GOVERNMENT MUST LEVERAGE DATA TO MODERNIZE EFFECTIVELY

Government at all levels has begun to reap the fruits of modernization, thanks to an explosion of data delivered by increasing numbers of digital devices, sensors and other sources. But that data is only as good as how it is used. To take full advantage of IoT, Artificial Intelligence and the promise of 5G networking, federal agencies, state offices and city officials alike need to leverage that data and put it to work. This requires a modernized infrastructure that can match the ever-growing flow of data.

VOLUMES OF BOTH THE DATA AND DATA TYPES ARE EXPLODING

WORLDWIDE, DATA VOLUMES WILL GROW TO

175 ZETABYTES
BY 2025

SOME **80 PERCENT** OF WORLDWIDE DATA WILL BE **UNSTRUCTURED** BY THEN

ALL LEVELS OF GOVERNMENT ARE UNDER PRESSURE

The need for improved data management infrastructures is apparent across all levels of government.

1 The US Census Bureau's first-ever all electronic national headcount in 2020 highlights the need for government to ingest and interpret large amounts of both structured and unstructured data, including aerial and street-level imagery.

2 With tax data increasing yearly, the internal Revenue Service has turned to big data and predictive analytics to crack down on disparities in returns and reduce the gap between what is owed and paid in taxes.

3 At the state level, the Central Florida Expressway Authority is replacing inefficient manual traffic analysis with automated processes, capturing toll plaza sensor data in order to better understand key traffic patterns including fluctuations in volume over holidays and weekends.

4 At the city level Columbus, Ohio has leveraged a $40 million grant from the U.S. Department of Transportation to launch a data-driven transportation initiative to enable on-demand transportation and ensure public transport is well-situated to meet citizen needs.

THE NEEDS ARE CLEAR, BUT LEGACY I.T. KEEPS GETTING IN THE WAY...

OVER 75%

OF FEDERAL IT SPENDING
ACROSS THE GOVERNMENT HAS BEEN ALLOCATED TO MAINTAINING LEGACY SYSTEMS IN RECENT YEARS, OFTEN AT THE EXPENSE OF IT INNOVATION.

$54.7 BILLION

THE AMOUNT FEDERAL AGENCIES ALLOCATED TOWARD EXISTING IT INVESTMENTS IN FY 2020

$14.5 BILLION

THE AMOUNT AGENCIES DEVOTED TO IT DEVELOPMENT MODERNIZATION AND ENHANCEMENT IN THAT SAME YEAR

...AND THAT HAS MAJOR IMPLICATIONS

Across the federal, state and local levels, this huge inventory of legacy IT, and the lack of funding for modernization, has major implications for agencies. The burden of legacy IT...

Limits agencies' ability to ingest and use mixed data types, while also slowing the rate at which new data sources can be added.

Keeps slow and inefficient data processing in place, thus limiting the expansion of online, automated digital services.

Makes important data unavailable, as IT departments archive or delete data to maintain systems and network operational performance.

It also creates tensions between the business side of agencies who want direct, self-service access to data, and their IT departments, who want to tackle the more strategic data needs of their users but have to allocate time to managing cost and maintaining performance of legacy infrastructure.

TIMELINE: MODERNIZATION IS AN ONGOING JOURNEY

IT modernization is now a major focus for government, but it is as much a journey as a destination:

DEC 2017

The President signed the Modernizing Government Technology Act, a multi-year and bipartisan effort that more easily allows agencies to allocate funds for IT modernization projects.

OCT 2018

A survey from ACT-IAC and MeriTalk finds that 94 percent of feds have experienced a shift in momentum toward the future state of federal IT, with 53 percent calling it significant.

MARCH 2019

The White House budget request includes $150 million for a Technology Modernization Fund (TMF) to seed further modernization. In its first 10 months, the TMF had funded seven projects totaling almost $90 million.

GOING FORWARD

The Office of Management and Budget has mandated agencies identify which of their systems to prioritize for modernization, and where to reallocate funds from legacy upkeep to more modern technologies. The journey continues.

THERE ARE SEVERAL THINGS GOVERNMENT MUST FOCUS ON

As agencies continue their push toward modernization, they will need to pursue several avenues in order to get the most out of the data they are collecting. Agencies must:

1 Enable the consolidation of all types of data in a single, secured shared data layer, as described in the Federal CIO's Federal Cloud Computing Strategy.

2 Heed Gartner's call to make analytics a top priority as a way to drive business intelligence, modeling and investigation, more extensive reporting, etc.

3 Develop the infrastructure to support more advanced capabilities such as machine learning.

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WHY CLOUDERA?

1 Hybrid and Multi-Cloud
Control, analyze and experiment with data wherever it lives. Run your analytics on the clouds you choose. Easily and securely move data and metadata between on-premises file systems and cloud object stores.

2 Analytics from Edge to AI
Solve demanding business use cases. Apply real-time stream processing, data warehousing, data science and iterative machine learning across shared data, securely, at scale on data anywhere from the Edge to AI.

3 Security and Governance
Simplify data privacy and compliance for diverse enterprise data. Use a common security model, role and attribute based access policies and sophisticated schema, lineage and provenance controls on any cloud.

4 100% Open
We empower customers with the freedom to choose — open source, open compute, open storage, open architecture and open clouds. Open for developers, partners, and open for business. No lock-in. Ever.

ABOUT CLOUDERA

Cloudera solutions empower people to transform complex data into clear and actionable insights, and provide a modern platform for next generation machine learning and analytics that's optimized for the cloud. Cloudera believes data can make what is impossible today, possible tomorrow.

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