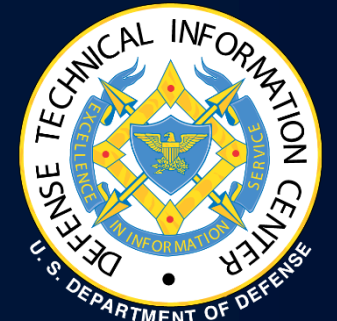# Introduction to the Defense Technical Information Center
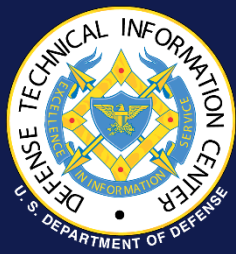
How DTIC Supports the Defense Ecosystem

Michele Finley
Chief of Staff
Defense Technical Information Center

Mission:

Ensure the innovation and knowledge stemming from DoD's past and current investment in science and technology (S&T) forms the building blocks for the next generation of discovery, and accelerates capability to the warfighter
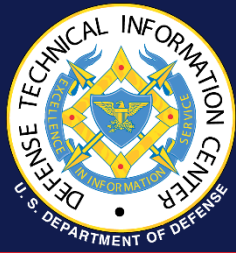
Vision:

Be the provider of choice for S&T information to the Defense research and development community, sharing knowledge and fusing data to provide advanced insights

DEFENSE TECHNICAL INFORMATION CENTER (DTIC)
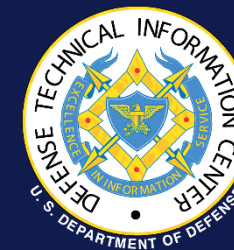*Preserving* KNOWLEDGE | *Connecting* PEOPLE | *Inspiring* INNOVATION

DoD Scientific and Technical Information Collections

- DTIC provides access to DoD's scientific and technical information knowledge base
  - 4.7M records spanning 75 years of research and innovation
  - Available to the Public, 800K reports
    - DoD funded peer reviewed journal articles
    - Final research reports (non-CUI)
    - DoD grant awards
    - Conference Proceedings presented at NDIA events
  - Available to DoD, Federal government, and their contractors
    - Final research reports, studies, briefings, and journal articles (CUI and non-CUI)
    - Research progress summaries
    - Journal of DoD Research and Engineering
    - Security Classification Guides
    - Industry Independent Research and Development reports
    - Collaboration content

DEFENSE TECHNICAL INFORMATION CENTER (DTIC)
Preserving KNOWLEDGE | *Connecting* PEOPLE | *Inspiring* INNOVATION

DISTRIBUTION STATEMENT A. Approved for public release.

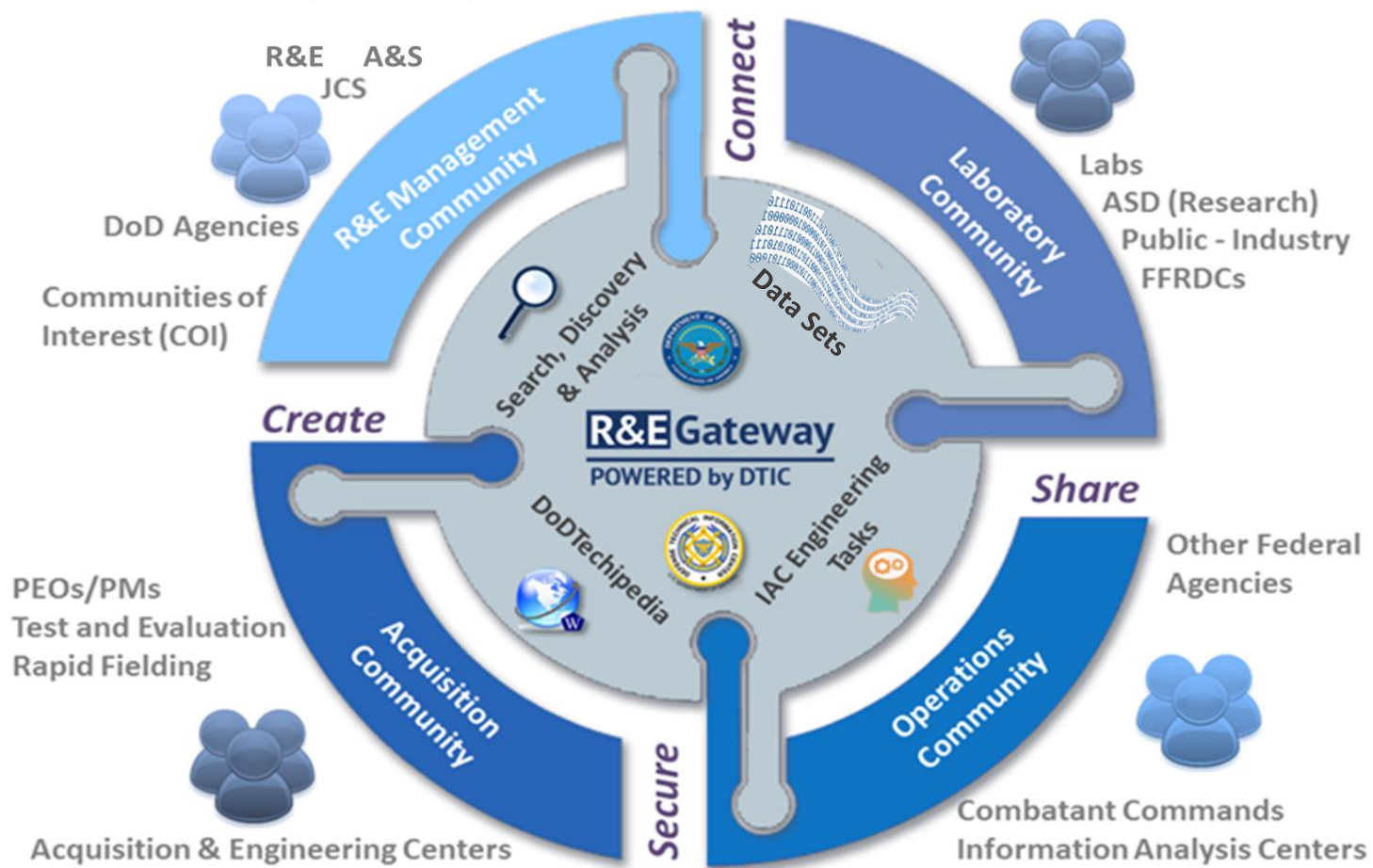# DoD's Central S&T knowledge Base – Connecting Communities

Innovation at the speed of relevance demands new work starts at the highest point of knowledge

From the Lab Bench to the Battlefield: DTIC connects DoD, academic, and industry researchers with the Warfighter and allied partners to ensure that in near peer competition our military has the tools and technology to deter and defeat our adversaries and safeguard our nation

As the Department's scientific and technical information knowledge provider, DTIC accelerates technology innovation, transition, and capability delivery and safeguards our nations investment in S&T

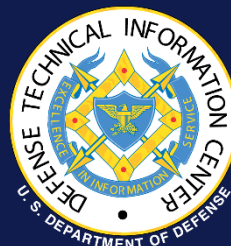## Customers, Submitters, Partners – Working Together

DEFENSE TECHNICAL INFORMATION CENTER (DTIC)
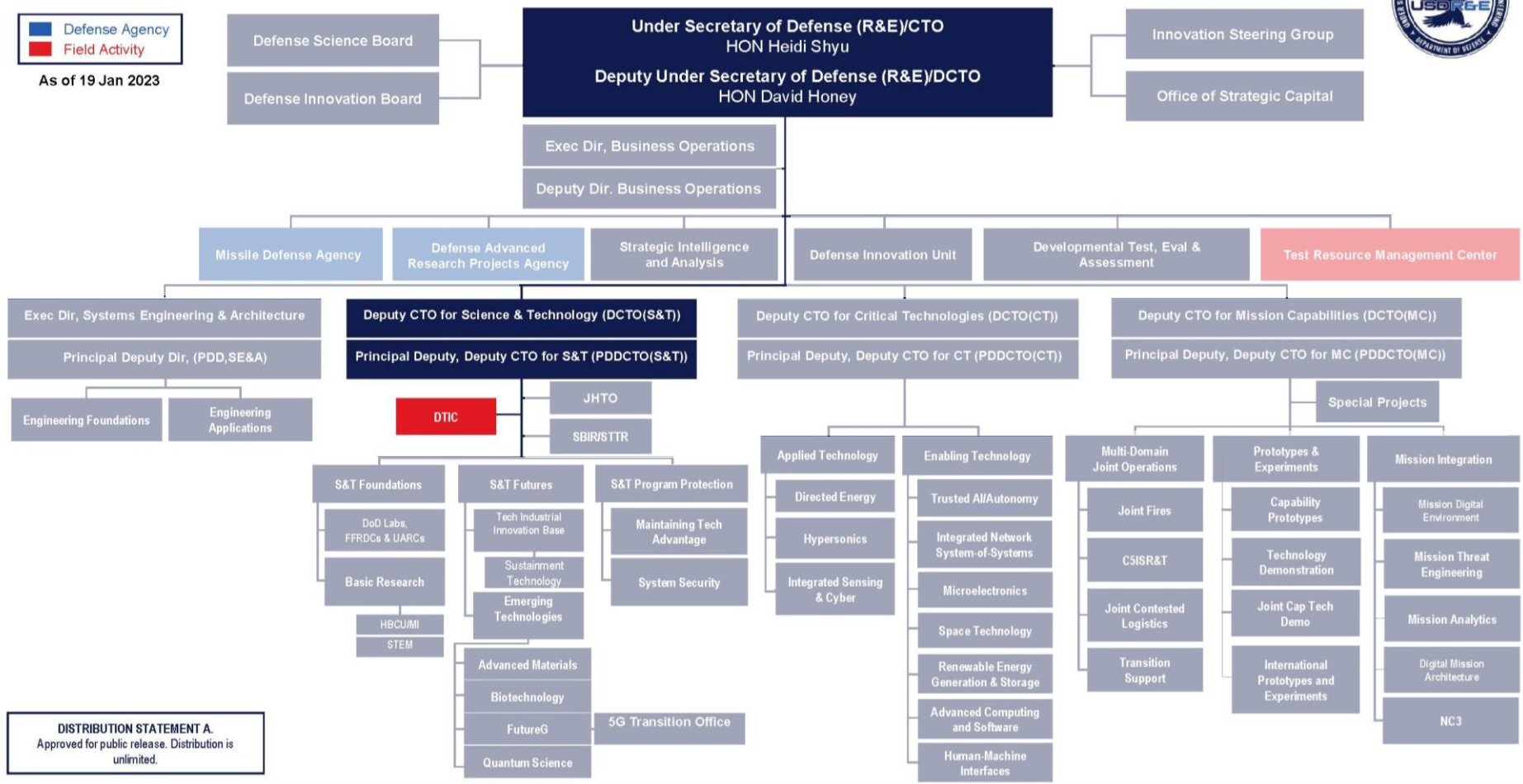*Preserving KNOWLEDGE | Connecting PEOPLE | Inspiring INNOVATION*

OUSD(R&E) ORGANIZATIONAL STRUCTURE

Defense Agency
Field Activity

As of 19 Jan 2023

Defense Science Board

Defense Innovation Board

Under Secretary of Defense (R&E)/CTO HON Heidi Shyu
Deputy Under Secretary of Defense (R&E)/DCTO HON David Honey

Innovation Steering Group

Office of Strategic Capital

Exec Dir, Business Operations

Deputy Dir. Business Operations

Missile Defense Agency | Defense Advanced Research Projects Agency | Strategic Intelligence and Analysis | Defense Innovation Unit | Developmental Test, Eval & Assessment | Test Resource Management Center

Exec Dir, Systems Engineering & Architecture | **Deputy CTO for Science & Technology (DCTO(S&T))** | Deputy CTO for Critical Technologies (DCTO(CT)) | Deputy CTO for Mission Capabilities (DCTO(MC))

Principal Deputy Dir, (PDD,SE&A) | **Principal Deputy, Deputy CTO for S&T (PDDCTO(S&T))** | Principal Deputy, Deputy CTO for CT (PDDCTO(CT)) | Principal Deputy, Deputy CTO for MC (PDDCTO(MC))

Engineering Foundations | Engineering Applications

DTIC | JHTO
SBIR/STTR

Special Projects

S&T Foundations | S&T Futures | S&T Program Protection | Applied Technology | Enabling Technology | Multi-Domain Joint Operations | Prototypes & Experiments | Mission Integration

DoD Labs, FFRDCs & UARCs | Tech Industrial Innovation Base | Maintaining Tech Advantage | Directed Energy | Trusted AI/Autonomy | Joint Fires | Capability Prototypes | Mission Digital Environment

Basic Research | Sustainment Technology | System Security | Hypersonics | Integrated Network System-of-Systems | C5ISR&T | Technology Demonstration | Mission Threat Engineering

HBCU/MI | Emerging Technologies | | Integrated Sensing & Cyber | Microelectronics | Joint Contested Logistics | Joint Cap Tech Demo | Mission Analytics

STEM | | | | Space Technology | Transition Support | International Prototypes and Experiments | Digital Mission Architecture

Advanced Materials | | | Renewable Energy Generation & Storage

Biotechnology | | | Advanced Computing and Software | | | | NC3

FutureG | 5G Transition Office

Quantum Science | | | Human-Machine Interfaces

DISTRIBUTION STATEMENT A. Approved for public release. Distribution is unlimited.

DEFENSE TECHNICAL INFORMATION CENTER (DTIC)
Preserving KNOWLEDGE | *Connecting* PEOPLE | *Inspiring* INNOVATION

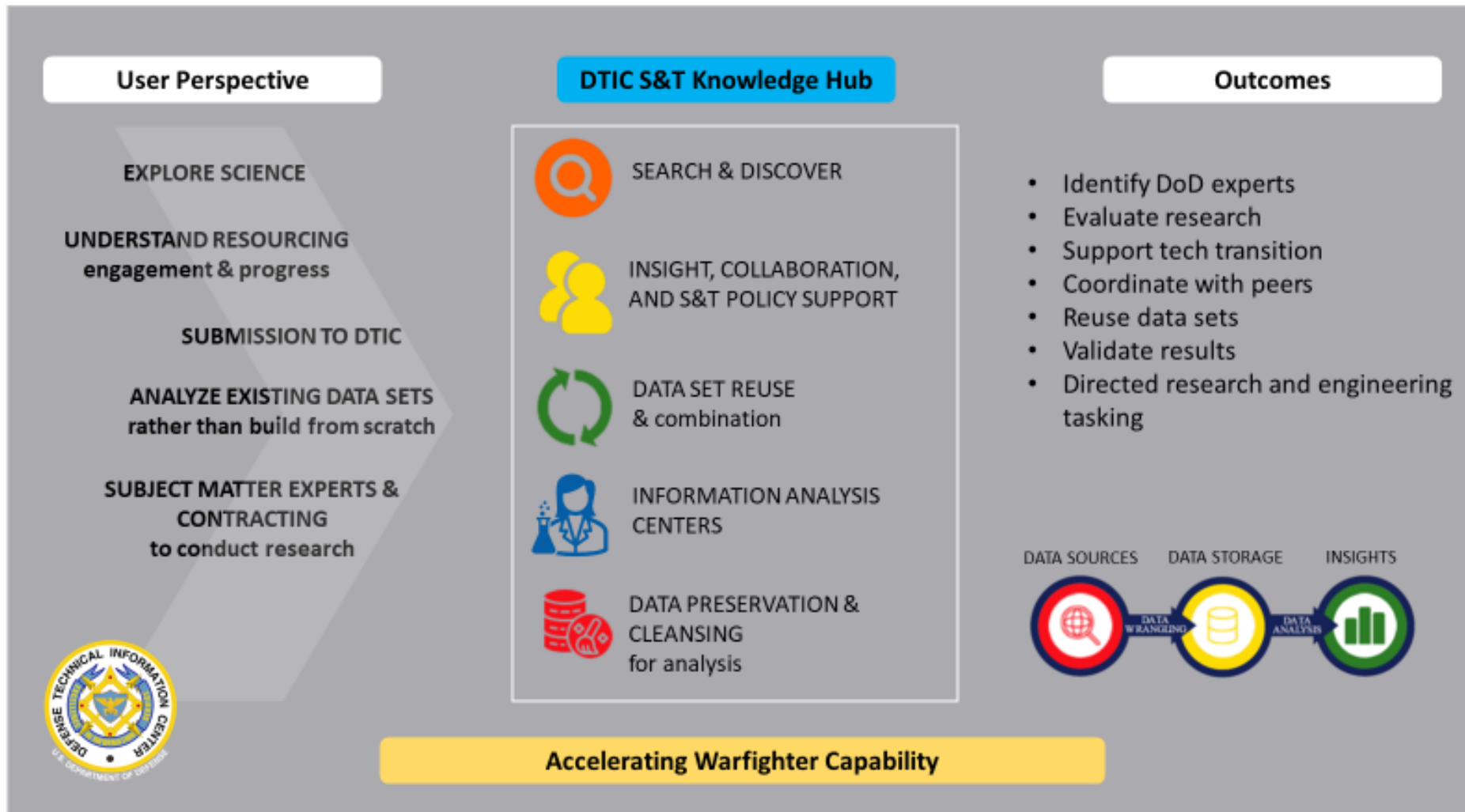DISTRIBUTION STATEMENT A. Approved for public release.

DTIC VALUE/IMPACT TO DOD

DTIC is the single central resource accessible to all DoD. Sharing results reduces costs, speeds fielding of new capability, and increases the ROI of the $17B annual funding for S&T – providing the foundation for scientific advancement, collaboration, and decision making.

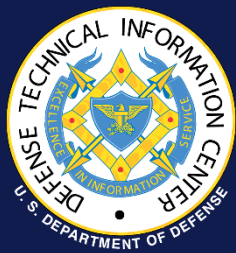Drawing from 4.7M records DTIC makes this information accessible across Service and component silos.

DTIC connects:

- More than 70K researchers, scientists, and engineers
- Public sites support industry, allies, and academic partners

User Perspective

EXPLORE SCIENCE

UNDERSTAND RESOURCING
engagement & progress

SUBMISSION TO DTIC

ANALYZE EXISTING DATA SETS
rather than build from scratch

SUBJECT MATTER EXPERTS &
CONTRACTING
to conduct research

DTIC S&T Knowledge Hub

SEARCH & DISCOVER

INSIGHT, COLLABORATION, AND S&T POLICY SUPPORT

DATA SET REUSE & combination

INFORMATION ANALYSIS CENTERS

DATA PRESERVATION & CLEANSING for analysis

Accelerating Warfighter Capability

Outcomes

- Identify DoD experts
- Evaluate research
- Support tech transition
- Coordinate with peers
- Reuse data sets
- Validate results
- Directed research and engineering tasking

DATA SOURCES — DATA STORAGE — INSIGHTS
DATA WRANGLING — DATA ANALYSIS

A key resource for the DoD and S&T community

Providing services and capabilities that enable the U.S. to remain at the forefront of innovation, meet the challenges of a rapidly changing world, and respond to emerging threats.

The DoDIACs brings together scientists, engineers, and researchers with a broad array of expertise to evaluate and respond to the Department's research challenges

- Conduct basic and applied research; develop, test, and implement new technologies and approaches; and analyze and synthesize existing data and information
- Facilitate collaboration and information sharing within the DoD and with external partners
- Enable DoD organizations and leadership to understand and evaluate the current state-of-the-art, more efficiently and effectively carry out its mission, identify gaps, and implement solutions

To learn more visit us at: **https://dodiac.dtic.mil/services**

DEFENSE TECHNICAL INFORMATION CENTER (DTIC)
Preserving KNOWLEDGE | *Connecting* PEOPLE | *Inspiring* INNOVATION

R&D Services Made Easy
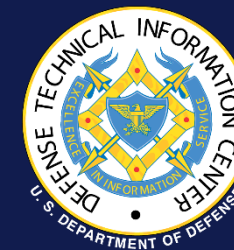
Dedicated teams helping you

Four Hours of Research at No Charge for technical inquiries to perform initial research and analysis of DoD challenges

- Up to 4 hours of research
- Answer technical question, referral to SMEs
- Create literature searches

Get started:
dtic.belvoir.iac.mbx.dodiacs@mail.mil

Single Award Contract for rapid prototyping and other research and analysis services

- $1M ceiling, with max 12 months PoP
- Rapid start time (as few as 6-8 weeks)
- Pre-awarded, pre-competed contract vehicle

Get started:
dtic.belvoir.iac.mbx.iacs-stos@mail.mil

A $28 Billion Indefinite Delivery Indefinite Quantity (IDIQ) Multiple Award Contract (MAC) for research and development (R&D) and other related services

- No maximum ceiling, with PoP up to 5 years
- Rapid award (4.5 months from solicitation)
- Quickly add co-funders

Get started:
dtic.belvoir.iac.mbx.csc@mail.mil

Fast, Flexible, and Low Cost

*To learn more visit us at: **https://dodiac.dtic.mil/services***

DEFENSE TECHNICAL INFORMATION CENTER (DTIC)
Preserving KNOWLEDGE | Connecting PEOPLE | Inspiring INNOVATION

DISTRIBUTION STATEMENT A. Approved for public release.

From a Document Repository to a Knowledge Provider

- Provide discovery, knowledge, collaboration tools and peer-reviewed Journal to all DoD users on three networks (public, controlled unclassified information, and classified)

  o Move from a per document request structure to a knowledge provider, displaying like content, people, and topics

  o Enable rapid access to relevant information and provide knowledge products that inform and increase understanding, identify where work is performed, and recognize maturity

  o Consolidate tools and provide a uniform experience

  o Provide role-based products based on user activity

  o Deliver usage analytics to submitters/authors

DEFENSE TECHNICAL INFORMATION CENTER (DTIC)
Preserving KNOWLEDGE | *Connecting* PEOPLE | *Inspiring* INNOVATION

DISTRIBUTION STATEMENT A. Approved for public release.

Partnerships and Challenges

Program Partners: Helping the science and technology community make the right technology investment decisions increasing cross-Service transparency through coalitions

- **Research Community**
  - Defense Basic Research Advisory Group
  - Research Data Working group
  - CENDI
  - DoD Labs Office
  - Tech Protection
  - FFRDCs
  - Joint Experimentation Network (JExNET)
  - **Open Science**
    - Office of Science and Technology Policy
    - Department of Energy – Joint tools
    - Non-profits (ORCID, CHORUS, FUNDREF)

- **Digital Transition – DTIC modernization team**
  - USAF Cloud One – Hosting, DevSecOps
  - Defense Innovation Unit – Solution discovery
  - Joint Reserve Directorate – Technical Architecture and market survey
  - Microsoft – Azure Gov Cloud/Cognitive search
  - Chief Digital and Artificial intelligence Officer (CDAO)
  - R&E Chief Data Officer (CDO)
  - Advana

Challenges
- Ambiguity of names and organizations: DoD lacks a unique organization identifier and person identifier
- Comparing Requirements to current projects
- Comparing new projects to past and other current projects
- Analyzing and categorizing content to Critical technology Areas
- Verification of classification/CUI level
- PII and PHI scanning
- Limiting uncontrolled further distribution of content
- Automated creation of document overview
- Discovering similar content
- Compilation from combining large data collections

DISTRIBUTION STATEMENT A. Approved for public release.
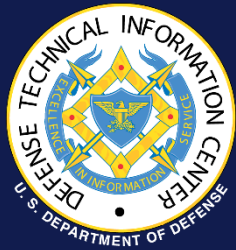
- **Tech Transition and Exploration**
  - Where research is being performed and how it progresses
  - What research is being performed and by who – organizations and people to include span of time/geolocation
  - Compare and contrast different agencies/organizations research budgets
  - Trace tech transition from budget (R2) to procurement (P40) to sustainment (O&M), such as using TRL, common topics, linked research, funding, etc.
- **Lifecycle of Spending and Research**
  - Identify and provide trends of the spending profile of a research area, organization, or individual
  - Track how budgets evolve over time for different topics/programs/organizations
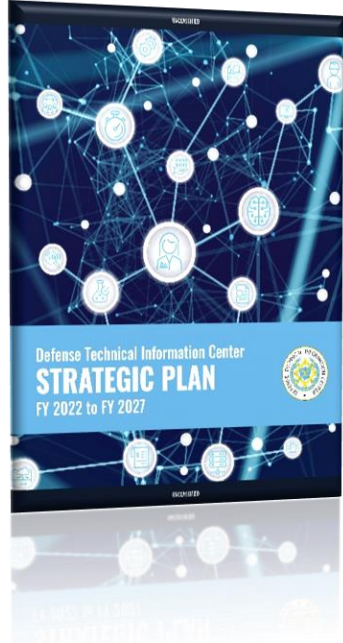- **Collaboration across Organizations**
  - Identify experts (COI leads, presenters, authors, etc.)/POCs for specific research topics or searches, including experts that publish in public domain

DTIC Modernization Priorities
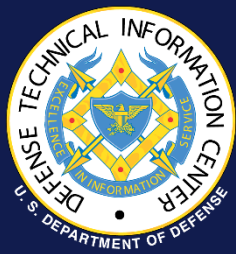
FY22-27 Strategic Plan

01. Availability and Readiness

Provide the foundation for always on, flexible compute, storage, and bandwidth to enable artificial intelligence/ML technology and advanced data science and analytic activity

Exploit leading commercial search and graphical navigation solution to simplify content discovery and apply analytic visualizations

03. Search and Analysis

Content Submission **02.**

Speed posting of new content using machine learning (ML) to review documents in seconds eliminating backlog

Reuse S&T research data sets to reduce both RDT&E costs and time to field capability

Data Sets **04.**

DEFENSE TECHNICAL INFORMATION CENTER (DTIC)
Preserving KNOWLEDGE | *Connecting* PEOPLE | *Inspiring* INNOVATION

DISTRIBUTION STATEMENT A. Approved for public release.

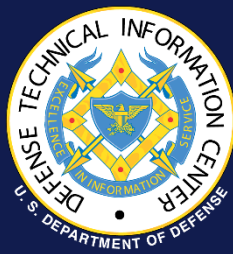# Modernization Efforts

Transition to a knowledge provider

Technology Innovation:
- Document Summarization
- Citation trace graph
- Improved metadata tagger
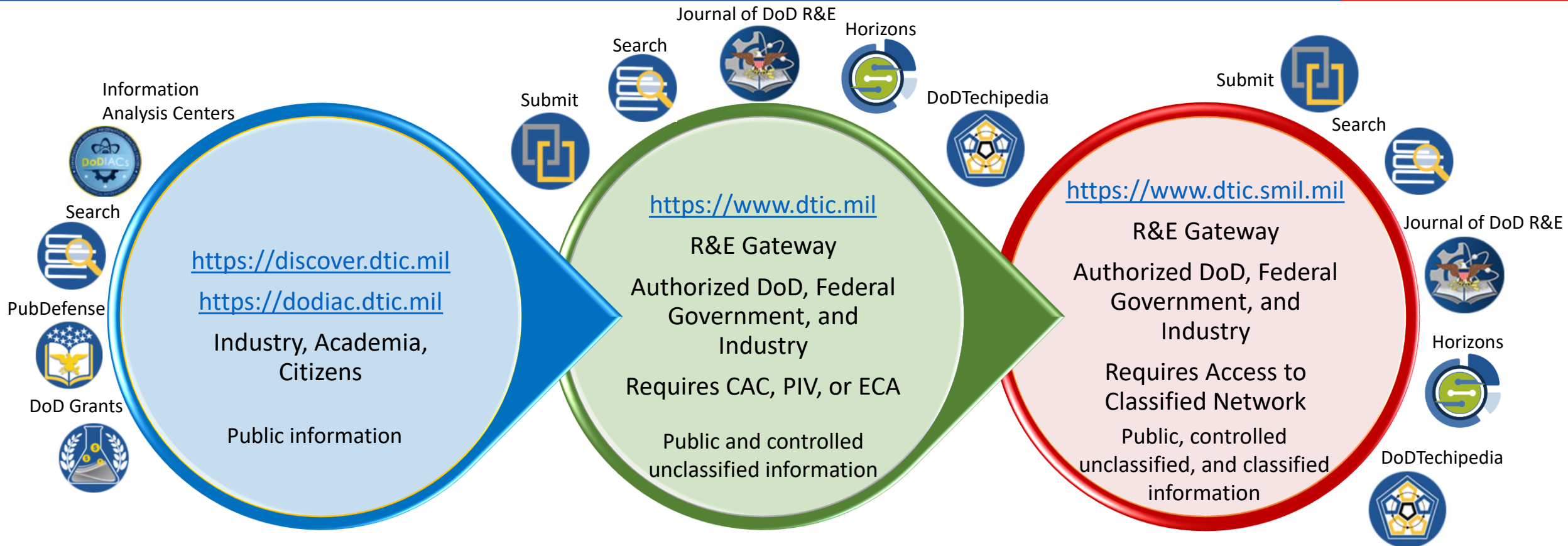- Network graph interface
- Cognitive search

Above timeline (top labels):
- Selected Microsoft Cloud One
- Selected Microsoft Cognitive Search and COSMOS DB
- Implement new submission pipeline that automates processing and standardizes data
- All data available through one search application with graphical navigation
- Data set storage strategy
- Customer directed analysis gap addressed
- Journal article submission

Timeline bar:
FY 2022 | FY 2023 (Migrate IL4) | FY 2024 | (Migrate IL6, consolidate to new submission system) | FY 2025

Below timeline (bottom labels):
- Build foundation for continuous technology insertion
- Launch new search
- Deploy new Horizons application
- Implement new DevSecOps pipeline
- Containerize legacy applications
- Initiate data set storage pilot
- Prioritize Software as a Service solutions
- Journal Article inventory data call
- Automated publishing of reports from Services
- Predictive analytics recognize S&T trends
- Unanticipated, but related, content presented to customers
- Digital persistent identifiers implemented to support tracking of the progression of science
- Improved S&T data literacy and stewardship culture

DEFENSE TECHNICAL INFORMATION CENTER (DTIC)

Preserving KNOWLEDGE | *Connecting* PEOPLE | *Inspiring* INNOVATION

DISTRIBUTION STATEMENT A. Approved for public release.

Access to Defense Scientific and Technical Information

Information Analysis Centers

Search

PubDefense

DoD Grants

https://discover.dtic.mil
https://dodiac.dtic.mil

Industry, Academia, Citizens

Public information

Submit
Search
Journal of DoD R&E
Horizons
DoDTechipedia

https://www.dtic.mil

R&E Gateway

Authorized DoD, Federal Government, and Industry

Requires CAC, PIV, or ECA

Public and controlled unclassified information

https://www.dtic.smil.mil

R&E Gateway

Authorized DoD, Federal Government, and Industry

Requires Access to Classified Network

Public, controlled unclassified, and classified information

Submit
Search
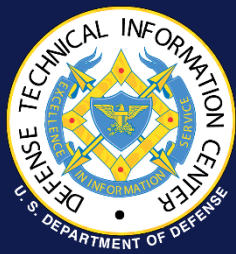Journal of DoD R&E
Horizons
DoDTechipedia

DEFENSE TECHNICAL INFORMATION CENTER (DTIC)
Preserving KNOWLEDGE | *Connecting* PEOPLE | *Inspiring* INNOVATION

Questions?

Contact Information:

Michele Finley
571-448-9902

General Inquiries:
dtic.belvoir.ooa.mbx.office-of-the-administrator@mail.mil
1-800-CAL-DTIC (1-800-225-3842)

Public site:
https://discover.dtic.mil/

NIPR site:
https://www.dtic.mil/

SIPR site:
https://www.dtic.smil.mil

5/30/2023 | https://www.dtic.mil

DEFENSE TECHNICAL INFORMATION CENTER (DTIC)
Preserving KNOWLEDGE | *Connecting* PEOPLE | *Inspiring* INNOVATION
DISTRIBUTION STATEMENT A. Approved for public release.

15