Workflow Warfare:

Business Process Transformation in the DoD

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U.S. DEPT OF DEFENSE

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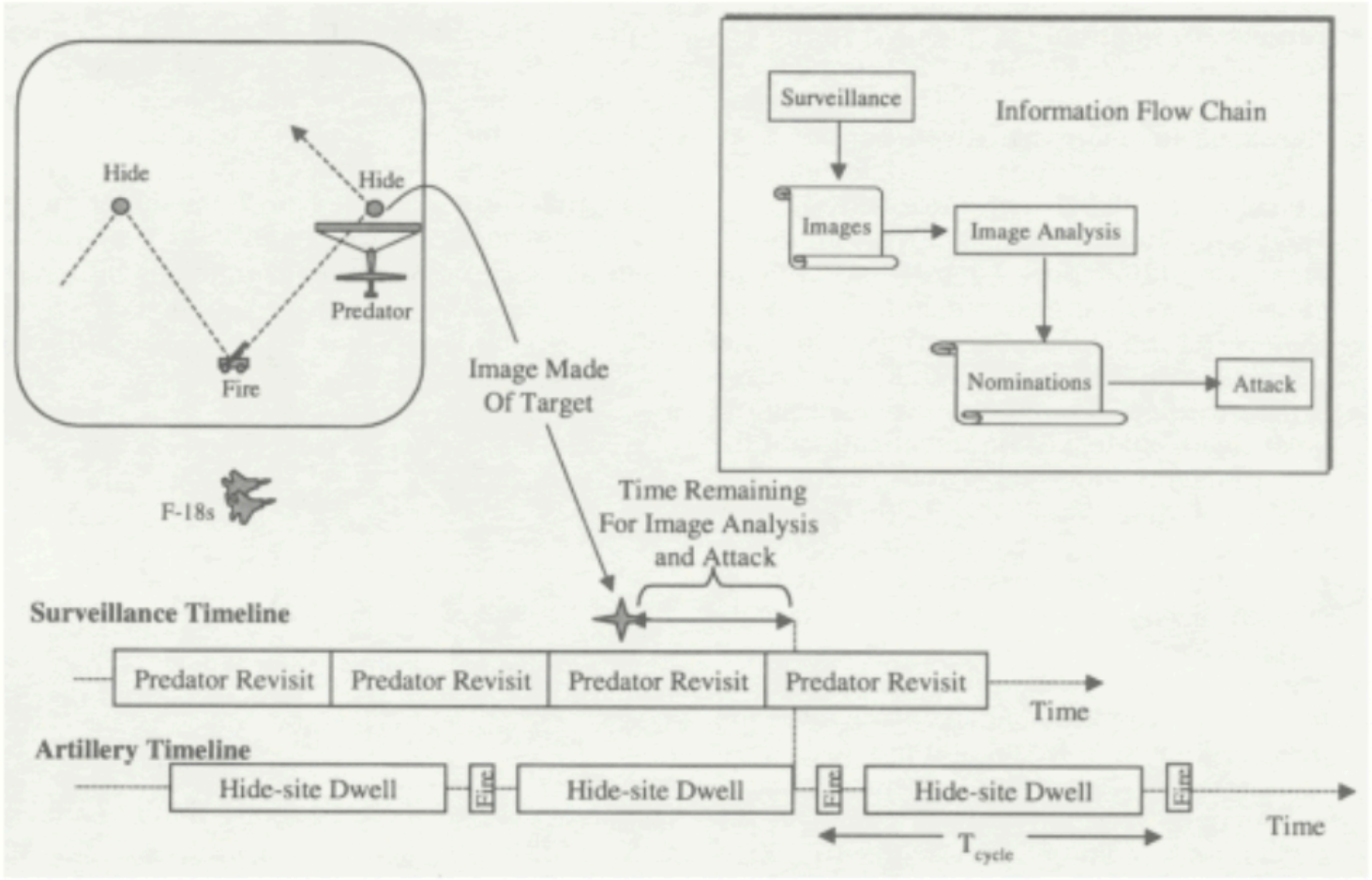
DARPA Sensor-To-Shooter Scenario – Bosnia 1999



Castleberg, Paul A., and William Dunaway. "A Model for Evaluating UAV Sensors with a Bosnia Sensor-To-Shooter Case Study." *Military Operations Research* 4, no. 4 (1999): 53-64. Accessed January 7, 2021. http://www.jstor.org/stable/43940818.

When it comes to transforming the Department of Defense, we are only as fast as our slowest workflow.

Business Process Transformation

Vision: The business of modern Defense is run as a trusted, digital, data-driven operation

BPT Mission Initiative Goal: Transform DOD business processes through AI technologies to improve efficiency, accuracy and overall operations in key service areas.

Business & Law Finance & Budget

Training & Development Customer Relations

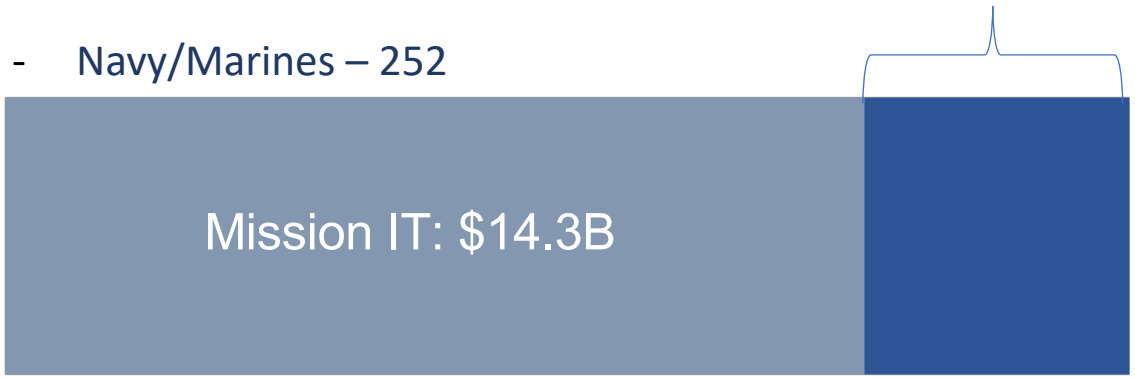
Human Capital Management Acquisition

BPT Total Addressable Market: Preliminary Assessment

Total Number of "BPT-Ready" Projects: 1009

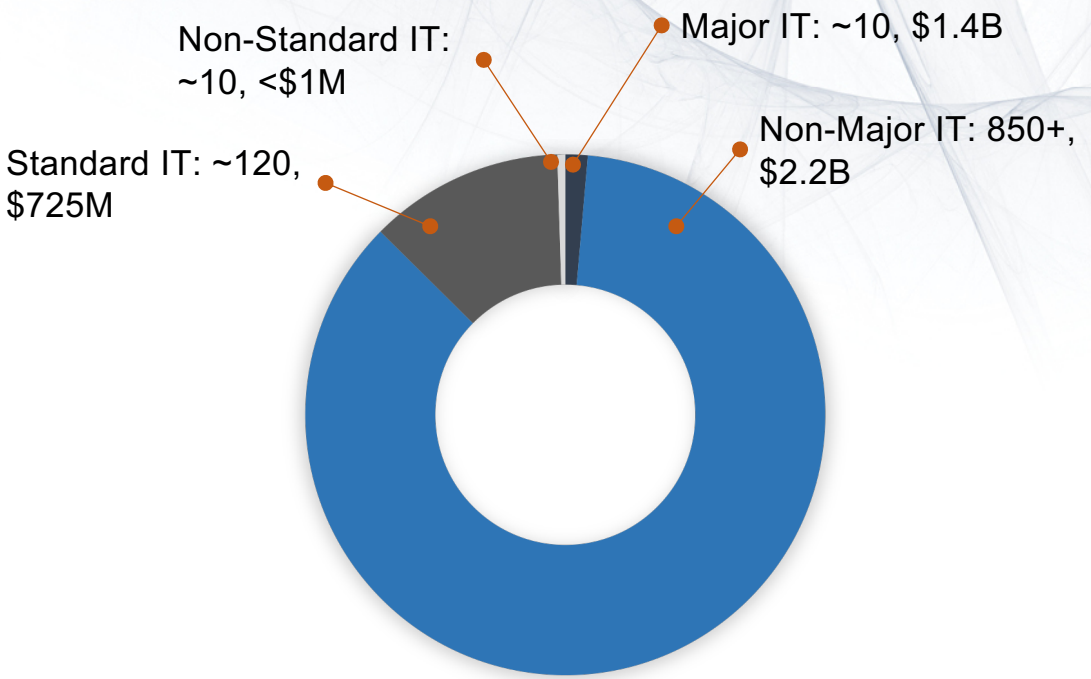
Number of Investments Per Organization:

- Air Force – 198
- Army – 306
- Defense Wide – 253
- Navy/Marines – 252



Total FY 21 IT Spending: $18.7B
Source: DoD CIO IT Dashboard

Number of Projects vs IT Spend



IT spending is fragmented with a small number of major IT programs and many non-major programs spread across DoD.

23% of publicly available DoD IT Spending is in BPT's sweet spot of business, law, policy, HR, training, finance, and acquisition.

BPT Weapons of Choice

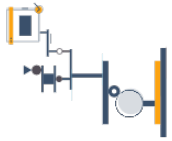
Tools and levers to achieve the BPT vision extend beyond building capabilities.

Community Building: Outreach, development, and evangelism of a BPT related communities of interest

Key Activities: Working groups, consortia, workshops, detail programs, training, strategic communications

Senior Leader Engagement: High level interactions to foster organizational change

Key Activities: Partnerships, official correspondence, top-down support, enterprise change management, goalsetting, performance



Process Definition: Describing user workflows and system interactions to identify transformation efforts

Key Activities: User research, process mapping, business process management, use case development, evaluation, and prioritization

Solution Design: Requirements gathering and architectural design of transformation capabilities

Key Activities: Technical exchanges, requirements mapping, capability matchmaking, solution architecture , tech evaluation

Prototyping: Advancing from ideas to AI-enabled technology solutions

Key Activities: Proofs of concept, MVP development, model building and testing, data analytics, software development

Scaling: Enabling the department through enterprise solutions and shared services

Key Activities: Capability transition, acquisition support, infrastructure enhancements, capacity building

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Product Line Highlights

HUnT & HUnTx

In partnership with the JAIC and DIU, HUnT seeks to improve the accuracy and auditability of financial transactions conducted by Assistant Secretary of the Army for Financial Operations and Information (DASA-FOI) and USD (Comptroller).

AI-Enabled Robotic Process Automation: The Army financial management workforce consistently spends millions of manpower hours annually to manually resolve financial errors within the General Funds Enterprise Business System (GFEBS). These errors exceed $2 billion with some errors never resolved, even after five years.

Read more here: [HUnT Article]

KEY INFORMATION

- **Multiple Capabilities Spanning Multiple Platforms.** HUnT users are leveraging automation tools to prove out methods for identifying unmatched transactions across different datasets.
- **Scaling Army Infrastructure.** HUnTx is executed and managed by DIU, which is actively scaling Army backend infrastructure to expand intelligent automation for unmatched transactions.
- **Successful Army Transition.** HUnT activities have been adopted by the Army as a committed transition partner and the Army is scaling to be a Service-wide capability for financial managers.

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GAMECHANGER

GAMECHANGER is intended to identify, consolidate, and automate the discovery and analysis of all applicable Statute, Executive Orders and Presidential Directives, Regulations, DoD Issuances, and Military Department Guidance documents for the Department.

AI-Enabled Shared Service Platform: The JAIC, in partnership with OSD components, is developing an artificial intelligence platform that utilizes semantic analysis, natural language processing (NLP), and data analytics to drive human-in-the-loop automated analysis and processes.

Access GAMECHANGER* today @
https://gamechanger.advana.data.mil

GAMECHANGER is fully operational on NIPR with 46k+ queries and over 3k unique users since inception. Anticipated SIPR deployment by April 2021.

*Requires CAC and NIPR access

KEY INFORMATION

- **Foundational Infrastructure.** Intelligent search and NLP tools exist on Advana platform, which can support enterprise-scale operations.
- **Increasing Demand From Mission Partners.** The Navy, Army, Joint Staff, and other organizations have expressed interest in partnering with GAMECHANGER team. JAIC has a role in shaping these partnerships.
- **JAIC Use Cases On Deck.** BPT has identified other potential use cases GAMECHANGER in areas such as safety operations, program evaluation, health policy, requirements mapping, security classification, and records management.

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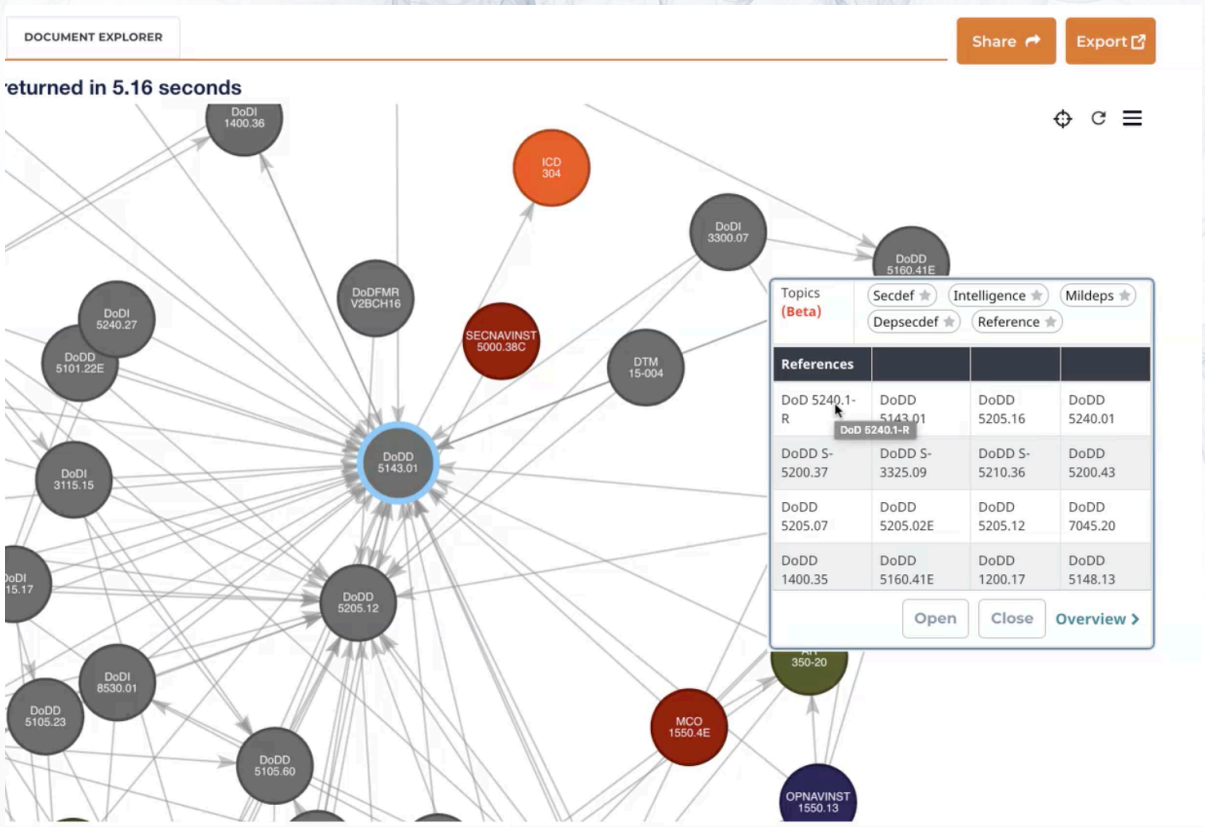
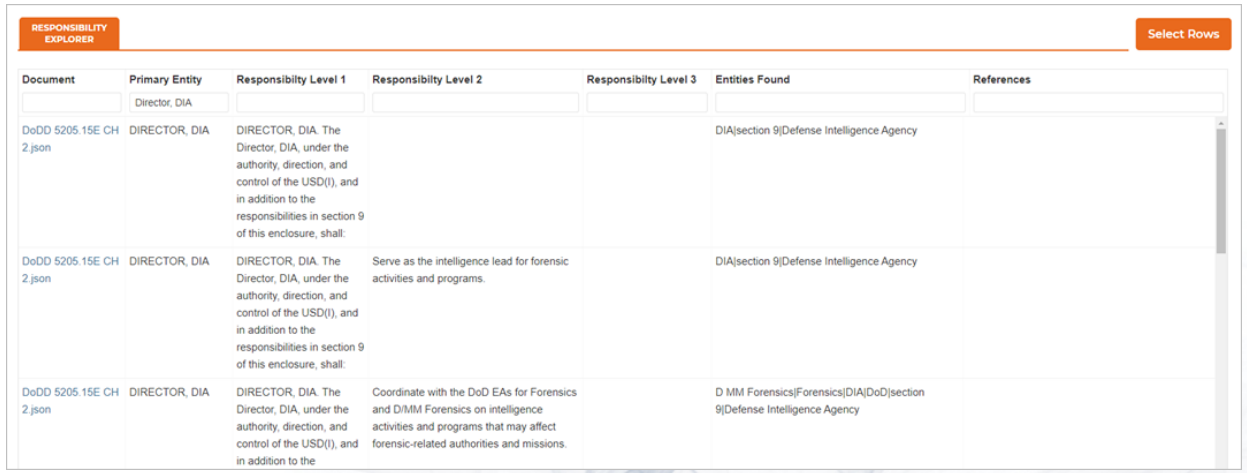
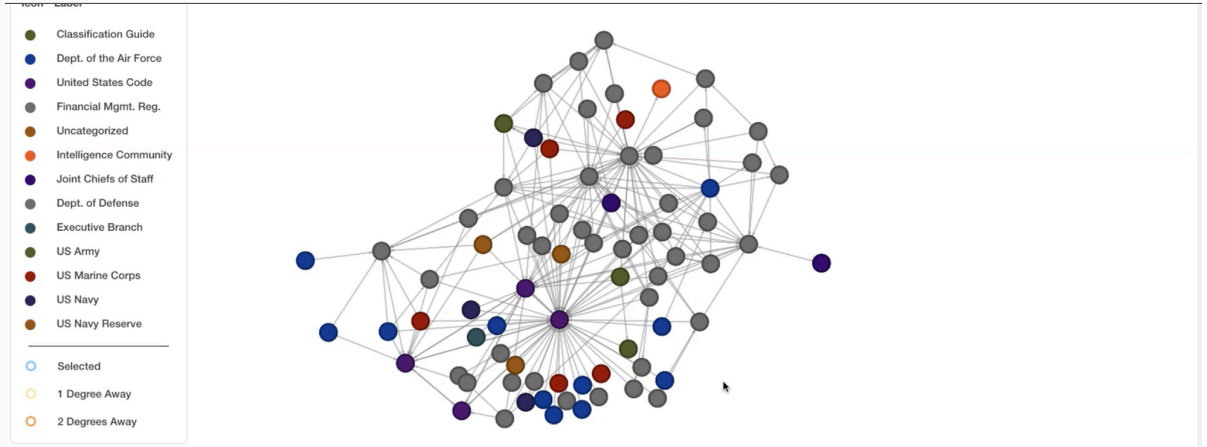
GAMECHANGER

Intelligent Policy Analytics For The DoD

- **Detect Relationships Between Policies.** Identify and extract policy references embedded in documents. Visually understand impact of changing or updating policy documents.
- **Identify Roles & Responsibilities.** As organizations are reconfigured through policy, identify where roles and responsibilities exist, overlap, or complement the mission.







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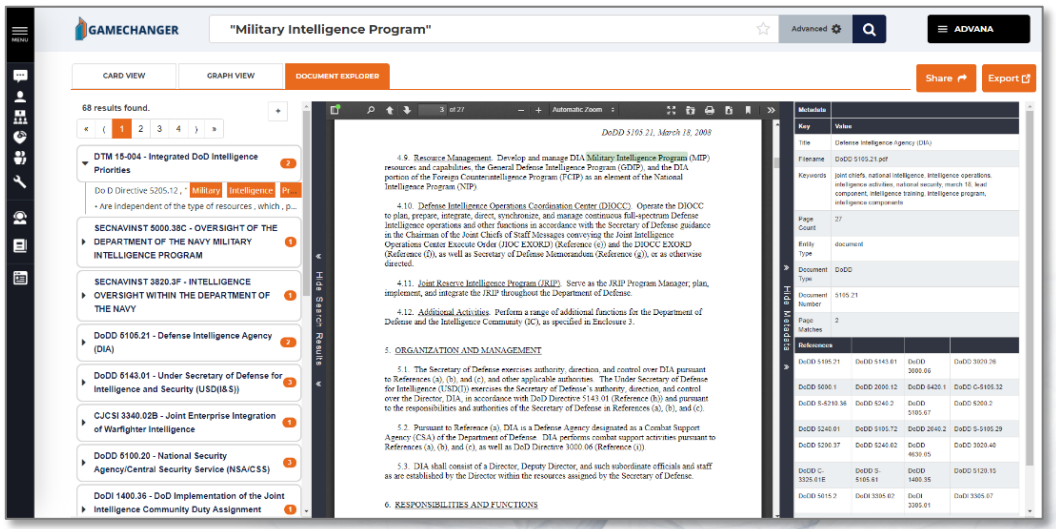
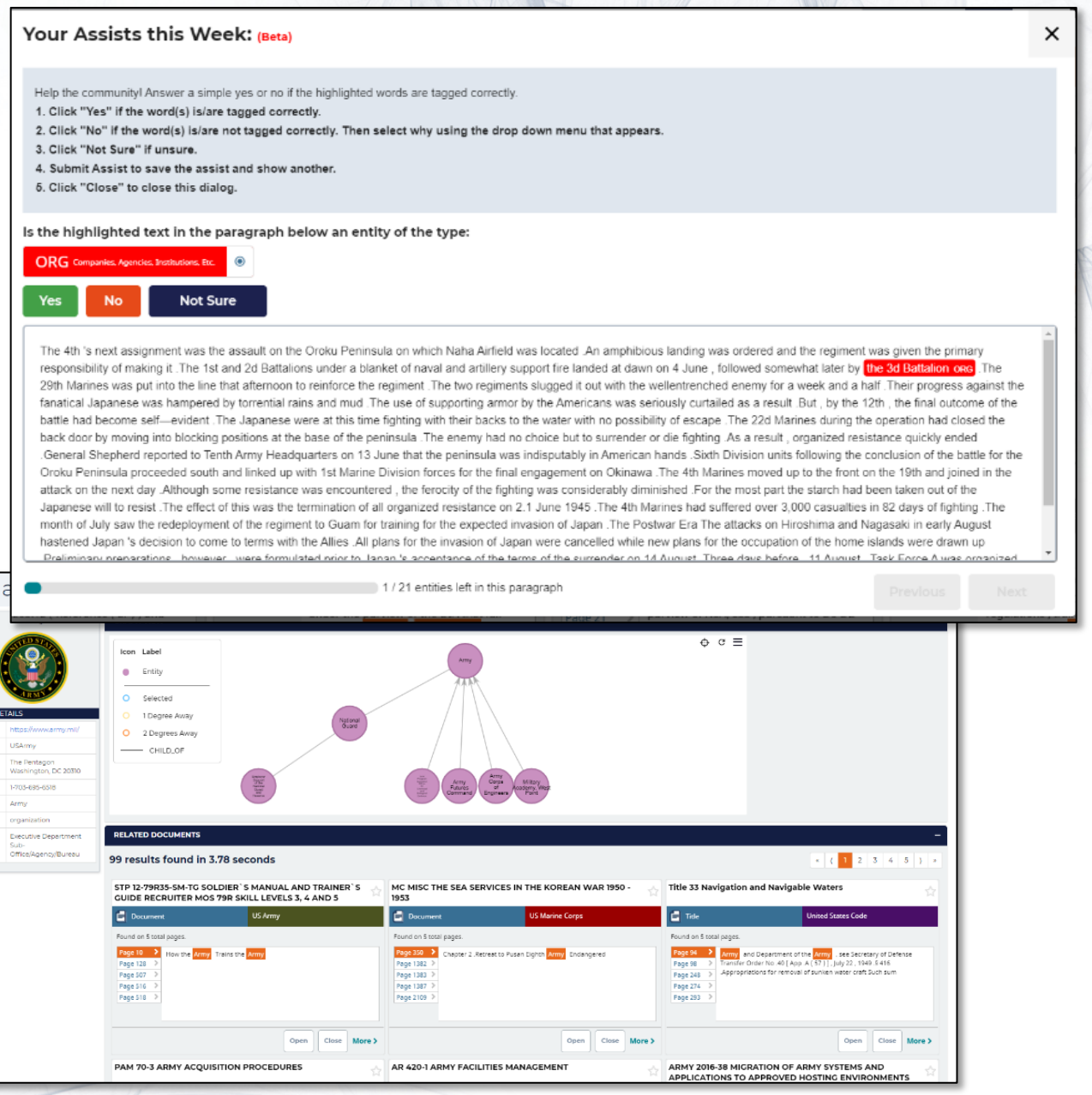
Intelligent Policy Analytics For The DoD

- **Interactive Document Exploration:** Preview, explore, and export documents. Quickly visualize metadata, relevant policy references, topics, and key organizations.
- **Entity Extraction & Crowdsourced Annotation.** Identify organizations, topics, keywords through named entity recognition. Ask users for input to continually update knowledge graphs.





Exciting Prototyping

MyNavy HR

The US Navy PSD offices have the responsibility of processing the Record of Emergency Data/Dependency Application (RED/DA) forms. Due to the amount of time the initial review requires, less time is available for the high-value work of processing the RED/DA forms that affect pay.

Intelligent Automation for HR Data: RPA technology can be used to automate the simple tasks, allowing personnel to focus on more high value work. Each RED/DA form review averages about 10 minutes when processed manually. Approximately 50% of all RED/DA forms submitted affect payroll. The results of the Norfolk PSD automation pilot validated a 48% reduction in workload.

KEY INFORMATION

- **Delivered & Transitioned.** Developers have delivered functioning code to the Navy. Navy has accepted the code and procured tools and capabilities required to assume O&M.
- **Intent To Scale.** The Navy has identified up to 13 deployment sites throughout the Service that perform this activity. The initial scaling strategy will deploy the prototype other stations to include Naval Station Great Lakes, Newport, and Memphis.
- **Need For CIOs To Weigh In.** The Navy team has expressed challenges with communicating risk to CISOs during implementation. This is an opportunity to conduct a Senior Leader Engagement around this successful prototype.

Big Ideas

BPT Big Ideas

100x Ideas That Are Truly Transformational

Policy-as-Code

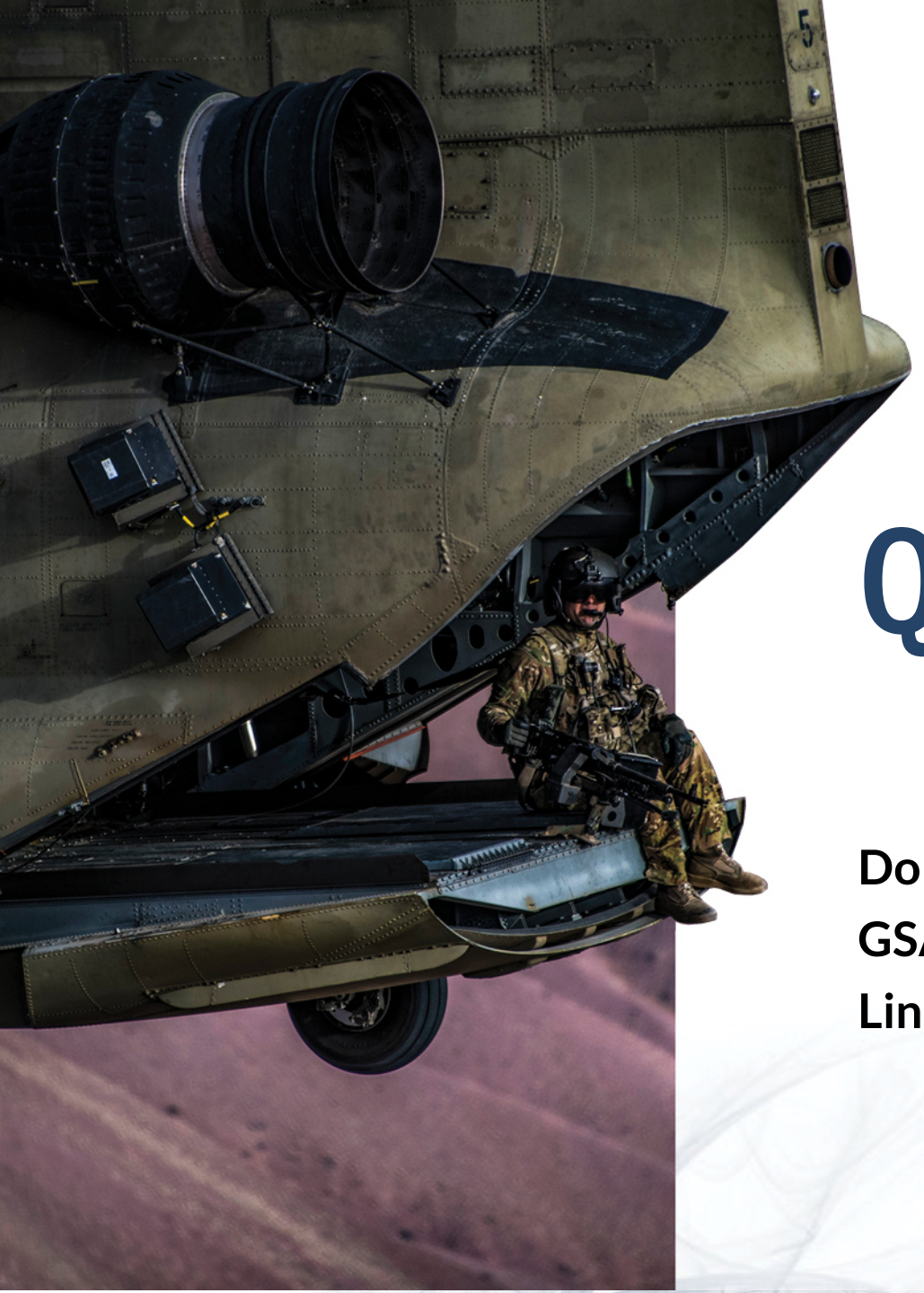
- Update once, propagate everywhere
- Real time impact analysis
- Machine readable roles, responsibilities, and authorities
- Enduring traceability and transparency

Data Driven Acquisition

- Intelligent vendor discovery and requirements matching
- Ensure fair pricing and minimize the risk of fraud
- Automated generation of acquisition packages

AI-Powered DoD & Industrial Base

- Build capacity and skills within industry, academia, and the government to match AI capabilities to mission needs
- Balance innovation and competition with reducing risk to the supply chain for the entire federal government
- Operate the Business of Defense as a truly digital operation
- Illuminate relationships between manufacturers, suppliers, and customers for materiel and non-materiel solutions



Questions?

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