unravel™

ANALYST REPORT

DATA SCIENCE AND ANALYTICS IN THE CLOUD SET TO GROW THREE TIMES FASTER THAN ON-PREMISES

"This market is growing thanks to the critical role of data, AI and analytics in speeding up enterprise data-driven decision-making."

- Krishna Roy and Greg Zwakman, 451 Research

Data science and analytics, as well as the data abstraction and acceleration offerings that underpin them, represented a $29bn market in 2020, according to 451 Research's recent report entitled "Data Science and Analytics in the Cloud Set to Grow Three Times Faster Than On-Premises." The market is growing thanks to the critical role of data, AI and analytics in speeding up enterprise data-driven decision-making for faster time to insight. Cloud services, in particular, are exhibiting strong growth – a trend that has been underway for some time and has been accelerated by the COVID-19 pandemic.

The shift away from on-premises, noncloud infrastructure to cloud services remains a defining aspect of the data and analytics sector. It is reflected in the slowdown in adoption of on-prem data platforms and services, as well as the drop in on-premises data science and analytics tools that utilize these data platforms, and the data abstraction and acceleration offerings that support them. 451 Research finds the proportion of respondents deploying data platforms and services to on-premises, noncloud infrastructure is expected to decline from 47% today to 33% two years from now. The company sees a similar transition playing out in data science and analytics, as cloud revenue is forecast to increase from just over 20% of total revenue in 2020 to slightly shy of 35% by 2025.

Unravel Data enables optimization and governance of modern hybrid data cloud

Unravel is a single platform to improve performance, lower costs and speed migrations across modern hybrid data clouds. Unravel provides data operations and application development teams with a single source of truth to improve collaboration, increase productivity and reliably deliver results.

What makes Unravel different?

Unravel is different from other observability and open source tools because we are purpose built for modern data pipelines and enable a single platform to govern and optimize across hybrid and multi-cloud environments.

- We provide full-stack visibility into users, apps, services, and resources.
- We speed cloud migrations by 40% while dramatically lowering both risk and cost.
- We reduce time-to-resolution and enable self-service troubleshooting via AI-powered root cause analysis and recommended improvement actions.
- Our cost governance and usage optimization reduces platform costs by 30%-40%.

Who uses Unravel?

Once our customers begin using our system, they cannot live without it. DataOps teams at UBS, Johnson & Johnson, Adobe, and Citi look to Unravel when they want to:

- Govern the costs of cloud operations and accurately chargeback usage
- Improve the performance of critical data pipelines to reliably meet SLA requirements
- Quickly improve time to resolution and reduce the number of tickets
- Increase the speed and lower the risk of cloud migrations

Migrating to the cloud

Cloud migration can be a costly and tricky exercise if the following points are not considered:

- Do I understand dependencies between applications, users and datasets that I need to migrate?
- Can I compare different cloud vendors to truly understand where my unique workload runs best?
- Can I measure before and after cost and performance to determine migration effectiveness?

Unravel can help ensure you won't be flying blind. With data-driven intelligence and recommendations for optimizing compute, memory, and storage resources, Unravel makes your transition a smooth one:

Plan

- Provide intelligence for migrating Cloudera, Hortonworks, and MapR Hadoop and Spark implementations to Amazon AWS/EMR, Microsoft Azure HDInsight.
- Provide detailed dependency maps to help you understand resource requirements before you migrate.
- Reveal the seasonality and ideal time of day to take advantage of the best prices for cloud services, spot instances, autoscaling, and more.
- Reduce cloud costs by enabling automatic app speedup, optimized resource usage, and intelligent data tiering.

Migrate

- Validate your decision to migrate by baselining performance before and after the move.
- Compare how apps perform before and after the transition – and optimizing them for the new cloud runtime environment.
- Offer guidance to improve the performance, scalability, and reliability of your apps once they're in the cloud.

Manage

- Identify which users, applications, and projects are having the biggest impact, with chargeback and showback capabilities.
- Break down costs by CPU, memory, I/O, and storage – and get recommendations for potential savings.
- Automatically detect and mitigate the inefficient use of resources by application – including CPU, memory, containers, caching, and nodes.

To learn more, download a free trial or contact Unravel.

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451 Research

S&P Global
Market Intelligence

Data science and analytics in the cloud set to grow three times faster than on-premises

Analysts - Krishna Roy, Greg Zwakman

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Introduction

Data science and analytics, as well as the data abstraction and acceleration offerings that underpin them, represented a $29bn market in 2020, according to 451 Research's Data, AI & Analytics Market Monitor: Data Science & Analytics. Moreover, this market is growing thanks to the critical role of data, AI and analytics in speeding up enterprise data-driven decision-making for faster time to insight. Cloud services, in particular, are exhibiting strong growth – a trend that has been underway for some time and has been accelerated by the COVID-19 pandemic.

The 451 Take

The shift away from on-premises, noncloud infrastructure to cloud services remains a defining aspect of the data and analytics sector. It is reflected in the slowdown in adoption of on-prem data platforms and services, as well as the drop in on-premises data science and analytics tools that utilize these data platforms, and the data abstraction and acceleration offerings that support them. Indeed, our Voice of the Enterprise: Data & Analytics, Data Platforms 2021 report exemplified this trend, showing that the proportion of respondents deploying data platforms and services to on-premises, noncloud infrastructure is expected to decline from 47% today to 33% two years from now. Furthermore, we see a similar transition playing out in data science and analytics, as cloud revenue is forecast to increase from just over 20% of total revenue in 2020 to slightly shy of 35% by 2025.

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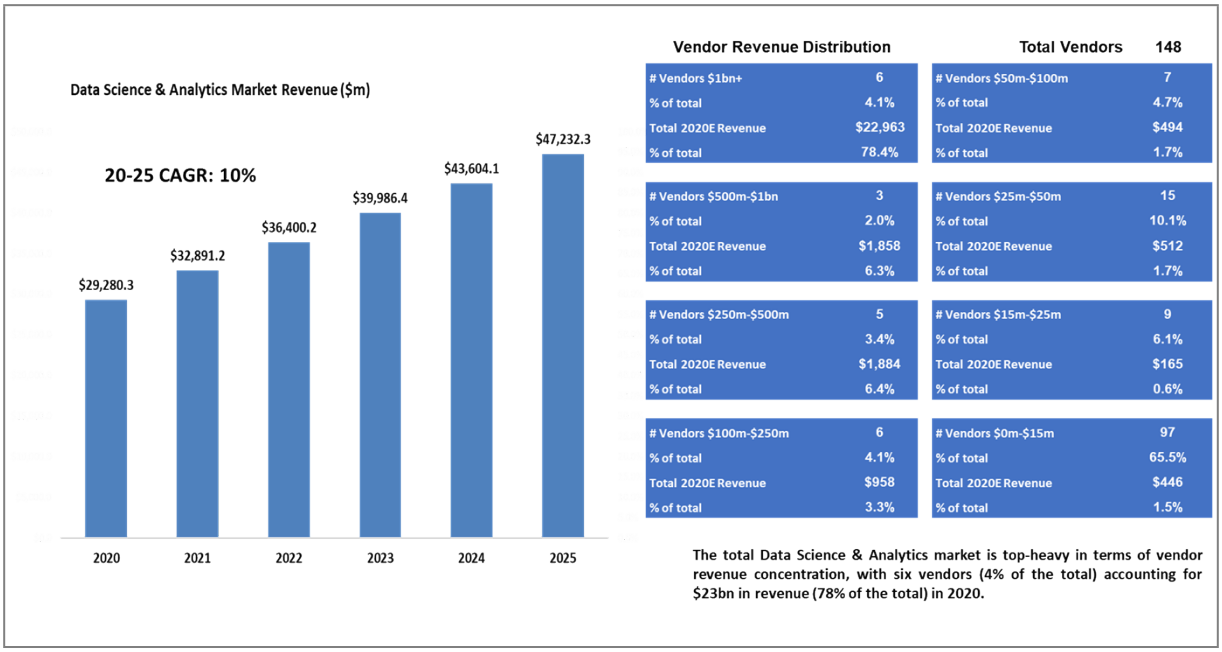
A large and growing market

We expect the data science and analytics market to grow from $29bn in 2020 to just over $47bn in 2025, representing a CAGR of 10.0%. Our market forecast is generated from a bottom-up analysis of 184 vendors participating in five segments. The market is top-heavy, with six vendors generating over $1bn in annual revenue as of 2020, accounting for just under 80% of the total market (see below).

Figure 1: Global Data Science & Analytics Forecast and Vendor Revenue Distribution



Source: 451 Research's Data, AI & Analytics Market Monitor: Data Science & Analytics

Shift to cloud is evident in demand and supply-side data

As noted earlier, our Voice of the Enterprise: Data & Analytics, Data Platforms 2021 survey indicates that the percentage of respondents using on-premises, noncloud infrastructure for data management and analytics workloads is expected to decline from 47% today to 33% two years from now. In contrast, IaaS/PaaS/public cloud adoption is expected to increase from 35% to 38% – with database as a service increasing from 22% to 23%.

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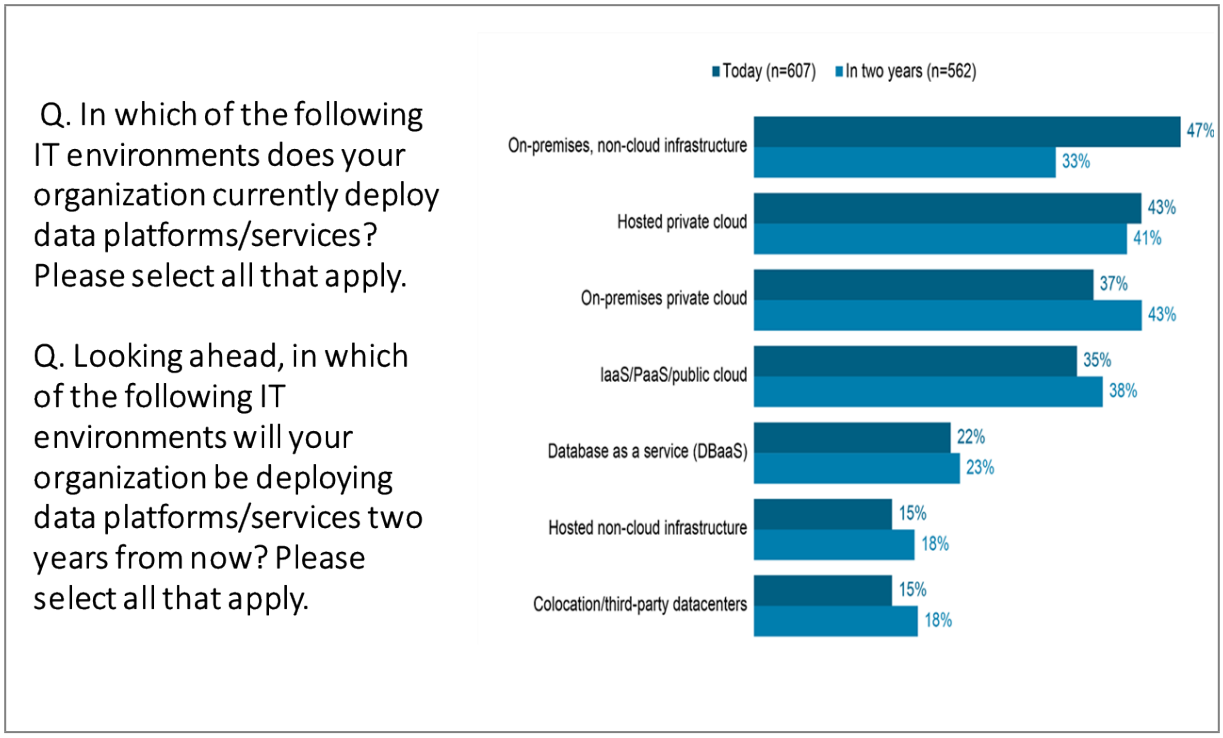
Figure 2: The Transition to Cloud Delivery



Source: 451 Research's Voice of the Enterprise: Data & Analytics, Data Platforms 2021 - Advisory Report
Base: All respondents

This transition from on-premises to cloud is also reflected in our market forecast (see below). This forecast shows the level of adoption of cloud services, which we define as services that are consumed via the cloud – as opposed to software that is deployed in the cloud. This growth varies across the 184 vendors we are tracking, as well as the five segments included in our analysis. Nonetheless, in aggregate, we expect the cloud component of the market to witness a 20.4% CAGR through 2025, with the on-premises market expected to grow at a 6.4% rate over the same period.

From a vendor perspective, that means architectures need to be able to embrace cloud consumption models or risk missing out on this growth opportunity. Those vendors that do will have significant competitive differentiation over those that don't. Equally importantly, cloud consumption needs to be attractively priced so that enterprises are not penalized for running cloud workloads by incurring significant costs from doing so. Furthermore, cloud consumption must be heterogenous, in the sense that it should not restrict an enterprise to adopting one specific cloud platform, since not all enterprises have standardized on cloud infrastructure from one supplier.

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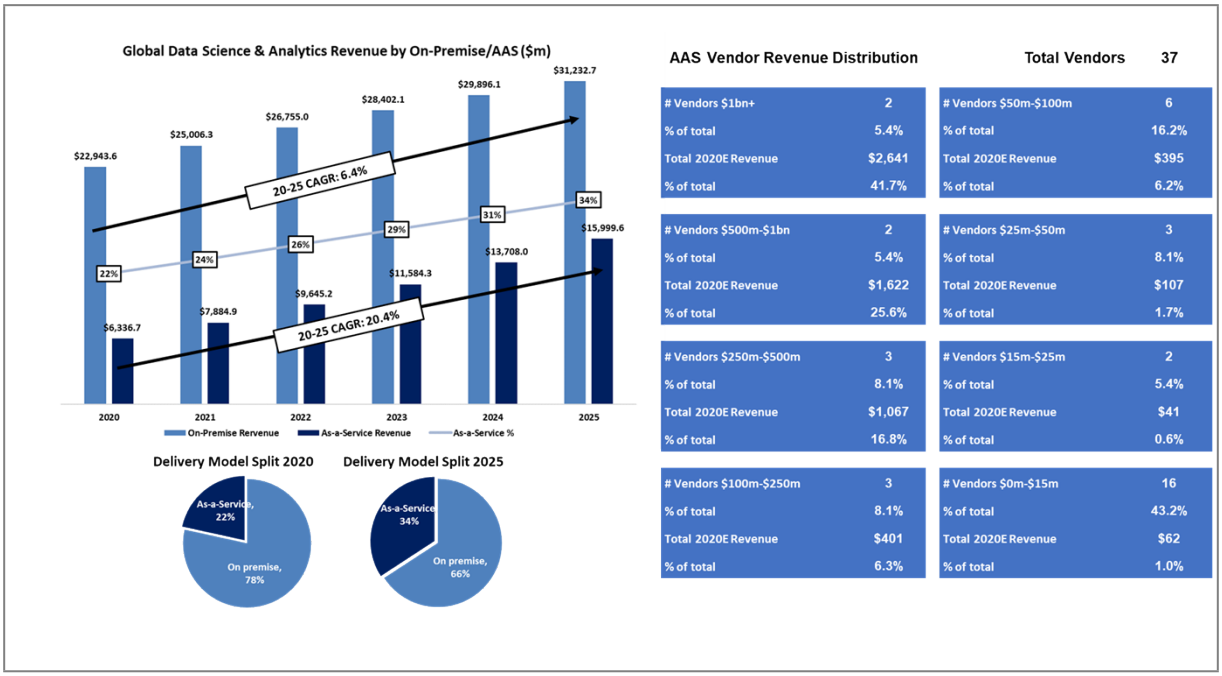
Figure 3: Cloud Data, AI & Analytics Market Forecast and Vendor Revenue Distribution



Source: 451 Research's Data, AI & Analytics Market Monitor: Data Science & Analytics

451 Research's Market Monitor leverages 451 Research's deep knowledge of vendors and relationships within the data platforms and analytics market, resulting in a proprietary forecast based on a bottom-up analysis of 184 vendors' current revenue and growth expectations through 2025.

Included in the report is our data, AI and analytics taxonomy; market sector revenue estimates; and growth forecasts. Additionally, we provide a view of the competitive landscape for each of the market subsectors included in our analysis.

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