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THE NEW DATA SCALE CHALLENGE

Results from the
2021 DataAware Pulse Survey
find that with the need for data products on the rise,
teams struggle to keep pace

Introduction

In the second annual DataAware Pulse Survey, the emergence of automation continues to take hold, but with caveats. Low- and no-code solutions are losing ground to solutions that provide more flexibility to meet the needs of everyone on the data team.

Survey results reveal that everyone is still feeling the pain and bottlenecks still persist in the data landscape. More than ever, all roads lead to data engineering. With a painful problem comes a powerful solution, and findings indicate that data teams are already discovering the benefits of automation and flexible coding solutions.

Total Respondents

406 US-based Data Professionals

102
Data Engineers

101
Data Scientists

102
Data Analysts

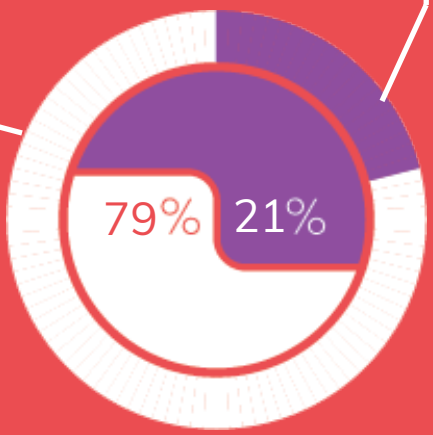
101
Data Architects

Still Struggling With Data Volume?

In a stark departure from what organizations have traditionally struggled with, only ***21%*** of respondents stated that the data team battles scaling infrastructures to keep pace with the growth of data volume. However, even with ***79%*** of data teams having found ways to ensure their infrastructure can keep pace, the scale troubles aren't over just yet. The tables have turned to a new and growing problem with scale that is focused heavily on data team capacity and less on technology capacity.

YES
21% still do battle scaling infrastructures for scaling volumes.

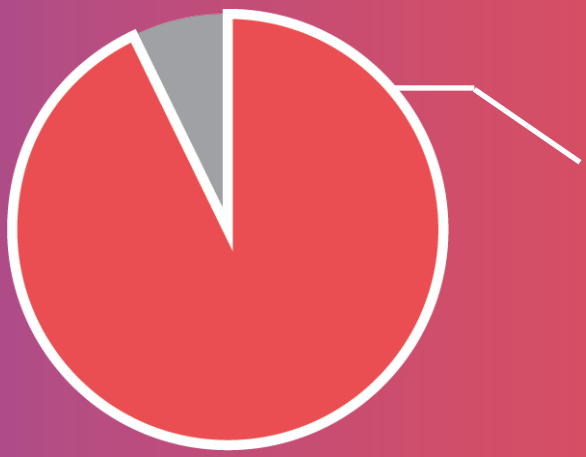
NO
79% do not struggle with the volume of data.



Data Teams are Over Capacity...And Getting Worse

There is no question about it—scaling output and developer productivity are increasingly the greatest challenges data teams face. In fact, a shocking **96%** of teams are at or over capacity—down only 1% from the previous year's study.

While this stat is telling in and of itself, multiple things could be fueling this capacity bottleneck. According to the 2021 survey, there is a significant and growing demand for data products and the pipelines that fuel them.



However, the demand for data products is forecast to continue growing faster than the teams that build and support them.

A striking **93%** of respondents anticipate the number of data pipelines in their organization to increase between now and the end of the year.

And the need for data products is not growing incrementally—it is growing rapidly and substantially.

56%

of respondents

projected that the number of data pipelines needed in 2021 will increase more than **50%** from what their organization required in 2020.

11%

of respondents

projected that the number of data pipelines needed in 2021 will increase more than **100%** from what their organization required in 2020.

74%

of respondents

indicated their organization's need for data products is growing faster than their team size.

A Solution Is Needed

This lack of data engineering resources is leading to even more downstream delays. In fact, when asked which tasks in their data ecosystem are the most backlogged, respondents were significantly more likely to identify their own function of the business compared to those of their peers.

Further evidence points to a growing backlog of data engineering tasks across teams. In fact, the most common bottlenecks across teams include the maintenance of existing and legacy data systems (39%), data system setup and prototyping (30%), and needing to ask for access to data or systems (26%). Among the respondents, data scientists reported the greatest need to ask for access to data, at 39%.

Enterprise Architects were

2.7 times

more likely to indicate data architecture as the most backlogged.

Data Analysts were

4.5 times

more likely to indicate data analysis as the most backlogged.

Data Scientists were

5.1 times

more likely to indicate data science as the most backlogged.

Data Engineers were

7.0 times

more likely to indicate data engineering as the most backlogged.

Automation Is the Answer...

Data teams are seeking technology solutions to overcome their bandwidth limitations and to do more, faster. When asked how they plan to increase bandwidth across their team, more than half of respondents plan to buy new products or tools or to implement automation technology. Additional means to increase bandwidth include hiring more staff and replatforming and retiring legacy technologies.

AUTOMATION

53%

plan to implement automation technology

PRODUCTS

53%

plan to buy new products or tools

REPLATFORM

30%

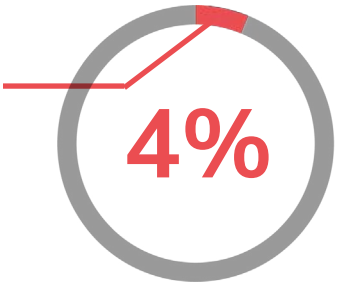
plan to replatform and retire legacy technology

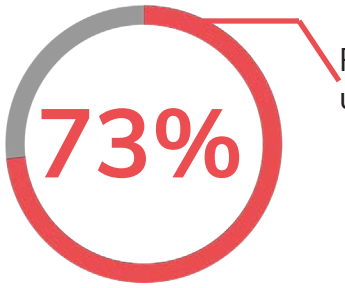
...But With Caveats

As data teams evaluate new solutions, concerns remain about the usability of low- and no-code technology. According to the 2020 study, 80% of respondents reported they were already using or considering low- and no-code solutions to increase their team's bandwidth. Interestingly, the 2021 research indicates that only **4% of data professionals prefer a no-code UI**.

However, that number jumps to **73% if the solutions offered the flexibility** of using both low- and no-code user interfaces in conjunction with higher code options, signaling a tremendous surge in interest for flexible coding (flex-code) approaches.

Prefer no-code user interfaces





Prefer flex-code user interfaces

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www.ascend.io | data-eng@ascend.io