

Accelerating DoD Operations by Smartly Automating Manual, Data-Based Workflows

Defense Department organizations are inundated with documents and other sources of valuable, disparate data that they cannot exploit without significant investments in manual data entry. Instabase solves that problem.



“*DoD must accelerate its progress towards becoming a data-centric organization.*

– DoD Data Strategy, 2020

Defense Department leaders understand that data is a strategic asset that must be operationalized for greater military effectiveness and lethality. By improving their data management, military organizations will enhance their speed, proficiency, and efficiency in Joint warfighting, senior leader decision support, and business analytics.

But as DoD organizations strive to become more data-driven and digital, many encounter a major obstacle along the way: accessing and leveraging the vast stores of data in their possession. Most of this data resides in formats that are not easily mined or accessed by today’s information systems – formats such as paper documents, machine logs, handwritten notes, PDFs, Word documents, PowerPoint slide decks, and data tables, to name a few.

The data in these formats, known as *unstructured data*, typically comprise about 80 percent of a large organization’s total data. In most cases, this data goes unused because it is too time-consuming to be made usable for the enterprise.

When an agency decides that certain unstructured data is too important to neglect, it will typically assign employees or contractors to do the time-consuming, tedious work of entering the needed data by hand into a computer system so it can be used. This approach slows down countless military-supporting programs and operations; burdens staff; and is incapable of leveraging unstructured data quickly and at scale. This time consuming and inefficient approach also runs counter to the *DoD Data Strategy* which aims to rapidly unlock the strategic value of data in the government’s possession.

This problem presents itself in countless ways across the DoD enterprise:

OPERATIONS AND READINESS: It takes a great deal of data collection, sharing, and analysis to properly assess and improve unit readiness or to support day-to-day military operations. The processes of extracting, aggregating, and analyzing needed information from sitrep reports, charts, maintenance logs, training and fitness reports, intelligence reports, and other data sources are highly time-consuming and labor-intensive. Much of that work can be done as automated workflows, even when the data involved lies in analog formats, such as paper documents, emails, charts, and spreadsheets.

LOGISTICS AND MAINTENANCE OPERATIONS: Whether the task is keeping weapons systems and platforms ready to support a high ops tempo, optimizing critical supply chains, or automating the analysis and management of records to keep logistics operations humming along, DoD logistics operations rely on a wide assortment of paper records, machine logs, emails, spreadsheets, charts, and other data sources. Much of the work to analyze and connect those data sources in meaningful ways is done manually. To improve key performance indicators, such as service readiness, supply availability, acquisition timelines, business health, and customer satisfaction, these back-end operations need to be digitized and automated to the extent possible.

INTELLIGENCE OPERATIONS: A dynamic international security environment and numerous pervasive threats necessitate robust global overwatch. However, many of the business processes involved in identifying, tracking, and providing timely strategic indication and warning on evolving threats is manual — and therefore, overly time-consuming — due to the analog nature of many information sources. As a result, the Defense Intelligence Enterprise is working to develop and implement innovative and comprehensive enterprise management capabilities to make its multi-intelligence collection management business processes more digitized, accelerated, and AI-driven.

MISSION, SUPPORT, AND RESOURCE MANAGEMENT OPERATIONS: Whether it's managing a large facility, keeping the financial books balanced, overseeing personnel and recruitment, or running contracting, IT, budget, and security operations, there are a lot of moving parts to keep track of, many of which are handled manually. DoD leaders have made it a strategic priority to streamline and automate many of the business processes that keep these back-office support operations running to improve effectiveness and efficiency.

The key to digitizing, streamlining, and automating these and other operations lies in unlocking the unstructured data entombed in analog formats and documents. These include:

Intelligence sources	Certificates	Supply chain documents
Unit readiness documents	Maintenance logs	Photos and videos
Budget documents	Fleet records	Case management files
Receipts	Financial records	Social media posts
Invoices	Personnel records	Charts and tables
Purchase orders	Court records	Training documents
Emails	Financial transactions	<i>and more...</i>
Handwritten documents	Health records	

Technology solutions exist to address this problem, but most are limited in one way or another. Some can digitize documents in analog formats, for example, but they cannot do anything with the data once it is digitized to bring the data's value to the enterprise. Others lack the versatility to leverage data from a wide variety of documents and formats — they may work well for certain applications but poorly for others.

Another limitation is that many solutions use proprietary technologies and architectures, which means they cannot be easily or cheaply upgraded or enhanced with new capabilities that emerge in the marketplace. This leads to “vendor lock-in” in which a DoD organization — in order to upgrade a solution or add more functionality — must do so through that solution vendor, which can be expensive if not impossible.

Instabase dramatically advances the frontier of document understanding

The good news is that modern technologies — such as automation and deep learning artificial intelligence — now enable

large enterprises to economically find and leverage the data embedded in these various documents and data sources with high accuracy.

Instabase is a highly versatile, hyper-automation software platform that employs deep learning to quickly and economically digitize and leverage valuable data embedded in your organization's unstructured documents. Importantly, Instabase not only digitizes your unstructured data with speed and high accuracy, but it also enriches, processes, and circulates that data where it is needed to immediately leverage that data's value for the enterprise.

Using the low-code Instabase platform, DoD organizations can easily build customizable apps to automate various parts of their operations. For example, an intelligence organization can quickly build an app that automatically scans a variety of Mandarin data sources for references to a specific weapons program or military operation and then extract that information and feed it into other business workflows. Or a military unit can build an app to extract readiness data from various sources on a periodic basis to automatically build and update a current unit readiness scorecard.

Only Instabase combines these three critical pillars into an enterprise-grade solution for leveraging unstructured data:

High accuracy: By combining Instabase's deep learning algorithms with those available on the market, Instabase requires far fewer training samples to hit the ground running and begin understanding and digitizing paper records. This enables it to work across a wide array of highly variable documents and data sources. And because Instabase can incorporate any new deep learning algorithms that emerge in the marketplace in the future, it is capable of continuous innovation to keep pace with the state of technology.

Infinitely modular: Agencies can mix and match low-code and pro-code capabilities tailored for the job at hand. Moreover, anyone can easily build custom solutions as modules for specific use cases and workstreams across the enterprise, thereby reducing time-to-value from months to days.

Highly scalable: Anyone across the agency enterprise or even across agencies can share and reuse solutions and solution components for prevalent use cases. For example, if a division within an agency sets up a workflow to digitize data from, say, paper SF-86 forms, then other divisions within that agency or even other agencies can use that same established workflow to similarly digitize SF-86 data.

This is what Instabase was designed to do from the ground up: access and understand highly variable documents, intelligently extract needed data from them, and enrich and circulate that data where it can be used by the enterprise.

Instabase is a modern, highly intelligent document processing solution that is:



Smart enough to understand what it is processing



Accurate enough to trust for military operations and missions



Fast and scalable enough to manage large DoD workloads



Versatile enough to process many types and classes of unstructured data



Powerful enough to not only translate and capture unstructured data, but also to immediately realize value from that data



Secure enough to manage highly sensitive data

The value that Instabase delivers to DoD agencies

With Instabase, DoD organizations can easily and quickly unlock and exploit vast amounts of data that otherwise would be entombed in formats difficult and time-consuming to work with. This capability presents many mission- and business-related benefits:

- Faster time-to-mission-value for your vast stores of unstructured data
- A more data-driven enterprise
- Greater ability to scale business processes
- Lesser errors, more accuracy in extracted data
- Staff, freed up from menial data entry work, can now focus on more critical tasks
- Cost avoidance due to less time being spent on correcting errors in the data and more timely processes

Our Differentiators

Immediate value from your data

Open APIs enable easy integration into existing systems to enrich and employ unstructured data in daily operations

Extreme versatility (via deep learning)

Applies to many classes, formats, types of documents; extracts data from handwriting, low-res images, even tables of data within documents

Easy to use

Low-code/pro-code drag-and-drop building blocks are tailored for technical and non-technical users alike, enabling anyone to build an app

An end-to-end solution

A highly modular architecture enables customizable assemblies of capabilities to find, understand, break up, classify, extract, validate, digitize, enrich, and circulate data to where it is needed

Future-proof

An open architecture enables continuous innovation and best-of-breed capabilities for OCR, NLP (73+ languages), deep learning algorithms, and more

High scalability

Solutions built to automate data workflows can be immediately reused across an agency enterprise or even across agencies. Pre-built apps within the platform can be reused so there is no need to do the same work twice to process the same type of document

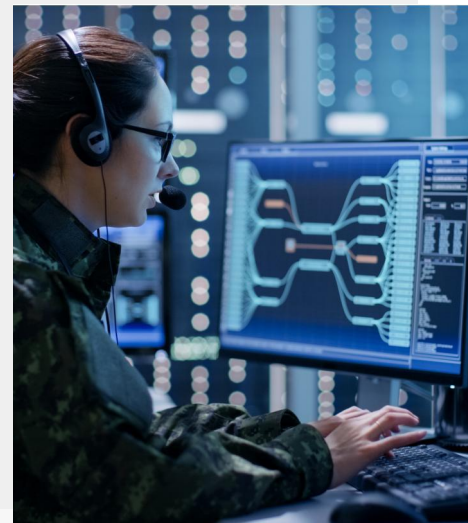
High Accuracy

Enabled by leading-edge transformer-based deep learning models

Common DoD use cases:

- Horizon scanning
- Financial statement digitization
- Supply chain management
- Maintenance record analysis and management
- Security clearance processing
- Intelligence analysis
- Human capital management
- Contract management
- Lockbox automation
- Mailroom Automation
- Accounts payable
- Employee Onboarding
- Fleet management
- Case management
- Supply chain reconciliation
- Employee vetting
- Health records digitization
- Personnel records digitization
- Fraud Detection
- Facilities management

To learn more about how Instabase can help your agency accelerate its programs and missions or to schedule a demo, contact federal-info@instabase.com



About Instabase

Instabase Inc. has built the first Automation Platform for Unstructured Data, enabling federal & commercial organizations to drive transformation across manual processes by unlocking unstructured data with deep learning. The Instabase platform helps institutions transform unstructured data into structured data so that processes, such as client onboarding and mortgage processing, can be automated end-to-end. Today, Instabase is helping the world's largest organizations like USPTO, Standard Chartered, and AXA automate their most complex business processes by extracting and understanding the unstructured data that underpins those. The business is backed by leading investors, such as Greylock Partners, NEA, Andreessen Horowitz, Index Ventures, Spark Capital, Tribe Capital, Original Capital, SC Ventures, and Glynn Capital.

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