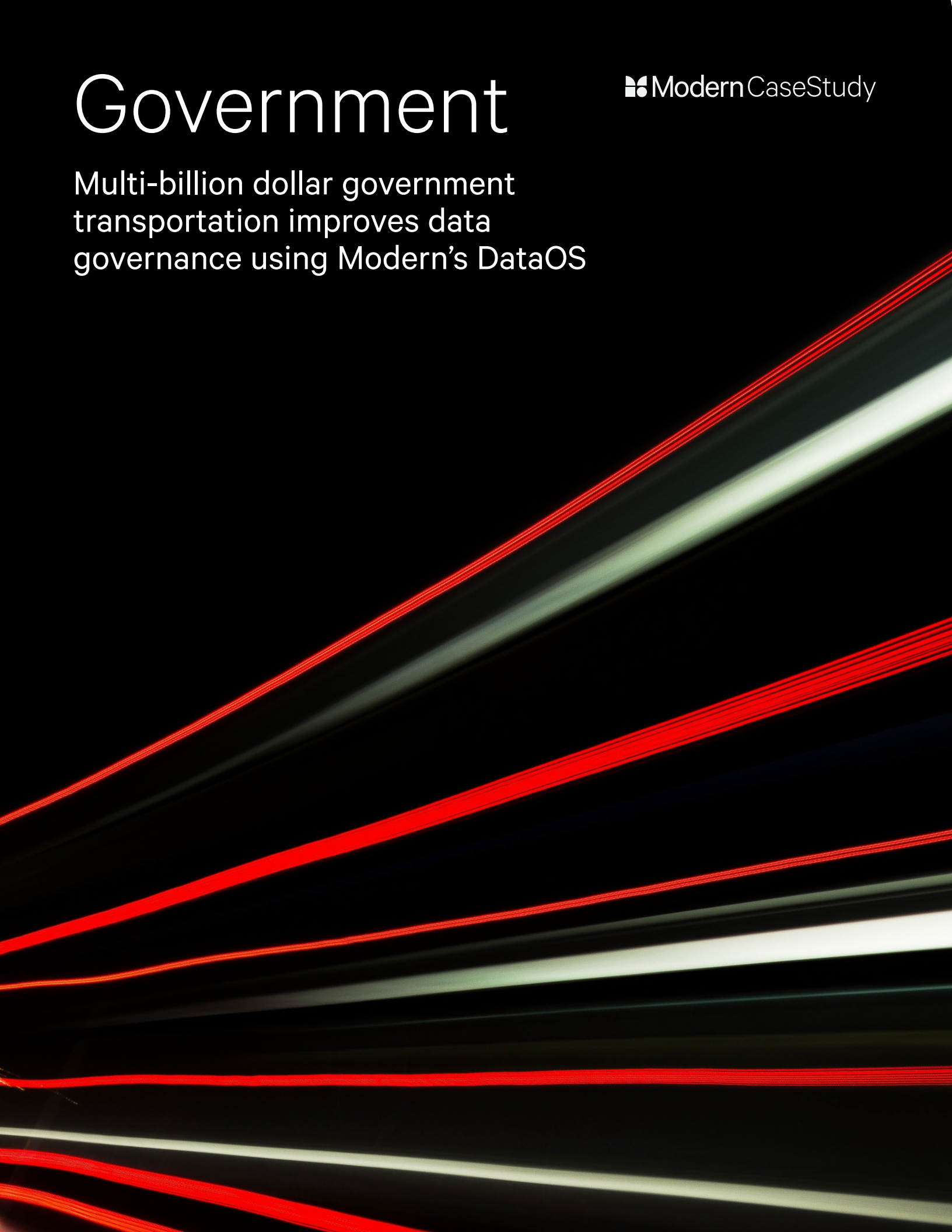
Government

Modern Case Study

Multi-billion dollar government transportation improves data governance using Modern's DataOS



Industry

Government

Objective

Give data users efficient, rapid, yet granular access to data in an environment with diverse data systems and fluid, emerging data requirements.

DataOS Key Benefits

- Advanced, flexible tagging and attribute definitions give highly granular data access to every user.
- Access controls can be based on roles, attributes, or tags.
- Configurable data validation rules enrich data and ensure high data quality.

The Customer

Our customer is a government agency managing more than 50,000 lane-miles of state and federal highways, as well as about 12,000 highway bridges. The agency also provides permits to more than 400 public-use airports in the United States. Their vision is to support the public good through a world-class national transportation network.

The Challenge

As a large transportation agency with a diverse set of data needs, the agency has developed multiple systems to manage diverse datasets. These systems contain large amounts of valuable data used to inform decision making and provide transparency to stakeholders. The agency faces stringent privacy requirements due to their custody of private data belonging to citizens and vendors, in the wake of several high-profile cases of government data misuse, mainly by private partners.

Despite these incidents, the agency has a growing need for data integration across departments within the agency and with outside stakeholders. Lax governance leaves sensitive data exposed, yet overly rigid controls slow data integration and data sharing to a crawl.

The primary challenge for this agency is to support decision-makers in the agency and its partners with timely, high-quality data currently stored in a wide range of data formats and different departmental governance regimes. The agency needs an end- to-end solution designed for granular governance to coordinate multiple systems, and the real-time insights needed to drive decision making.

Advanced data governance with DataOS®

Dealing with large volumes of data demands modern data tools designed specifically for big data while ensuring data quality, data security, and governance. DataOS uses advanced tagging and other data primitives to manage security and priority classifications at the most atomic level.

This approach allowed us to create an innovative and proprietary data governance solution. Our unique governance engine gives customers the flexibility to provide access controls based on roles, attributes, and tags.

We can successfully deploy DataOS® in six weeks or less, far faster than any other data management platform on the market. User and system access remains compliant by leveraging foundational capabilities such as row and column level redactions, data abstraction, and data masking.

DataOS empowered agency data teams to set up role-based data access or conditional access controls, such as the ability to access a data set on a certain network or during a certain period of time. By providing quickly configurable access control down to specific cells in a data table, our solution allowed the agency's data users to get all the information they needed, while protecting information that they were not cleared for. By eliminating the need to clear each data request through internal channels, DataOS provided true data democratization.

The Modern Solution

We deployed our flagship product, DataOS—the Modern data operating system—in our customer's cloud environment. The entire deployment process took less than a week and we were able to ingest and process terabytes of the agency's data.

- Depots in DataOS provide immediate access to diverse data sources and different storage formats. They abstract out the complexity of ingesting data based on the type of data source, and do all of this transparently for the user. This helps organizations connect easily to multiple data sources and ingest data from them simultaneously at scale.

- Data Lake in DataOS provides you with schema on write and supports all standard data file formats. The streaming layer in Data Lake provides a rolling store of data over a configurable range of several days, which enables real-time data activation and data processing.

- DataOS's innovative attribute-based access control uses tags and conditions to define data governance policies. You can implement very coarse-grained access controls, like role-based access controls or very fine-grained access controls like Identify and Access Management. These features provide flexible data access as needed to every user in the enterprise.

The Benefits

The Modern Data Company delivers an enterprise-grade product in 6 weeks or less, with advanced governance out of the box.

- Modern's governance engine offers customers the flexibility to implement role-based, attribute-based and/or tag-based access controls.

- Flexible and rapid configuration ensures that data users get all the data they need quickly, while protecting sensitive information.

- Enrich data quality by configuring data validation rules pertaining to uniqueness, consistency, relevance and completeness.

About DataOS®

DataOS is an operating system that consists of a set of primitives, services and modules that are interoperable and composable. These building blocks enable organizations to compose various data architectures and dramatically reduce integrations. Enterprises can have the same data-driven decision-making experience akin to data-first tech companies in days and weeks instead of months and years.

About The Modern Data Company

Founded in 2018, The Modern Data Company began with the realization that enterprise-wide data access has been siloed. Data engineers and database administrators have been the longstanding data gatekeepers who funneled data to analysts and data scientists. We aim to change that by freeing enterprises to make better data driven decisions by democratizing access to data. When all employees, irrespective of their technical skills or background, can easily explore and analyze enterprise data, then both productivity and market expansion are realized at a faster pace.

TheModern DataCompany

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