

eBook

Marching Toward Modern

Why data modernization is key to unlocking business opportunities and how to do it right



 **OneNeck**[®]
IT SOLUTIONS
a TDS[®] Company

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Introduction

Data is digital gold. It's a treasure trove of insights, intelligence and opportunities for differentiating from the competition — so long as you know how to use it. But while many businesses sit on massive volumes of institutional data collected from the farthest reaches of their IT environment, they're unable to extract real value from it because they still work with data in "old" ways.

They're still reliant upon on-premise databases, using point tools for different functions and working in isolated data silos that make gaining any sort of useful insight or actionable information almost impossible — especially when organizations are generating and storing more types of data from more sources than ever before.

Companies of all sizes, across industries, sectors and geographies know there's untapped value hidden in their data stores. And they're increasingly realizing that adopting modern data management strategies and systems — building modern, end-to-end data pipelines — is the only way to extract maximum value from their information and uncover new revenue opportunities, identify weaknesses or areas for business improvement, and enhance productivity, profitability and competitiveness.

But not every organization is there yet, often because they lack the time, talent and expertise to completely commit to the data journey. They know data modernization is necessary and possible, but they need a better understanding of the way forward before they can begin.

If you're ready to modernize your data management, read on to learn how you can take a more strategic approach to understanding the data you have, the end results you want from it, and the optimal steps and support you need to get there.

84% of enterprises are on a **data modernization journey**

1/2 say these initiatives are **underway**

1/3 say they've **fully implemented** these initiatives

Davenport, Tom; Verma, Ashish; Linticum, David.
"Data modernization and the cloud: which trend is driving the other?" Deloitte. Aug. 26, 2019



Data Modernization 101

Data modernization is the process of updating the way you locate, collect, store, secure and manage data, allowing you to gain new insights and drive digital transformation initiatives. More than just adopting new technologies, it's also about effectively categorizing your data so you understand where it lives, how and when to use it, and how long to keep it.

Data modernization makes it possible to:

- Use your existing data while also incorporating new data sources to improve analytics and insights
- Apply artificial intelligence (AI) and machine learning (ML) wherever it makes sense
- Continue to grow your operations while reducing total cost of ownership (TCO) of your IT environment

What's holding you back?

Simple as it sounds, data modernization can be a complex and often nuanced effort. Though it's become something of a business imperative in the modern landscape, organizations face a wide variety of technical and non-technical obstacles preventing them from getting an initiative off the ground.



Data is proliferating and spread everywhere

Data is generated in higher volumes, with more velocity, and in greater varieties – structured and unstructured – than at any time in history, making it much harder to analyze, store and manage effectively.

Unstructured data from sources like social media platforms, emails, video chats and other sources alone grows by as much as 65% per year (Taylor, Christine. "Structured vs. Unstructured Data." Datamation. March 28, 2018).

But beyond the sheer volume of the information, companies need to account for the different data privacy standards each byte of information may require. Not all data should be kept indefinitely, some has limits on how it can be used, and all of it needs to be governed for appropriate access and modification.

Without a data governance and retirement plan in place to control what's already there and what's coming in, data will continue to proliferate at overwhelming rates and continue to decline in value as a result.



“Despite enormous innovation in the data and analytics sector in recent years, for many organizations there remains a gap between what is theoretically possible with the latest data and analytics technology and a practical, meaningful impact on business decision-making.”

451 RESEARCH

56% of IT leaders said they expect their use of containers to **INCREASE IN THE NEXT 12 MONTHS**

The State of Enterprise Open
Source. Red Hat. 2020

Data quality and sprawl

On average, enterprises use 2.2 public clouds and 2.2 private clouds (Cloud Computing Trends: 2020 State of the Cloud Report. Flexera. May 2020) and almost 1,300 cloud services (NetSkope Cloud Report. August 2019), accounting for roughly 80% of an organization's data stores (Jain, Priyanka. "Sample-based analysis: A new approach for unstructured data management." IBM. Aug. 19, 2019). In traditional environments, that data resides in siloed environments, creating huge visibility gaps that limit its value and use.

Worse, data tends to decay rapidly — at a rate of over 5% per month, or more than 70% per year (Coe, John. "B2B Data Decay and List Rental — Buyer Beware!" Biznology. Feb. 13, 2015) — meaning that the longer data sits untouched or actively managed (which is the case when teams don't even know it exists), the likelier it is that the accuracy, completeness, and usefulness of the information will rapidly decrease and undermine any value it had for business growth in the first place.

Spread-out infrastructure

IT infrastructure is no longer just in one data center or another. The march toward hybrid infrastructure, prioritized by nearly 75% of global enterprises (Casey, Kevin. "Hybrid cloud by the numbers, 2020: 10 stats to see." The Enterprisers Project. July 27, 2020), complicates data modernization efforts. The IT perimeter continues to expand at a breakneck pace, enabling data to live in a virtually limitless range of cloud or on-prem databases, cloud apps, and user endpoints.

Combining all that data — usually manually or with limited automation — is both time-consuming and prone to error, leaving teams to choose between investing in data discovery and orchestration tools or simply trying to make due.

80% OF AN ORGANIZATION'S DATA exists in silos

Data decays at a rate of **70.3% PER YEAR**
Source: Biznology, 2015

Time, money, and talent are in short supply

Time - Data modernization is a full-time responsibility and effort. But most of the employees tasked with spearheading modernization initiatives already have a primary role in the company and have to find a way to balance that with the demands of the modernization roadmap — assuming they're up-to-date on the technologies and methodologies. Otherwise, they'll need to find time to learn essential and best practices while still squeezing in time to maintain their regular, day-to-day responsibilities.

Personnel - With the speed that technology evolves these days, the IT skills gap — especially in data operations — grows bigger every day. Even if there's an expert already on the team, chances are good they're already doing another job and won't have the time or energy to lead the effort.

Unfortunately, most organizations aren't in position to build complete in-house teams dedicated to data modernization, and hiring qualified experts to join the team quickly becomes prohibitively expensive and more difficult as demand for skilled employees greatly outpaces supply.

Money and financial resources - Like most things "business," money plays a starring role in an organization's ability to modernize its data operations. Many companies waste valuable dollars on over-provisioned or unnecessary solutions that require heavy up-front investments but deliver minimal value in return. They're spending more than they need on data storage, especially if some data doesn't need to — or shouldn't be — stored, and processing every bit of data 24/7 requires tons of compute power that can dramatically increase operating costs and cuts into the budgets of other programs and initiatives.

Given the urgency of data modernization in the current competitive landscape and the mounting obstacles preventing organizations from effectively executing their strategy, it's no wonder that many are looking for external support in defining their data modernization goals, planning how they'll achieve them, and finding the time, resources, and expertise to do it.

Enterprises spend an average
of **\$250,000 ON DATA
QUALITY TOOLS PER YEAR**

Jain, Ankush; et al. "Cost Optimization Is Crucial for Modern Data Management Programs." Gartner. June 22, 2020.

A mindset, not a toolset

Data modernization is more than just buying a bunch of data management tools. It's much more a strategy and methodology than it is a shopping list. But many organizations take a near-term, more short-sighted approach to data operations, giving into the temptation of piecing together their own solutions to incrementally improve their data use, which often results in them just giving up altogether and hiring the first firm they come across that offers a quick fix.

Instead, you should actively seek out a partner who not only has deep knowledge about how particular data tools work to meet your specific data goals, but who can also help you build a scalable, sustainable, and comprehensive roadmap to get your organization to its destination faster, more cost effectively, and with minimal, if any, missteps.

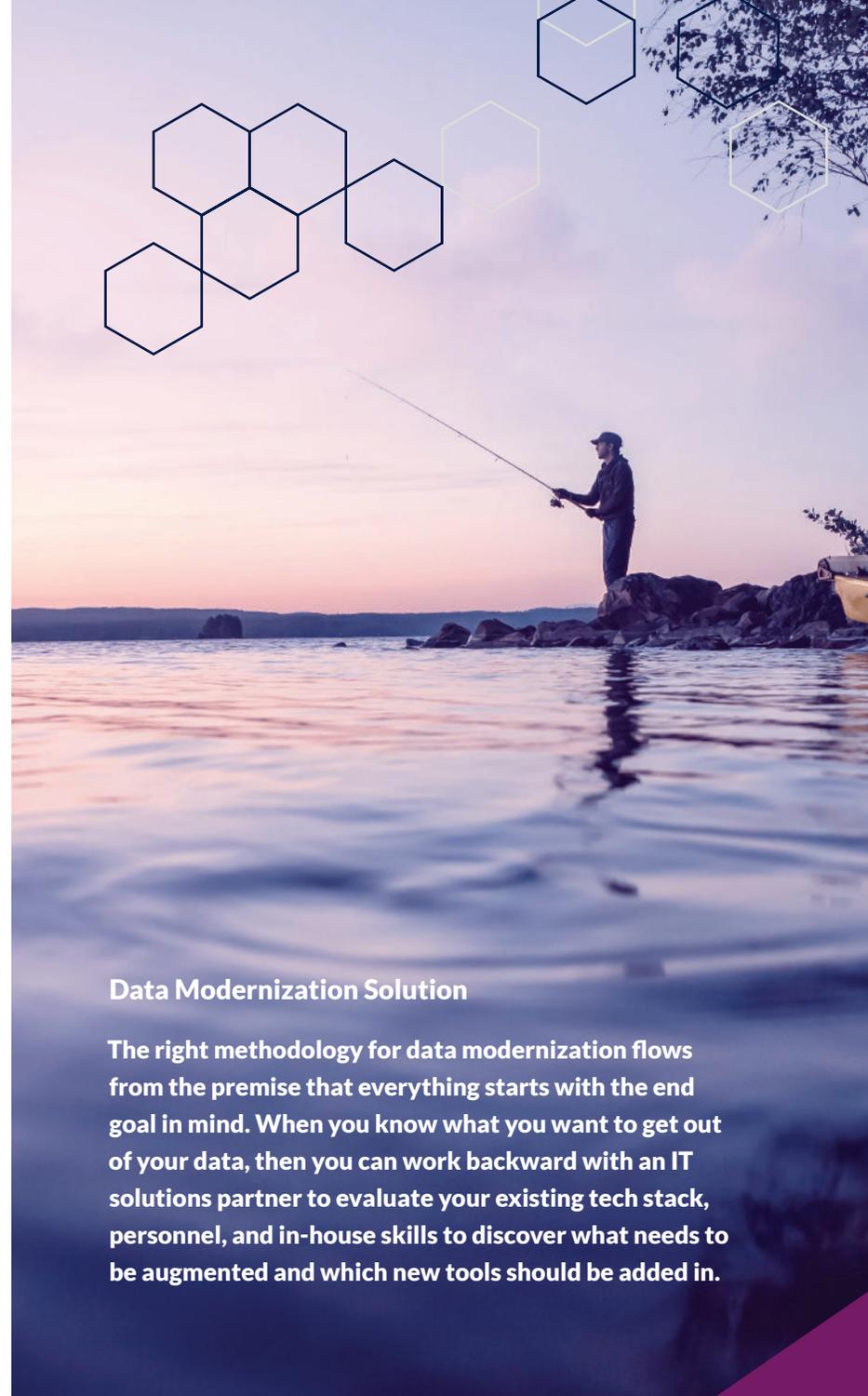
Data modernization demands scalable, adaptable platforms to deal with constantly changing and increasing data volumes. With different data in different types of tools, a partner can help you systematically and strategically orchestrate those operations.

Similar to the philosophy behind DevOps, continuously integrating new data and continuously deploying new data tools enables faster time to insights and value and guarantees that teams will always be working with the freshest, most complete data. The right data modernization solution lays the foundation for effective DataOps — that is, enabling the flow and analysis of data easily, quickly, and reliably, in real time and in the right structures.

“To make the most of DataOps, enterprises must evolve their data management strategies to deal with data at scale and in response to real-world events as they happen.”

TED DUNNING & ELLEN FRIEDMAN

(Dunning, Ted; Friedman, Ellen. “Machine Learning Logistics.” O’Reilly Media. October 2017)



Data Modernization Solution

The right methodology for data modernization flows from the premise that everything starts with the end goal in mind. When you know what you want to get out of your data, then you can work backward with an IT solutions partner to evaluate your existing tech stack, personnel, and in-house skills to discover what needs to be augmented and which new tools should be added in.

6 steps to DataOps success

To get your data into a usable state based on your organization goals — whether it's better analytics, AI and ML, or something else — there is a multi-step framework to follow that helps you form a clearer picture of the data you have and what you can achieve with it.

A data modernization partner will guide you through each step, offering advice on tool selection, deployments, and integrations to create a seamless process that will result in a modern, flexible, and extensible data pipeline that grows and evolves with your business.

STEP

1

Transfer

Move your data efficiently, securely, and reliably from disparate systems to a single target destination.

STEP

2

Ingest

Transform unstructured and semi-structured data via an ETL/ELT (extract, transform, load/extract, load transform) process into usable formats, enabling a continuous flow of updated data that combats data decay.

STEP

3

Store

Consolidate and centralize data repositories for more efficient, cost-effective storage and backup.

STEP

4

Train & model

Define AI/ML models and desired outcomes, then determine and ensure enough compute capacity to employ those models and whether they should be in the cloud or on-premise.

STEP

5

Visualize & analyze

Provide data scientists and individual users with robust analytics and data visualization, along with self-service analytics for daily line-of-business and departmental uses.

STEP

6

Serve

Deliver current, accurate, and complete data to endpoints such as productivity apps, customer-facing apps, and business end users.

Data modernization is a boon to the business

When you invest in a smart, methodical, and strategic data modernization program, you enable critical business processes and initiatives that deliver a litany of important business benefits, such as:



Breaking down silos - Virtualizing data helps you create a single, logical view of your data across all business units and departments to maximize its usage and reduce the costs associated with moving and storing data.



Accelerating time-to-market - Unifying data tools, processes, and governance eliminates the need for redundant point tools and increases the speed and scale with which you can bring new products and services to market.



Controlling costs - Implementing AI solutions to run predictive and prescriptive analytics helps optimize your business operations and outcomes.



Improving financial planning - Using AI solutions that leverage greater volumes of your organizational data also enables you to more accurately plan and budget across the enterprise, getting the dollars and resources where they need to go, when they're needed.



Enhancing the customer experience - Using enterprise data to uncover operational strengths and weaknesses helps you reinforce what's already good and make strategic improvements to create better customer experiences.



Stronger together: OneNeck and you

Backed by decades of experience and deep expertise across platforms and environments, OneNeck's data modernization services help you meet virtually any goal or objective. Taking a holistic approach, OneNeck analyzes your current data state and creates a project-by-project plan for extracting the most value out of your data, now and into the future, to reflect changing business needs.

OneNeck helps you gather, process, and maintain your own data using a range of vendor-agnostic or environment-specific solutions so you can finally utilize your data to the fullest extent in your unique environment. OneNeck can also train your existing team on each tool so they can accomplish their tasks with greater confidence and less ongoing intervention and support.

As a result, your organization gains:

- A sustainable, adaptable plan for data classification, maintenance, and storage
- A better understanding of which tools to use, for what purposes, and how they fit into the larger data ecosystem
- A stronger ability to take advantage of AI and ML
- Greater business intelligence to find new ways to monetize data
- Improved data security and access policies
- A reduction in data management costs and friction



Modernize your data today, take on the world tomorrow

With the constant influx of data that most enterprises deal with today, continuing to rely on conventional methods and tools of data management is a losing battle. But by strategically updating your approach to how you collect, store, and manage your data, you can finally begin to visualize, analyze, and harness it to your advantage — capitalizing on real business opportunities, answering crucial customer and market demands, and earning a competitive edge.

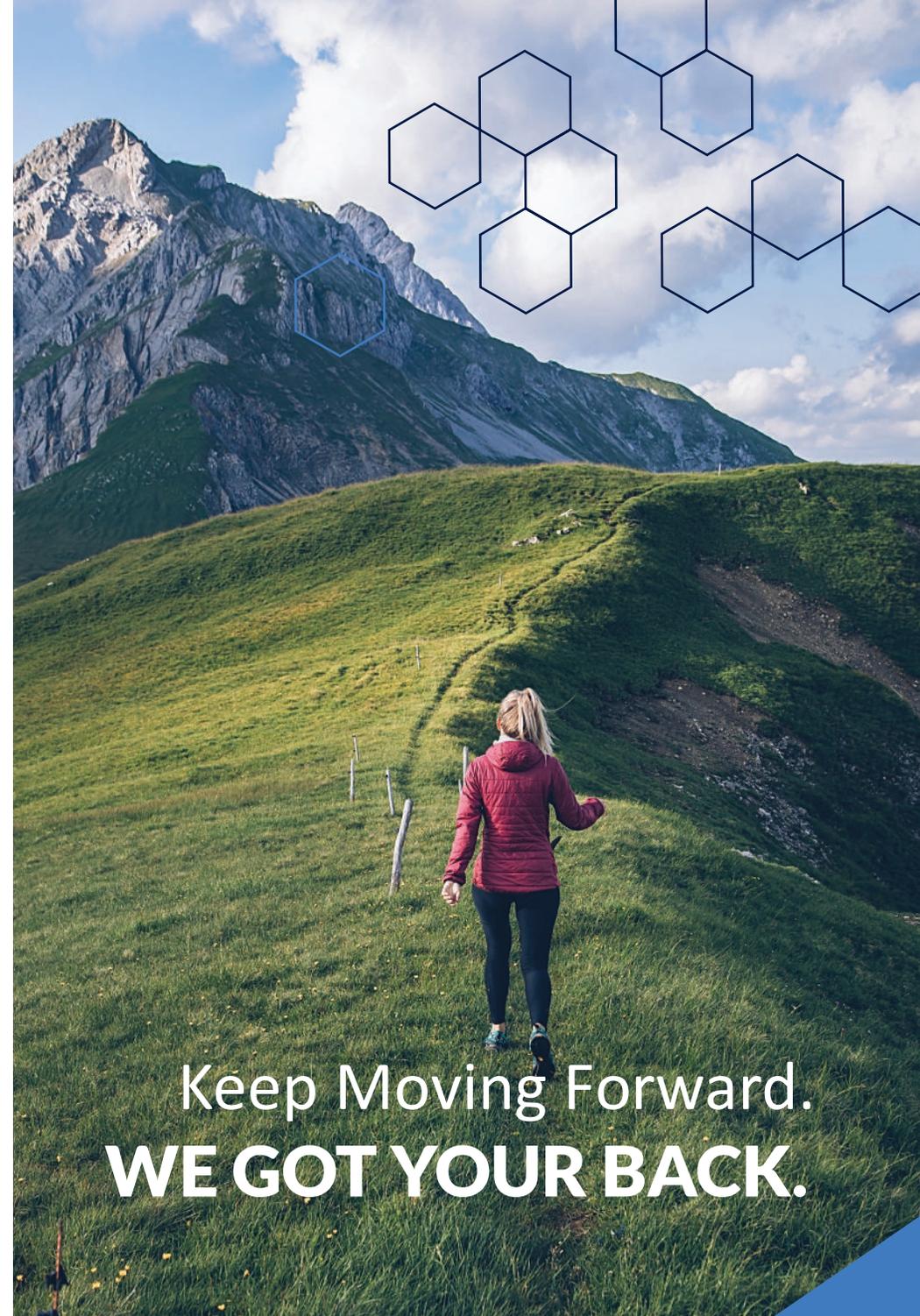
With OneNeck's comprehensive data modernization services, your enterprise is able to:

- Gain visibility into and understanding around all your data assets
- Improve business intelligence and analytics
- Strategically implement AI and ML solutions
- Drive growth while reducing IT costs
- Deliver new products and services with greater speed
- Create better customer experiences

To discover how OneNeck's data modernization services can help you know where you are today so you can get where you need to be tomorrow, schedule a consultation.



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Keep Moving Forward.
WE GOT YOUR BACK.