The Data Paradox

RESEARCH FINDINGS
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 11th 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- Outdated IT infrastructure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.

Source: A May 2021 commissioned study, “Unveiling Data Challenges Afflicting Businesses Around The World,” conducted by Forrester Consulting on behalf of Dell Technologies. Base: 4,036 Director+ decision-makers responsible for data and data strategies in NA, EMEA, APJ, GC, or LATAM.
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:

- **Three years ago**: $15.9 mil
- **Today**: $28.2 mil (↑77%)
- **Three years from now**: $44.1 mil (↑57%)

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Businesses are Bracing Themselves for Zettabytes of Data

Over the last three years:

- 75% have experienced an increase in the firm's demand for data.
- 66% say the data they generate has increased.
- 56% say the data they collect has risen.

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

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2 - Data Without Value
Despite the data boom, almost half of businesses say the following has stayed the same or decreased:

- Quality of actionable insights that their business has applied and benefitted from: 47%
- Amount of innovation that more data and digital capabilities allow: 49%
- Ability to use data to fuel machine learning / artificial intelligence: 46%
- Overall quality of their data: 42%

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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.

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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.

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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

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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:

- 60% are battling data silos.
- 56% have yet to improve their IT infrastructure that’s geared for rapid data ingestion.
- 16% are looking deeper into the performance stack to see how they can better use the data that they have.

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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**.

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

61% are held back by insufficient in-house data science skills (i.e. to find insights in data)

57% are held back by insufficient in-house technical skills (i.e. to manage a data lake)

19% are actively recruiting digital scientists and/or software developers

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Businesses Could Be Doing More to Develop Employees’ Data Skills

Through training and incentives:

- **67%** still aren’t setting data-driven personal development targets.
- **13%** are incentivizing employees to innovate with data and analytics processes.

Stronger data leadership is needed:

- **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.

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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.

4 - Businesses with Opposed Values
66% regard their business as data-driven and say, “data is the lifeblood of their organization.”

21% testify to treating data as capital and prioritizing its use across the business.

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

<table>
<thead>
<tr>
<th>DATA NOVICES</th>
<th>score poorly in both technology &amp; process and culture &amp; skills categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATA TECHNICIANS</td>
<td>focus their efforts on technology and process, to the exclusion of culture and skills development</td>
</tr>
<tr>
<td>DATA ENTHUSIASTS</td>
<td>emphasize culture and skills; less on developing a technology backbone</td>
</tr>
<tr>
<td>DATA CHAMPIONS</td>
<td>score highly in both technology &amp; process and culture &amp; skills categories</td>
</tr>
</tbody>
</table>

88% are neglecting either their technology & processes, culture & skills, or both.

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Data Readiness Scores

54% Data Novices
- Overwhelmed by data volume and variety
- Need to optimize for the right skills/culture and technology infrastructure

17% 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

17% 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

12% 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.

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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

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

63% believe it will enable firms to be more agile

64% believe it will enable firms to scale to changing customer demands

60% forecast it will enable firms to provision applications quickly and simply

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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**.
Explore the Full Research on www.delltechnologies.com/dataparadox