to both our DTIC workforce and our highly diverse customer base of DoD and Services leadership, S&T laboratories, Program Executive Office (PEO) and federally funded research and development centers (FFRDC) staff, academic and non-profit institutions, and industry partners. The plan is intended to shape and guide the internal culture change at DTIC and improve the way we build, operate, and maintain our customer facing systems.

2. Mission, Vision and Guiding Principles

2.1 Mission Statement

Preserve, curate, and share knowledge from DoD's annual multi-billion dollar investment in science and technology, multiplying the value and accelerating capability to the warfighter.

2.2 Vision Statement

The Defense research and development (R&D) community recognizes DTIC as the provider of choice for defense research information, knowledge sharing, and advanced analysis.

2.3 Guiding Principles

DTIC is directed and committed to collect, preserve, and disseminate S&T knowledge and partner with others to bring this knowledge to bear on the DoD's challenges.

- We put our **Customers** first and our **Actions** focus on our **Warfighters**.
- We have **Integrity** and show **Respect**.
- We are **Creative** and **Efficient**.
- We **Protect** information while **Effectively** sharing.
- We are **Accountable** for delivering **Capability**.
- We **Empower** our community to **Innovate**.

3. Essential Capabilities

3.1 Talent and Culture

People are the strength of our organization. Against the backdrop of technological change, DTIC is most defined by our people and our partnerships. We recognize that shifting to a customer first culture is only achievable by the collective talent, skills, and capabilities of our professionals. DTIC must enable a transformed workforce to achieve operational excellence through improved customer communication, collaboration, and S&T knowledge services. To empower our staff, we will invest in training to inspire them to actively learn, innovate with, and leverage new technologies. It is vitally important we provide our staff with the tools and resources that empower them to accomplish goals that directly contribute to our customers' success.

3.2 Measured Process Improvement

Business process improvement efforts are focused on improving DTIC product and service delivery by removing impediments preventing achievement of customer satisfaction criteria. We recognize that process measures provide value only when analyzed and incorporated into assessment and planning, and we will require metrics be included with activity reports and in decision activities. DTIC established a metrics team that tracks customer access and product usage. Operating in a new cloud environment, we will revitalize our change management process to speed adoption of change by fully documenting our new baseline, identifying roles and responsibilities

within DTIC and our contracted partners, and improving configuration controls and identifying dependencies. We will refocus our resources that work with the community to replace resource intensive hardcopy media submissions and simplify electronic submission for remote customers. DTIC will refine our products and services and seek opportunities to transfer work that is not in our core mission.

3.3 Cyber Operations

To deliver the capabilities our customers require to analyze the state of a technology, identify mission capability gaps, and identify the next innovative solution, DTIC must utilize cutting-edge commercial capabilities and technologies. DTIC will work with the DoD Chief Information Officer (CIO), Defense Information Systems Agency (DISA), Joint Forces Headquarters DoD Information Networks (JFHQ-DoDIN), and US Cyber Command (CYBERCOM) to advocate for initiatives that support adoption of innovative capabilities and technologies that support scientific and technical information discovery and analysis. DTIC will enhance the delivery and management of IT capabilities and services by leveraging commercial best practices, processes within proven government cloud solution providers. We must balance our need to share the Department's research activities with the unintended disclosure of sensitive information through the aggregation and compilation of data sets through new policy and technology solutions. DTIC's access and identity management modernization solutions will focus on a risk-based approach. We will increase traceability to DTIC distributed material by adding digital rights management to limit secondary release and to offer authenticated customers access to related material.

3.4 Advanced Analytics

DTIC customers have a tangible need to harness complex volumes of data and convert it into actionable insights to help drive faster and better decision-making, expedient analyses, predictable outcomes, and optimal operational efficiency. DTIC is implementing and evolving an advanced analytics capability to provide timely, relevant, and accurate knowledge to support real-time decision making for Principals, specialized customers, S&T analysts, and all DTIC customer levels. DTIC customers need access to analytic tools to manage, collect, and leverage large data sets of both structured and unstructured data for various mission-critical analyses. We will work with our customers to refine data standards, data profiling, and stewardship principles and increase standards and processes for enhanced AI-enabled data sets and ML operations. DTIC will leverage impactful business processes linked with new cyber operations that integrate advanced analytics of complex data and provide the deeper, exploratory

perspective on the data, while having standard business intelligence systems that provide a more structured customer experience.

4. Goals and Enabling Objectives

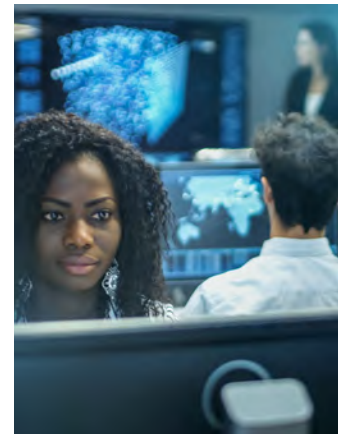
DTIC exists to protect and extend the value of DoD's \$16B annual investment in S&T. This gets to the central purpose of DTIC. To preserve discovery and share the knowledge via secure, state of the art technology solutions, so that future S&T projects are better positioned to extend beyond research rather than repeat it not knowing what had come before.

Core DTIC Goals:

- Focus on our Customers
- Modernize Our Operations
- Build and Enhance Our/DoD Data Environment
- Transform from a Record Repository into a Knowledge Provider
- Grow and Care for Our Diverse Workforce

4.1 Goal 1: Focus on Our Customers

Our view of the entire DoD S&T enterprise allows us to serve all customers. We will model new behaviors, investigate leading technologies, and instill new ways of thinking with an undivided focus on enabling our customers to achieve their mission. Implementation of new capabilities and solutions to our day-to-day challenges must always incorporate a clear understanding of our customers' perspective and experience. Wherever possible, we will seek to identify and eliminate barriers between our customers and our products and services. We will continue to leverage the power of the cloud to enhance capabilities for our customer, maximize availability of DTIC tools and, when issues arise, we must use automation to course correct to ensure we are supporting the 24/7 activities of the DoD. As new priorities are announced by the Office of the Under Secretary of Defense for Research and Engineering OUSD(R&E), DTIC will update our document curation and



processing to identify relevant materials, perform analysis, develop implementing policy, and ensure our Information Analysis Center (IAC) program vendors can give top tier support. The complexity, time, and costs to develop and employ ML algorithms, and the need to better understand our customers' requirements and expectations will inspire us to expand and solidify our partnerships across Services, agencies, and industries.

- **Objective 1:** Transfer burden of submissions from customers to systems.
- **Objective 2:** Anticipate customer needs to make submission and discovery intuitive.
- **Objective 3:** Accelerate delivery of IAC capabilities.

4.2 Goal 2: Modernize Our Operations

As we continually modernize our customer facing tools, we engage with subject matter experts in OUSD(R&E), Office of the DoD Chief Digital and Artificial Intelligence Officer (CDAO), the Defense Innovation Unit (DIU), the Joint Artificial Intelligence Center (JAIC), and private industry. DTIC plans to lease software in the government cloud through software as a service (SaaS) or platform as a service (PaaS) to accelerate our fielding of the most current commercial technology. We will also simplify and consolidate our customer facing interfaces to enable an all-digital ingest pipeline and reduce the S&T product gap we experience today. DTIC must leverage approved open source and commercial products that further our mission and greatly reduce the development, customization, and maintenance schedules we have today. This will remove as much as two years in market survey, procurement, and fielding, and simplify our ability to deliver the most current commercial release to customers. We will consolidate and modernize most of our application portfolio and deliver an integrated search, discovery, and advanced analytics friendly platform. In addition to our technology stack, we must also conserve resources and streamline our operations by sunsetting or transferring those activities that are no longer value-added to our mission.

- **Objective 1:** Implement pipeline automation (including services).
- **Objective 2:** Leverage technology application to intelligent solutions.
- **Objective 3:** Reduce cost and complexity by streamlining our portfolio of activities and applications.

4.3 Goal 3: Build and Enhance Our/ DoD Data Environment

The Department of Defense (DoD) must realize the full potential of research and the key data produced in our labs, agencies, contracts, and grants, to protect and defend the United States and increase military lethality, support reform, and support partnership opportunities. Improved data management impact each of these areas and will enhance the Department's ability to fight and win wars in an era of great power competition. To this end, the DTIC must shed outdated data practices, and recognize our investment in and the value of research, engineering, and technical data, embrace data-driven concepts of operation, and leverage commercial-sector innovations. In conjunction with DoD Data Strategy, DTIC will leverage our extensive experience managing S&T content to assess enterprise S&T data management requirements and ensure OUSD(R&E)'s data set interests and equities are protected. The need to balance release of DoD's research activity with unintended disclosure of sensitive information through the aggregation and compilation of data sets has slowed our release to the public in support of open science. DTIC will bring our proven track record to guide advancement of development, governance, curation, logistics, and user management (access controls and authentication) capabilities. DTIC will seek to federate to DoD and federal government data sources.

- **Objective 1:** Simplify and migrate the DTIC collections to the Cloud One environment.
- **Objective 2:** Establish and maintain data governance procedures via Cloud One and Advana.
- **Objective 3:** Advance the research data sets by working with DoD CDAO.

4.4 Goal 4: Transform from a Records Center into a Knowledge Provider

The complexity and scale of our information environment is continuously and rapidly expanding. We have a unique opportunity to better serve our customers and support the S&T community by reducing this complexity across our collections. We will do this by transforming how we organize, retrieve, and share information to deliver enhanced search results, real-time insights, relevant links to additional content and broader context around the records in our collections. Building and developing our internal knowledge management capabilities will enable us to expand our collections through knowledge mapping and gap analysis. As this capability matures, we will not

wait for customers to come to us but will seek out ways to identify and proactively engage them with the right information at the right time. In addition to connecting people to content, we will foster greater collaboration by connecting experts across the S&T community and providing them the secure space and tools to exchange information and ideas that rapidly advance their critical work. Sharing information and connecting users to content is key. We need to balance sharing and protecting information and ensuring we are protecting the information that is entrusted to DTIC.

- **Objective 1:** Establish a formal knowledge management (KM) capability.
- **Objective 2:** Identify and resolve knowledge gaps across our collections.
- **Objective 3:** Leverage advanced analytics to deliver enhanced and relevant search results in context.
- **Objective 4:** Balance information sharing with information protection.

4.5 Goal 5: Grow and Care for Our Diverse Workforce

DTIC is firmly committed to the Equal Employment Opportunity (EEO) principles that all people should have the right to work and advance based on merit and ability, regardless of their race, sex, color, religion, disability, national origin, or age. Our diversity provides us with the ability to better understand and support our user community. We will identify and recruit top talent to close skill gaps to become a center of excellence and employer of choice. DTIC will transform our workforce to achieve operational excellence for improved customer service, communication, and coordination. We will continue to

emphasize Schedule A hiring authorities, and when available resume our partnership with the US Army Warrior Transition Battalion. We will continue to look to programs hosted by the General Services Administration (GSA) and DIU to attract and interact with college fellows to identify new approaches to solve challenges. Beyond our current efforts, we must renew visits (in person and virtual) to minority colleges and universities and seek out ways to reach out to attract applicants from underrepresented communities. In all cases we must attract and retain the best most capable workforce reaching out to all backgrounds and experiences.

- **Objective 1:** Recruit diverse talent and become an employer of choice.
- **Objective 2:** Train to inspire innovation using new technologies.
- **Objective 3:** Promote and sustain a culture of employee career development.

5. Operationalizing the Strategy

Central to operationalizing the DTIC strategy is keeping pace with technological advancement, refining, and maturing our underlying processes, assessing how innovations meet our business needs, and prioritizing investments by cost and benefit. We leverage our guiding principles to decide where and how resources should be dedicated for rapid and responsible deployment of the best solutions for our customers. This will help us provide a standardized foundation of efficient, secure, and sustainable technology solutions to all customers and identify areas where S&T innovations integrates with the RDT&E lifecycle to achieve the DTIC mission.



5.1 Implementation Roadmaps

Accountability is a core leadership responsibility, and we must be accountable to each other, our leadership, customer base and the public. DTIC responds to direction from OUSD(R&E), DoD CIO & CDAO, JFHQ-DoDIN, CYBERCOM, and Congress. We must account for and recognize utilization of resources as essential, enumerate impacts to existing workload, memorialize the priority and resourcing decision, and clarify OUSD(R&E)'s direction for DTIC. To reinforce accountability and mission priorities, DTIC Directors, Deputy Directors and Division Chiefs will participate in the development of the Strategic Plan Implementation Roadmaps. The DTIC Administrator will designate a lead for each of the five goals in the 5-year Strategic Plan. The goal leads will coordinate development and maintenance of the implementation roadmaps. Each implementation roadmap will be 24 months long and refreshed on six-month cycles. The implementation roadmaps should sufficiently detail the key product deliverables and project milestones to support achievement of DTIC's strategic objectives. The internal 24-month implementation roadmaps will be available to all DTIC staff and drive higher level 12-month product roadmaps designed for customer facing communication.

5.2 Preview Release Product

As part of "Goal 2: Modernize Our Operations", DTIC will redesign and enhance Search leveraging the latest commercial cloud capabilities. To ensure the new DTIC Search is aligned to the needs of the DoD S&T community, DTIC will offer a preview release to DoD military and civilian customers. The new DTIC Search implementation will follow an Agile methodology to deploy enhanced analytic features, visualizations, and machine learning tools to enable S&T discovery against DTIC's full collection.

5.3 Establish Metrics Dashboard

To validate measured process improvement, DTIC is currently implementing dashboards for each DoD laboratory with information on their submissions, usage, and other activity. We are adding gap analysis to show where we think we are missing information, and we will break out additional demographics on information usage and customers. DTIC will automate the dashboards to present the most up-to-date information. Baselineing and measuring are critical to understanding progress and accomplishment. The improvement efforts result in reduced cycle time or latency, elimination of non-value-added steps, elimination of rework, and/or improved quality. We recognize that measures provide value only

when analyzed and incorporated into assessment and planning, and we will require metrics be included with activity reports and in decision activities. We will provide submission tracking information and notify submitters when their documents are available to the community as well as metrics on document access.

6. Conclusion

DTIC is at a pivotal point in our history, and we must respond aggressively. We have a vision to apply state-of-the-art technology with the support of our exceptional people. We will aggressively challenge the "way we have always worked," and adopt new processes and technologies that meet the needs and expectations of our customers and mission partners. As we move to the U.S. Air Force Cloud One/Platform One, we will consolidate and simplify our offerings and operational position. We will improve the completeness and quality of our DoD collections and extend access to new sources. As we embrace and implement AI-ready data sets driving ML-ops solutions, DTIC will deliver a more complete picture of the worldwide S&T frontier and unleash the power of the Department's research activities to inform and inspire future innovations. We will work with the S&T community and continue to reach out to innovators and key providers to insure we are supporting our users with continuous modernization. Measuring performance at various levels and through different lenses will allow us to monitor incremental progress toward achieving our goals and can help us identify where changes must happen. It only takes imagination, compute power, and storage. Now it is up to us. Each of us has a role.



“We will aggressively CHALLENGE the ‘way we have always worked,’ and adopt NEW PROCESSES and technologies”

