DLT AnalyticsStack™

Powering big data, analytics and data science strategies for government agencies

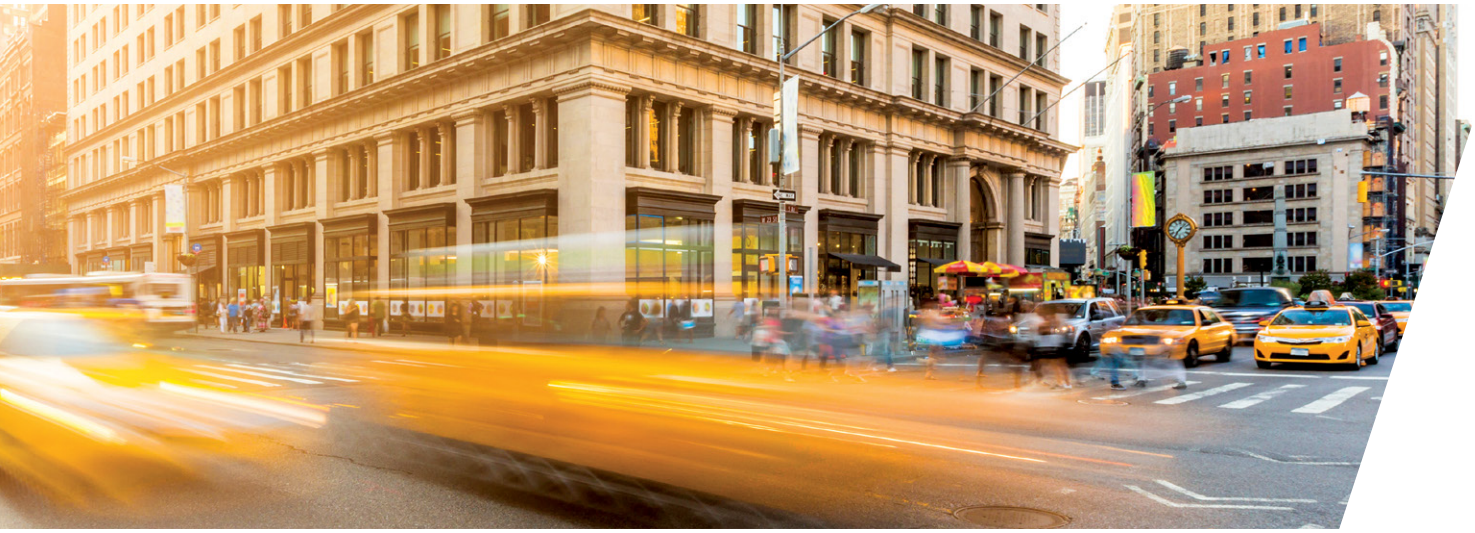
Now, government agencies can have a scalable reference model for success with Big Data, Advanced Analytics and Data Science capabilities

Public sector government agencies are increasingly challenged to provide new citizen services, decrease time to decision and achieve faster mission success. An answer to these challenges can be found in the volumes of data created, collected, stored and managed in the wide range of public sector applications and processes. While many government agencies have begun the journey of digital transformation with new focus on data as an asset, the effort is typically piecemeal and uncoordinated. What has been missing is a comprehensive framework that arms agencies with all the tools—as well as the guidance and support—necessary for leveraging data into meaningful insight and action. DLT AnalyticsStack now provides that critical framework.

Maximizing all types of data has become a mission imperative

Government's experience with big data and analytics is still in the early stages. The most commonly used definition of big data describes it as high-volume, high-velocity and high-variety information that requires new forms of processing to enable enhanced decision-making, insight discovery and process optimization. These factors are driving agencies to rethink traditional data storage strategies and create intelligent, 'data lakes' to effectively manage ingest and use of dynamic and emerging types, sizes and volumes of data.

Big data analytics can involve vast amounts of structured and unstructured data, which helps government leaders use sophisticated data science techniques and machine learning algorithms to drive decision-making. These algorithms, in conjunction with purpose-built advanced analytics, can predict behavior (predictive analytics); analyze program integrity to identify problems, such as fraud and abuse; or evaluate policy changes before they are implemented. When combined, big data, analytics and data science represent, disruptive, modern and strategic capabilities for discovering new patterns and correlations in data to create a new outcomes.



DLT AnalyticsStack strategy helps agencies realize real benefits from big data

DLT is taking a leadership position to guide U.S. public sector government agencies with a vision of how to effectively incorporate analytics and data management technologies and capabilities to achieve improved data insight and decision-making. Aligned with today's IT stack methodologies, our approach to addressing big data analytics and the resulting data management challenges is through an 'analytics stack' strategy leveraging best-of-breed technologies, products and ecosystem solutions.

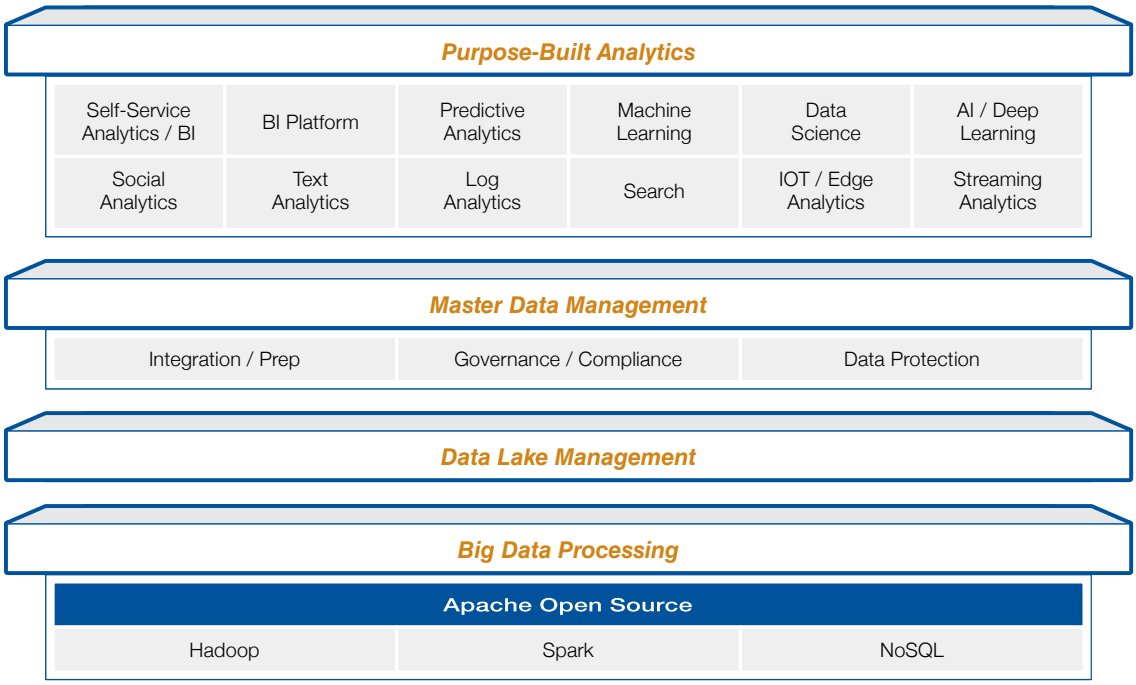
The AnalyticsStack four-layer stack strategy *focuses on all aspects of big data, advanced analytics and management ranging from foundational aspects like Big Data Processing to Data Lake Management, Master Data Management and Purpose-Built, Advanced Analytics. Providing improved data insight and supporting a culture of end-user driven analytics, each layer consists of complimentary capabilities to support the needs of agency executives, analysts and data scientists.*

Removing the guesswork and risk from digital transformation

DLT AnalyticsStack is a framework and 'building-block' model that allows Government customers to quickly identify how vendors fit into their big data strategy. Just as important, it is complemented by DLT's expertise and services, to help assure smooth strategy development and implementation. This approach will help agencies quickly architect, procure and adopt enterprise analytics capabilities ranging from big data infrastructure to business intelligence and visualization to advanced analytics and data science capabilities.

The DLT AnalyticsStack four-layered structure

With the innovative AnalyticsStack approach, DLT selects and organizes technologies and vendors that correlate to all the key functions of data science, processing and analytics.



Purpose-Built Analytics Layer

Data insight is key to the success of any analytics strategy. The Analytics Layer provides a set of purpose-built analytics and data science capabilities that span everything from self-service, business intelligence, to advanced machine learning, deep learning and artificial intelligence.

Master Data Management Layer

To support data ingest wrangling, preparation and integration while providing data governance, compliance, security and protection, the Master Data Management Layer ensures data is ready and available for effective analysis.

Data Lake Management Layer

To effectively manage the ingest and use of various types, sizes and volume of data, the Data Lake Management capability creates and manages a metadata catalog for all data in the batch and streaming data clusters deployed in the big data processing layer.

Big Data Processing Layer

As a foundational element, this layer is based on big data batch and streaming database and processing technologies like Apache Open Source Hadoop and Spark and transaction-oriented, NoSQL databases like Apache Cassandra and others. All possible in on-premise, private, hybrid or public cloud deployment models.

The complete solution is packaged with technology expertise and support

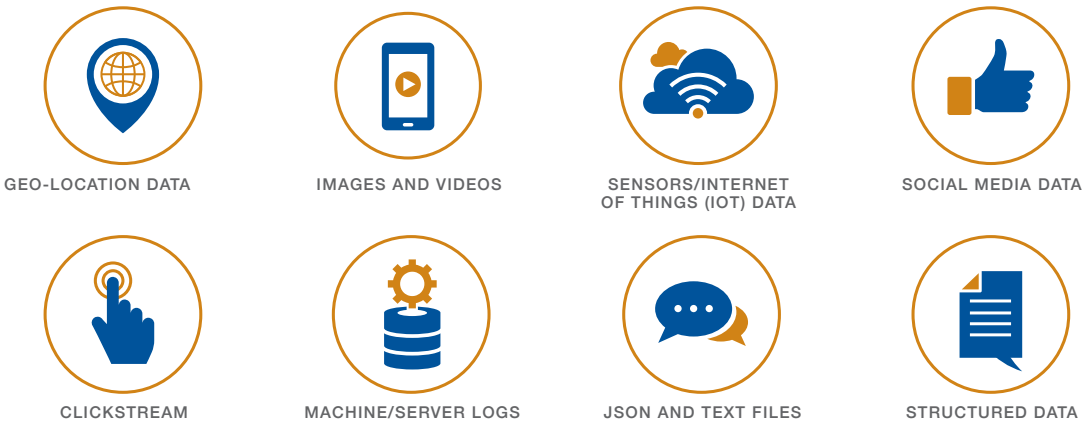
We can help accelerate the development and implementation of your big data strategy with a full range of engineering and support capabilities, including sales engineering, professional services, and managed services. Leveraging a rich eco-system of Systems Integrators and professional services partners, DLT works with you to ensure success.

Leveraging all size and types of data to create new capabilities and mission outcomes

While public sector organizations are usually well-equipped to collect, create and manage structured data, they are still learning how to deal with the increasing influx of unstructured data sources. Specifically, organizations struggle with converting structured and unstructured data into meaningful actions and outcomes. The challenge is in harnessing these disparate data sources to create valuable insight resulting in new or improved citizen services, greater situational awareness, and advanced mission capabilities. DLT AnalyticsStack provides the means to ingest, analyze and process both structured and unstructured data from different sources for the purpose of addressing a broad range of challenges.

Data ingest support: valuable data is everywhere

Until recently, most of the data residing within discrete applications, devices and Internet venues was not readily accessible for analysis and constructive use. The DLT AnalyticsStack now makes it easy to tap into a wide range of data assets and sources for ingest.



Driving outcomes for a large variety of government use cases

The DLT AnalyticsStack V1.0 is highly relevant in addressing the dynamic and emerging, data-driven mission needs of government agencies. An abbreviated list of potential mission use-cases include:

Citizen and Employee Engagement	Fraud, Waste and Abuse Detection/ Prediction	Predictive Maintenance	Location-based Services	Situational Awareness	Drug Addiction Management	Supply Chain Management
Transparency/ Open Data	Cyber Threat Management	Risk Management	Healthcare/ Hospital Optimization	Logistics/Asset Management/IoT	Food Safety	Financial/Budget Accountability
Workforce Management	Blue Force Tracking	Predictive Policing	Public Safety and Services	Scientific Research	Critical Infrastructure Planning and Monitoring	Next Generation Battlefield

Real, Outcome-Oriented Mission Benefits

With DLT AnalyticsStack, public sector agencies no longer have to tackle the very big challenge of big data in an inefficient “one-function-one-vendor-at-a-time” basis. AnalyticsStack offers the framework that empowers administrators and data specialists to approach digital transformation as a comprehensive initiative that maps to strategic objectives. Among other benefits, the AnalyticsStack:

Provides ‘full stack’ big data reference architecture	Leverages best of breed technologies in each layer	Offers a complete, API/ integration-based analytics ecosystem	Provides open source and purpose-built flexibility
Enables agencies to start small, go big, or grow existing analytics environments	Adapts to the full spectrum of government use-cases	Opens new opportunities for public-private research and development efforts	Creates new insights and cost efficiencies

DLT AnalyticsStack allows for integration with your existing environment, plus room for growth, depending on relevant use cases. It’s the best way for government agencies to embrace, plan and deploy a full range of data analytics technologies to result in new levels of data insight, use and outcomes.

To explore the possibilities, contact us for a complimentary consultation.

About DLT Solutions

DLT is a leading technology partner to federal, state and local governments, and education, utilities and healthcare markets. For more than 25 years, the company's dedication to helping the public sector make smart technology choices and simplify their technology procurements ensures its customers have the best options for Big Data, Analytics and Data Science, Cybersecurity, Cloud Computing, Application Lifecycle, IT Consolidation, and IT Management solutions. The DLT advantage includes strategic partnerships with industry-leading and emerging technology companies whose products and services can be easily procured thought DLT by leveraging its broad portfolio of government IT contracts, including GSA, SEWP V, U.S. Communities and Texas DIR.

To learn more, visit DLT's Resource Center online, call 800.262.4358 or email sales@dlt.com. You can also find us on LinkedIn and Twitter (@DLTSolutions).

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