

# The Data Paradox

RESEARCH FINDINGS



**DELL**Technologies

# The Data Paradox

The 2020 Digital Transformation Index reveals that “data overload” and “[the inability] to extract insights from data” is a rising barrier to transformation (top third barrier to transformation in 2018 & 2020, from 11<sup>th</sup> place in 2016).

The Data Paradox, based on a commissioned study conducted by Forrester Consulting on behalf of Dell Technologies, digs deeper and seeks to:

1. Uncover what’s preventing businesses from turning data into actionable insights
2. Gauge businesses’ readiness for a data deluge

Forrester surveyed 4,036 director+ decision makers responsible for data strategies and digital transformation.

Global perspective:  
40+ countries

Cross-functional:  
Director to C-Suite from small to large  
firms with an annual revenue  
spanning \$10m - \$100m+

Industry view:  
5 industries

# Top Findings

- People, technology and processes are overwhelmed by too much data.
- Based on Forrester's scoring, most businesses do not have:
  - Effective data processes and technology
  - A mature data culture/data skills

As a result, businesses are struggling to reconcile a number of conflicting data realities (data paradoxes).

Top 3 paradoxes:

1. Businesses believe they are data-driven, yet many are not treating data as capital and do not prioritize its use across the organization.
2. Businesses are gathering data faster than they can analyze and use, yet they constantly need more data than their current capabilities can provide.
3. Businesses recognize that an as-a-service model would enable them to be agile, scale and reduce complexity, but only a minority have made the transition.

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# 1- Data Burden in an On-demand Economy

The on-demand economy is generating unprecedented amounts and types of data.

It's also fueling expectations that more of this data in motion will be processed in real-time.

Today, most firms are operating outside of the on-demand economy:

Only **20%** have moved the majority of their applications/ infrastructure to an as-a-service model.

Leaving businesses struggling with barriers to capturing, analyzing and acting on data.

**83%** are experiencing either or all of the following barriers:



Data warehouse that is not optimized



High storage costs



Outdated IT infrastructure



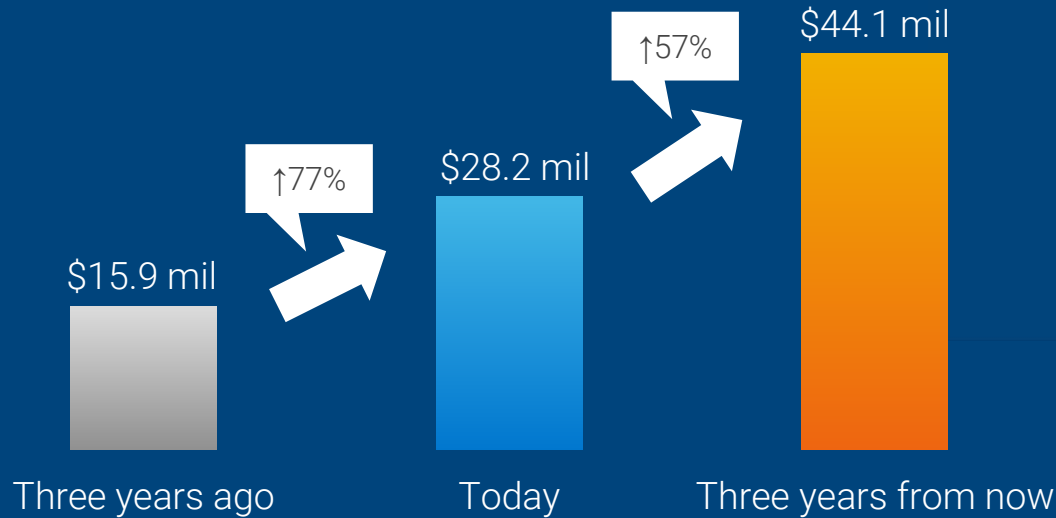
Manual processes that don't meet business needs

These issues can be **mitigated with an as-a-service approach.**

# Businesses are expending significant effort and expense trying to compete in the data decade while making limited headway.

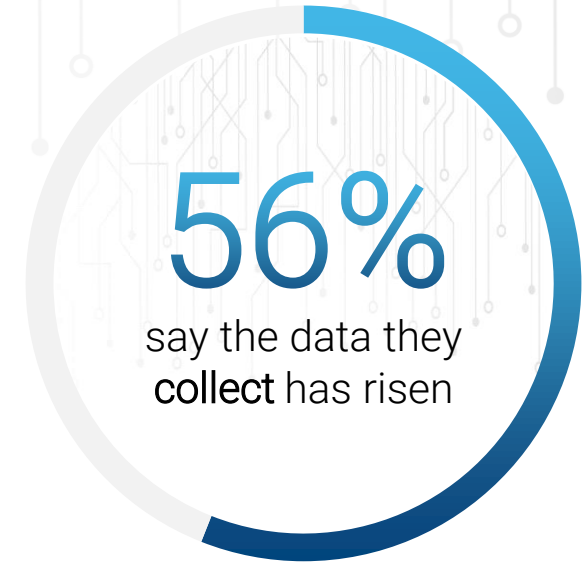
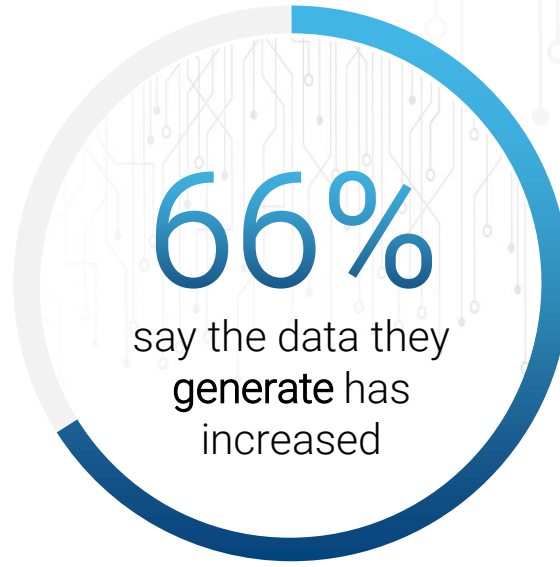
More than half (55%) have not yet come close to realizing their digital transformation goals.

Yet IT spend is mounting rapidly:



# Businesses are Bracing Themselves for Zettabytes of Data

Over the last three years:



For many businesses, **data is or will become a burden rather than an opportunity.**

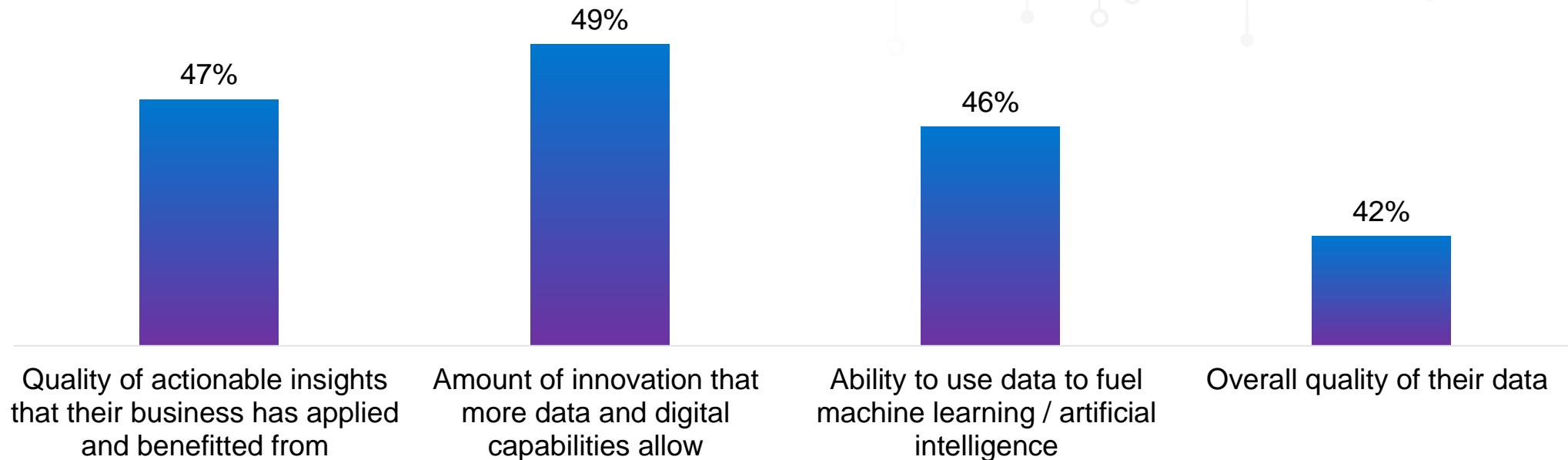


A man in a light-colored jacket and dark pants is walking on a purple path that has a circuit board pattern. The path is set against a white background with a similar circuit board pattern. The man is casting a long, dark shadow to his right. The overall scene is split diagonally from the top-left to the bottom-right.

# 2 - Data Without Value

# Data Volume Does Not Equal Data Value

Despite the data boom, almost half of businesses say the following has **stayed the same or decreased**:



On the one hand, **businesses** need more data:

67%

say they **constantly** need more data than their current capabilities provide.



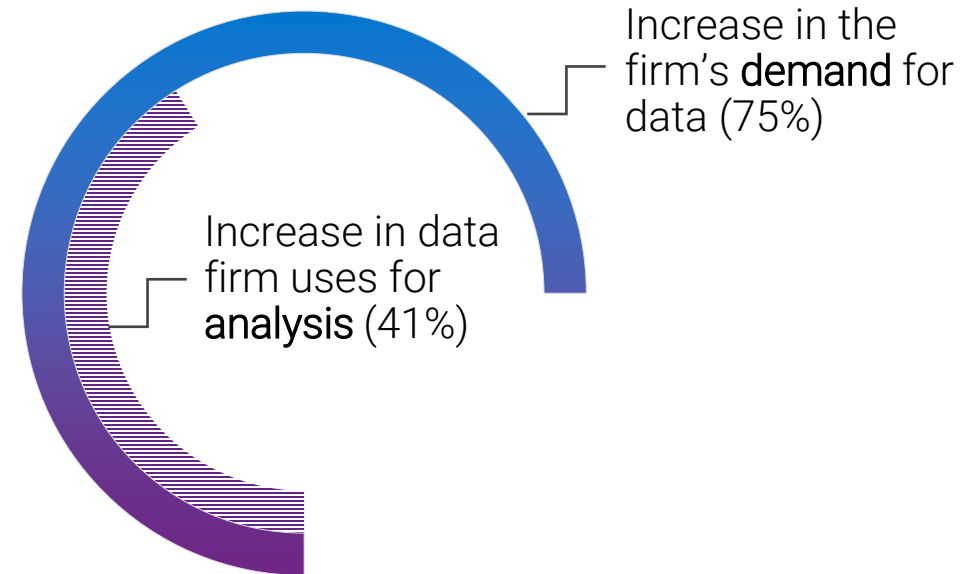
On the other, they have more data than they can handle right now:

70%

say they are gathering data **faster** than they can analyze and use.

# Analysis is Lagging Behind Demand

The number of businesses that say they are **analyzing** more data is only **half** that have seen an increased **demand** for data.



# The Consequences of this Paradox are Rippling Out:

61%

say their data teams are already overwhelmed by the data they have

64%

have too much data to meet security and compliance requirements



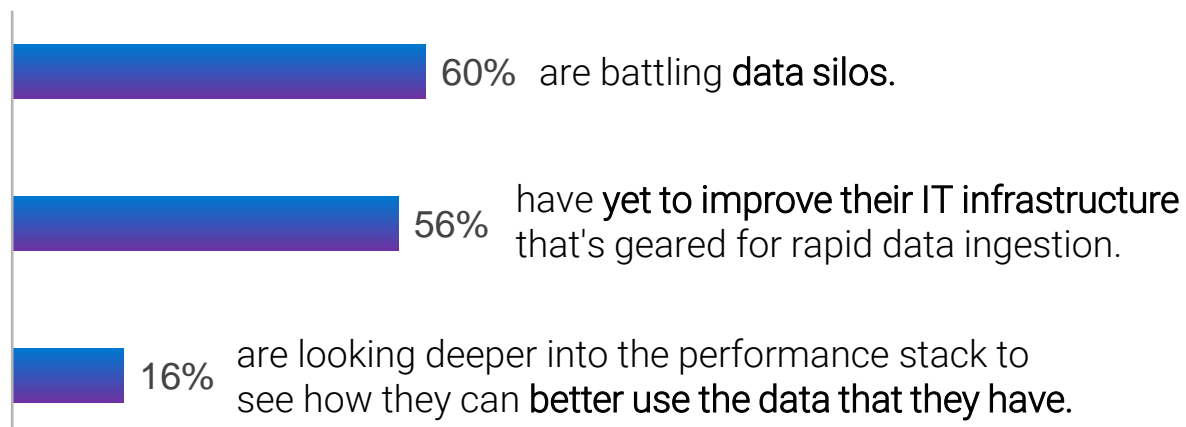
# Unhelpful Technology Response

Businesses' short-term IT strategy is hindering necessary shifts in their data strategy. Despite the benefits of processing data at the edge (where the data is generated):

**64%** intend to keep a significant amount of data in the data centers they own or control.

Just **35%** are looking to increase proof of concept (PoC) data uses at the edge.

As a result:



# Data Stewardship is Needed

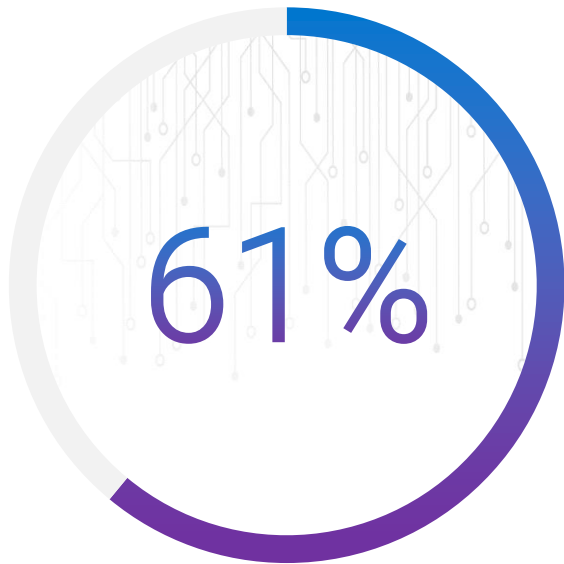
In addition to data silos, firms also struggle with **business silos** (difficulty sharing data with everyone who needs it).

**52%** are constrained by **business silos**.

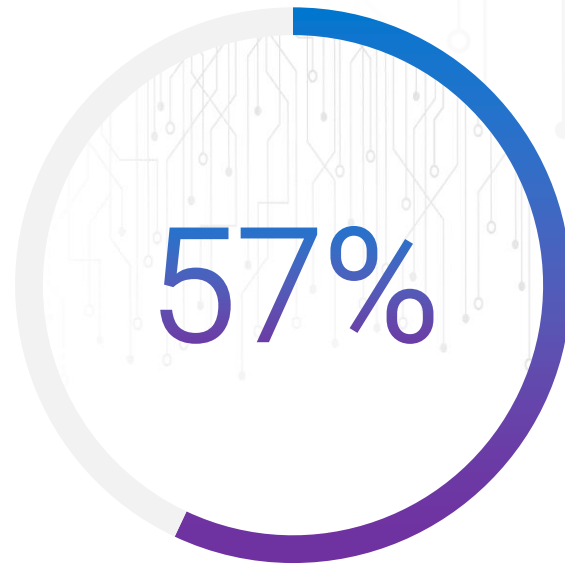
But only **17%** are running initiatives to promote the democratization of data.



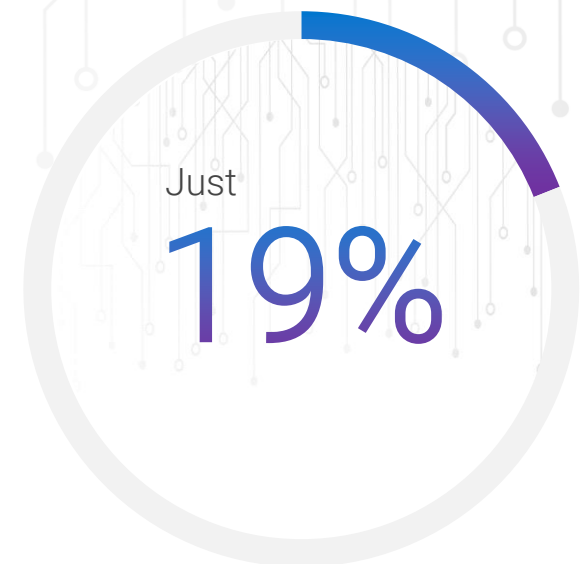
# Almost Half Report the Data Savviness of their People Has Plateaued or Reduced



are held back by **insufficient in-house data science skills** (i.e. to find insights in data)



are held back by **insufficient in-house technical skills** (i.e. to manage a data lake)

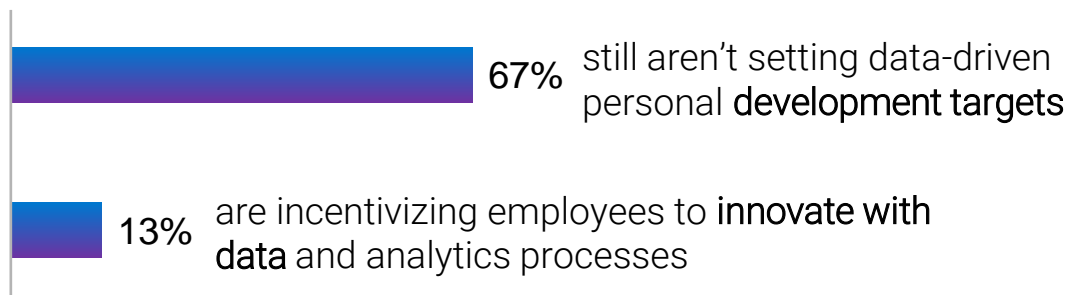


are **actively recruiting** digital scientists and/or software developers



# Businesses Could Be Doing More to Develop Employees' Data Skills

Through training and incentives:



Stronger data leadership is needed:

Only **28%** have appointed a **chief data officer** to the Board of Directors.

**70%** still haven't taken steps to ensure their board **visibly supports** the company's data strategy.



# 3 – The Pandemic and the Perfect Storm

# Already strained businesses are vulnerable to volatility:

44%

say the pandemic significantly increased the data it needs to capture/act on.

52%

had to put emergency steps in place to keep data safe.

38%

faced a data expertise skills gap.

A man in a dark suit and tie is looking down at a large green circuit board that dominates the right side of the frame. The background is a white and green circuit board pattern. The man's shadow is cast onto the green board.

# 4 - Businesses with Opposed Values

66%

regard their business as data-driven and say, “data is the lifeblood of their organization.”



And yet only:

21%

testify to treating data as capital and prioritizing its use across the business.

# To Get to the Truth, Forrester Scored Respondents' Data Readiness:

## DATA NOVICES

score poorly in both technology & process and culture & skills categories

## DATA TECHNICIANS

focus their efforts on technology and process, to the exclusion of culture and skills development

## DATA ENTHUSIASTS

emphasize culture and skills; less on developing a technology backbone

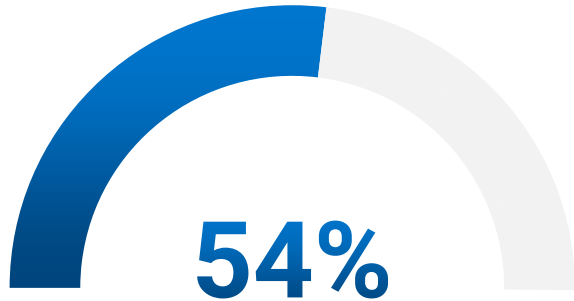
## DATA CHAMPIONS

score highly in both technology & process and culture & skills categories

# 88%

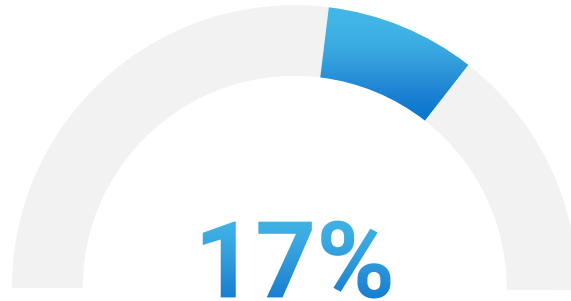
are neglecting either their technology & processes, culture & skills, or both.

# Data Readiness Scores



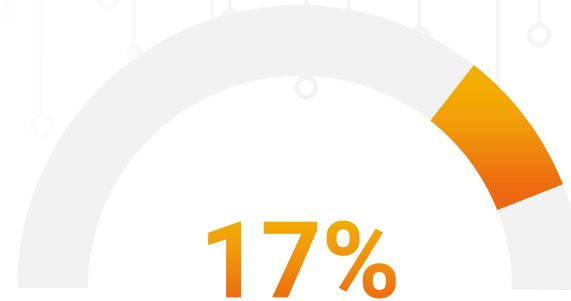
## Data Novices

- ▼ Overwhelmed by data volume and variety
- ▼ Need to optimize for the right skills/culture and technology infrastructure



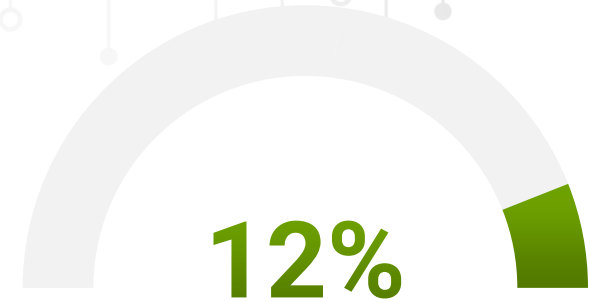
## Data Technicians

- ▲ Able to turn data into insights by using multi-cloud/aaS models and process data at the edge
- ▼ Need to optimize for the right skills and culture mix



## Data Enthusiasts

- ▲ Invested in data science skills and culture and are data-savvy.
- ▼ Need to optimize for the right infrastructure/aaS model to balance with already-present skills/culture



## Data Champions

- ▲ Able to turn data into insights by using multi-cloud/aaS models and process data at the edge
- ▲ Invested in data science skills and culture and are data-savvy.



# 5 - Hope on the Horizon



# The future looks more promising:

Over the next three years:

66%

plan to deploy machine learning to  
automate anomaly detection

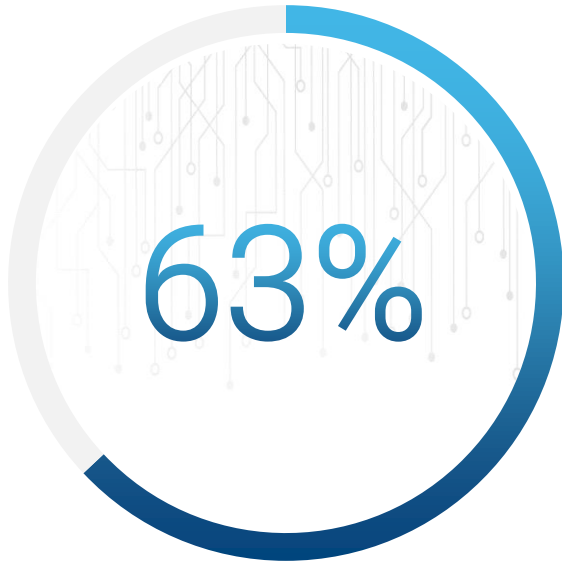
57%

intend to move to a data as-a-service  
model

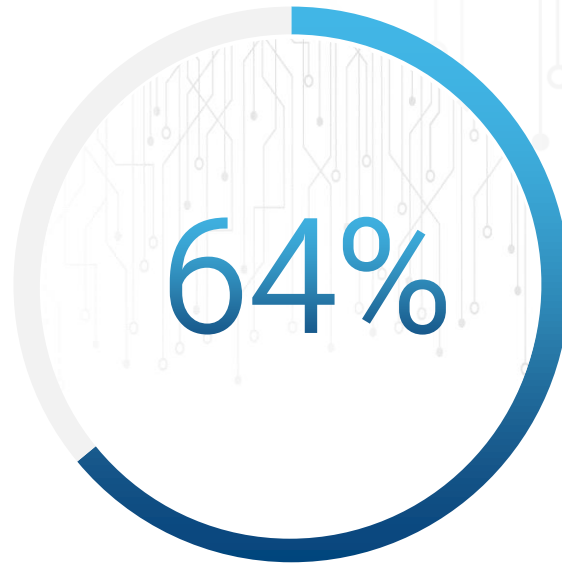
57%

plan to improve the data lakes that they  
have

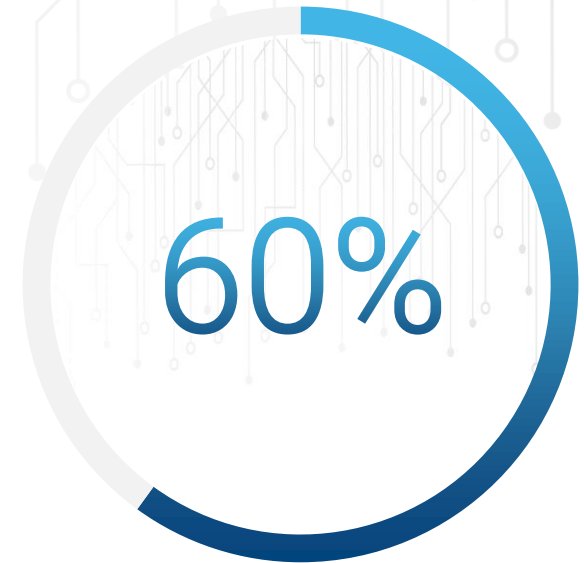
# The Benefits of an As-A-Service Paradigm Shift are Dawning



believe it will enable firms to be more **agile**



believe it will enable firms to **scale** to changing customer demands



forecast it will enable firms to **provision** applications quickly and simply

# 6 - Conclusion



# So, how can businesses manage the data deluge, innovate with it and create new value?

Businesses need the right...

- ❑ **End-to-end technology and services** to overcome data silos
- ❑ **Processes** to seek out anomaly data and make meaningful discoveries
- ❑ **Skills and data-driven culture** to work with real-time data to predict future outcomes

Combined, these elements will enable organizations to achieve **better business outcomes, faster.**





# DELL Technologies

Explore the Full Research on  
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