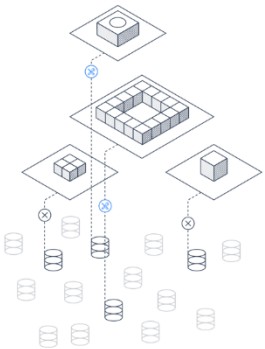
Palantir

Asset Readiness



Introduction

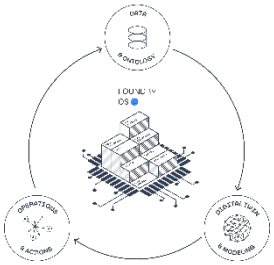
From safeguarding national security and securing the energy grid to protecting public health, Government organizations serve our nation's most critical missions. To ensure that they are operating healthily and making informed, proactive, and cost-effective decisions, these organizations need actionable information and insights about their assets. This begins with what they have, where they have it, and how that compares to what they need and where they need it.

Achieving this visibility today can be a complex challenge, as the data needed for an organization to truly "see itself" is often scattered across separate systems such as those for inventory management, procurement, maintenance, and other mission-specific data environments. Further, this data is frequently encoded in disparate formats within a web of siloed systems, requiring extensive human interpretation to get to actionable information.

In a large organization, even answering seemingly simple questions like "How many vehicles do I have?" or "Are we running low on PPE?" can be a complex task with multiple bottlenecks. Bespoke engineering work is often required every time a new question arises. Even when data is patched together in an interpretable manner, it can be hard to trust it, because it's not always apparent where that data came from or how recently it was updated.

A systematic approach to integrating, modeling, and managing data can overcome these challenges and give organizations a complete picture of their assets and operations, with real-time metrics and insights they can trust. We built Palantir Asset Readiness to support our critical mission partners in Government and industry as they adopt such innovative approaches to data management.

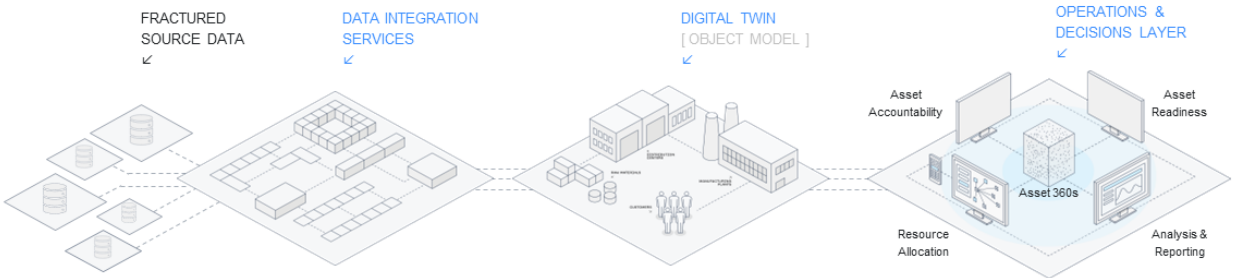
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Solution Overview

At its core, Asset Readiness is an open-architecture software solution built for unifying fractured data landscapes while respecting existing systems and processes.

With integrated, interpretable data and flexible operational tools in their hands, users can not only gain quicker visibility into the current state - they can ask and answer deeper questions that help improve that state. Instead of just trying to figure out how many vehicles are in the fleet, for example, a user can now ask “How many of these vehicles are up to date on their maintenance?” and “What is the breakdown of new-model and old-model vehicles among those that are not ready to deploy?”



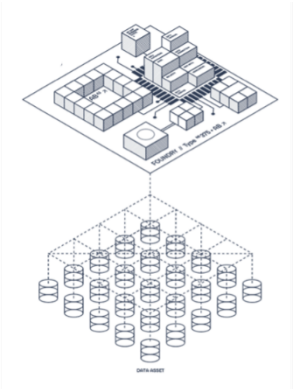
Unifying data to reconstruct a digital twin of the enterprise and enhance operations.

OUTCOMES ENABLED WITH PALANTIR ASSET READINESS:

Leading enterprises across the public and private sectors are using Asset Readiness today to:

- → Create a collaborative, access-controlled source of truth for enterprise assets
- → Measure and assess readiness and operational health at a glance, at any level
- → Investigate issues to understand root causes and pinpoint / prioritize remedies
- → Optimize resource allocation; e.g., determining where a component is needed most, where to send equipment, or how to prioritize maintenance staff time
- → Analyze over-time trends at each level of their organizational hierarchy, from aggregate views all the way down to component-level analyses
- → Get ahead of anticipated surges and risks, such as training exercises that consume inventory and increase unscheduled maintenance.

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01 | Digital Twin

Build a digital twin of your resources and workflows that reflects the entirety of the enterprise.

Palantir provides the under-the-hood tooling needed to generate and maintain an authoritative, actionable picture of the organization. It fuses, cleans, and maps data from disparate systems into a single layer of intuitive concepts that anyone in the organization can walk up to and understand. This engineering process enables users to interact with data as objects, their properties, and the relationships between them. These objects serve as human-interpretable building blocks that power the analyses and workflows across the platform.

For example, all of the information relevant to a single truck might have previously lived in 8 different spreadsheets or data systems, each of them using a different schema and shorthand. Palantir centralizes that information in a single “truck” object.

This approach to modeling data greatly increases the speed to insights and outcomes, and it democratizes the use of data across the organization. Anyone with authorized access can ask and answer questions with just a few clicks, without the need for data engineering skills.

CURRENT STATE	FUTURE STATE WITH PALANTIR
× Asset data is fragmented in silos	→ A centralized, single source of truth that fits into existing infrastructure
× Data is hard to trust—difficult to tell where it came from and when it was last updated	→ Data orchestration engine with built-in provenance, health checks, monitoring, and alerting
× Dependency on subject matter experts to gather and interpret data	→ Intuitive user workspace provides 360-degree views and enables users to investigate causes, impacts, and predicted future states
× Most time is spent just trying to understand the current state and first-order questions	→ Answer top-line questions in seconds and drill down into deeper analysis of causes, impacts, and remedies

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The list below summarizes the technical components that enable data orchestration and engineering of the digital twin:

→ **Data Connection** enables a comprehensive view of data across source systems for making informed decisions.
Varied, configurable connection methods and open APIs enable the solution to connect to any data source, file system, database, or third-party application to reliably ingest data in any format, location, or environment.

→ **Data Lineage** ensures that users can trust analyses by inspecting upstream data source.
Data lineage is automatically generated within the platform from the moment of data ingestion, allowing users to trace data and enforce controls through all phases of integration, transformation, dissemination, and use.

→ **Data Health** proactively surfaces data issues for resolution before decisions are made with faulty data.
Users can monitor, check, and remedy data quality issues through both automated alerts and user-driven health checks.

→ **Data Engineering** fosters a community of experimentation and rapid improvement, only modifying production once changes are vetted.
Users can integrate, clean, transform, and model data collaboratively through branching and versioning features that enable data engineers to build/edit pipeline branches safely without affecting production data pipelines and applications.

→ **Data Security** maximizes collaboration across teams while protecting data by respecting granular permissions.
Palantir's security model offers several levels of encryption and highly granular role-based, access-based, and purpose-based controls down to the cell level, which persists downstream to all applications and derived datasets.

→ **Openness and Flexibility** simplifies interoperability with existing data sources and tools for quick adaptation to new technologies as they become available.
Use of open APIs and software development kits (SDK) supports multiple technologies and architecture models that can "plug in" to the solution and enable connectivity with third-party tools. The solution supports push, pull, or hybrid connection models to connect to data source systems.

→ **Scalability** accommodates changes in data and user scale while optimizing resource consumption to future-proof the organization.
Palantir's containerized infrastructure layer builds on top of Kubernetes for dynamic scaling, improved compute performance, increased cost control, and enhanced security.

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02 | Asset 360s

One-click metrics and insights on any asset.

360 Views provide single panes of glass for metrics and insights on any object in your operational environment, whether it be a component, a truck, a fleet, a mission, a maintenance task, or other relevant concept.

→ **Component 360**

A granular view of each component part tracked in your organization, with current and historical context — removals, installations, sensor readings, supplier, NIIN, remaining useful life (RUL), and more.

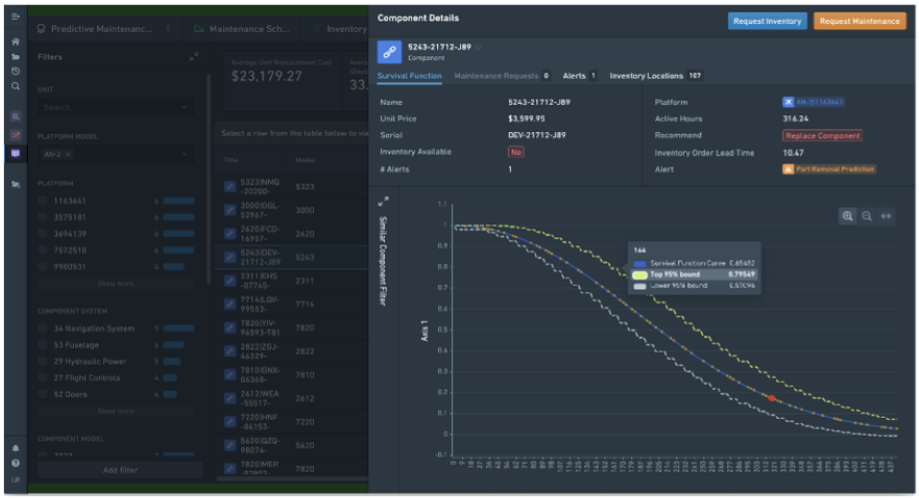
→ **Equipment 360**

An actionable and integrated view of platforms and large equipment (e.g., vehicles, machinery) — with data on readiness, missions, inspections, maintenance, installed components, sensor readings, and more.

→ **Fleet 360**

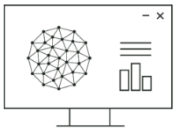
The solution also provides fleet-level views for understanding asset readiness/availability and risk across multiple platforms.

Asset 360s provide fleet-level views for understanding asset readiness and availability and risk across multiple platforms.



Example Component 360 view. All data notional.

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03 | Analysis, Reporting, and Operational Decisions

Automate ad-hoc reports and routine work, or slice and dice data to get answers and decisions quickly.

Users can interrogate data with extensible analytic tools and rapidly present data and insights in interactive and live-updating reports. With flexible metrics, analyses, and reports, Palantir unlocks a host of operational workflows and decisions:

→ **Inventory Readiness Monitoring**

Measure availability, monitor resupply levels, and evaluate other operational health metrics. Identify high-risk assets and operations at a glance, then drill down into causes and remedies.

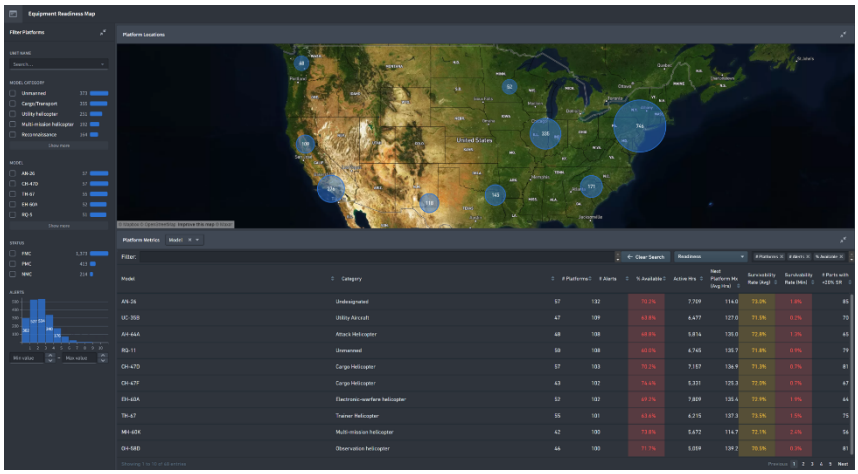
→ **Resource Allocation and Decision Support**

Encode business practices and resourcing workflows by digitally modeling complex hierarchies and decision processes. Triage and prioritize resource requests and asset management tasks with a clear picture of outcomes and tradeoffs by modeling multiple scenarios and evaluating their expected outcomes.

→ **Historic Trend Analysis**

Chart, measure, and draw insights from asset status and performance metrics over time. Compare asset availability across different parts of the organization or asset types over time. Monitor trends in target, on-hand, and utilization metrics over time.

With flexible metrics, analyses, and reports, Palantir unlocks a host of operational workflows and decisions.



Example inventory readiness view. All data notional.

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Case Studies



Asset Accountability & Readiness at the U.S. Army

THE CHALLENGE

In 2018, the Army's senior leaders needed to address their most critical problem: readiness, or the availability and preparedness of any given unit, Soldier, or piece of equipment to support the requisite mission. Answering even seemingly simple questions related to readiness – i.e., "How many tanks are operational?" or "How many tank drivers are trained?" – was enormously complex, as the information was scattered across hundreds of data sources or on the desktops and in the minds of thousands of analysts, data engineers, and functional managers.

THE SOLUTION

- → 160+ source systems and 30,000+ data sets integrated
- → 15M+ pieces of equipment managed
- → Tens of thousands of users supported

Palantir now powers Army Vantage, a data ecosystem to augment decision-making across this million-person organization. To date, the platform has integrated more than 160 source systems and 30,000 data sets, many with millions of rows each. Data comes from across every business area and function within the Army — from finance, operations, personnel, and logistics data to complementary open-source and third-party data sources — to build a digital twin of the Army's operations and resources.

Vantage enables collaborative force readiness — from senior leader-level decision support to suites of analyst capabilities. The Army now uses Palantir to manage force readiness — including its 65,000+ units, authorizations for over 1,500,000 pieces of equipment, and over 1,000,000 billets for personnel — all connected, updated, and changed daily. This ecosystem enables the Army to assess readiness in near real-time, without the manual intervention of dozens of analysts or the creation of stale PowerPoint decks.

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OUTCOMES ENABLED

Aircraft and crew readiness metrics and forecasting:

→ Palantir provides a common picture at each echelon of aircraft, aviator, and crew readiness through near-real time integrations of authoritative source systems.

→ With this capability, Palantir has improved the visibility of aviation metrics at every echelon, and by doing so, improved the overall posture of the aviation domain within the Army. As part of this effort, Palantir juxtaposes flight hour and financial forecasts with the number of hours executed and dollars spent for aviation units to monitor whether there are needed resource adjustments.

Self-serve metrics on asset readiness and availability:

→ Obtaining relevant records on a given asset previously required emailing requests to Commanders and other stakeholders around the organization and waiting days for responses. Even answering simple questions like whether a part was in stock at a unit could require significant and specialized manual effort.

→ Today, Palantir operates as a self-service solution for Commanders across the Army to access a richer, integrated view that gives them clear visibility into what they have, what they need, why they need it, and how they can fill that need. Now, Commanders can better understand their assets immediately and make more data-driven decisions at faster speeds.

Unit readiness and real-time decision support:

→ Before Palantir, units like the 82nd Airborne Division spent an estimated 500+ hours each month to produce a one-time, monthly self-assessment of their readiness. This represents an untenable cost and time risk for a Global Response Force that needs to deploy anywhere in the world within 18 hours. The Division now has access to real-time readiness data through a unit-centric application that summarizes its personnel, equipment, and other related metrics.

→ Beyond situational awareness, Palantir enables users to view historical trends that help contextualize the current readiness situation and empower Commanders to make more informed decisions immediately and make more data-driven decisions at faster speeds.

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Vaccine Readiness and Administration for the Countermeasure Acceleration Group

THE CHALLENGE

The task of allocating, distributing, and monitoring the administration of the COVID-19 vaccine presented massive challenges in scope and complexity. This required the U.S. Government to manage vaccine availability and response readiness based on high-integrity, up-to-date data from across the nation.

THE SOLUTION

Since 2020, Palantir has supported several federal agencies, including HHS and the Centers for Disease Control and Prevention (CDC), with an end-to-end solution to manage the allocation, distribution, and monitoring of the COVID-19 vaccine across the country. Palantir integrated more than 6.5 terabytes of data from across more than 150 source datasets and systems, enabling the Government to:

→ Maintain a central picture of allocation, planning, distribution, delivery, inventory, and updates across the vaccine supply chain

→ Analyze and disseminate vaccine allocations in line with program / Federal & State policies

→ Allow jurisdictions to track their vaccine allocations, orders, & shipments, among other metrics

→ 2,200+ unique users across Federal agencies, jurisdictions, and private sector partners

→ 198 applications configured with the platform

→ 11,000+ analyses and 1,600+ reports generated

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OUTCOMES ENABLED

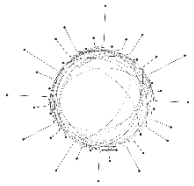
Optimized vaccine distribution:

- → Palantir supports optimized vaccine distribution with high fidelity data and integrated tools for demand forecasting, scenario planning, and simulation.
- → Palantir includes walk-up usable operational interfaces to support decision-makers and analysts alike and provides end-to-end support for the proactive, data-driven management of the supply chain.

Inter-agency decision impact support:

- → Palantir enables inter-agency stakeholders to see how potential decisions would impact anticipated vaccine distribution, without special training or coding experience required.
- → Millions of administration records are integrated with more than 150 source data sets, which enables HHS, CDC, and other key users to analyze how changes in scope or deadlines impact anticipated distribution using all available data.
- → Users in Palantir rapidly leverage enterprise data: in a few steps, the platform's user-configurable and data-backed applications enabled users to operationalize their data to make effective and informed decisions—all without writing a line of code or needing days of specialized training.

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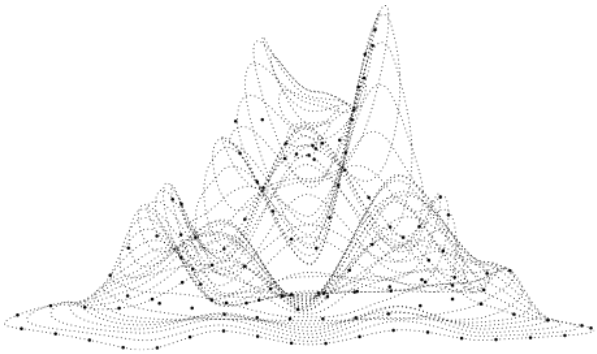
Conclusion

With flexible metrics, analyses, and reports, Palantir unlocks a host of operational workflows and decisions.

Innovative approaches to data management can significantly improve asset readiness. Palantir Asset Readiness leverages best-in-class data management technology and implementation practices to provide a powerful and cost-effective solution for asset and supply chain managers.

Palantir Asset Readiness packages technologies that are pre-built, proven across diverse real-world enterprise implementations, and are immediately deployable for operational usage within days or weeks on cloud environments. The benefits of leveraging this commercial technology include:

- → **Lower costs:** Commercial technologies generally cost less than custom-built solutions because development and sustainment costs are shared over many users over the lifetime of the technology.
- → **High quality:** Commercial products have been developed and improved over time, with other parties participating in finding bugs or suggesting feature enhancements.
- → **Fewer customer start-up costs:** Productized solutions are designed for quick implementation, with full documentation accompanying the start-up process.
- → **Less development time:** Customer organizations can spend time learning about and configuring the product, rather than developing it from scratch.
- → **Streamlined acquisitions:** The government can quickly acquire commercial technologies through a number of rapid acquisition authorities including CSOs, OTAs, and FAR 12 based contracts.



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