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

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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. 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.

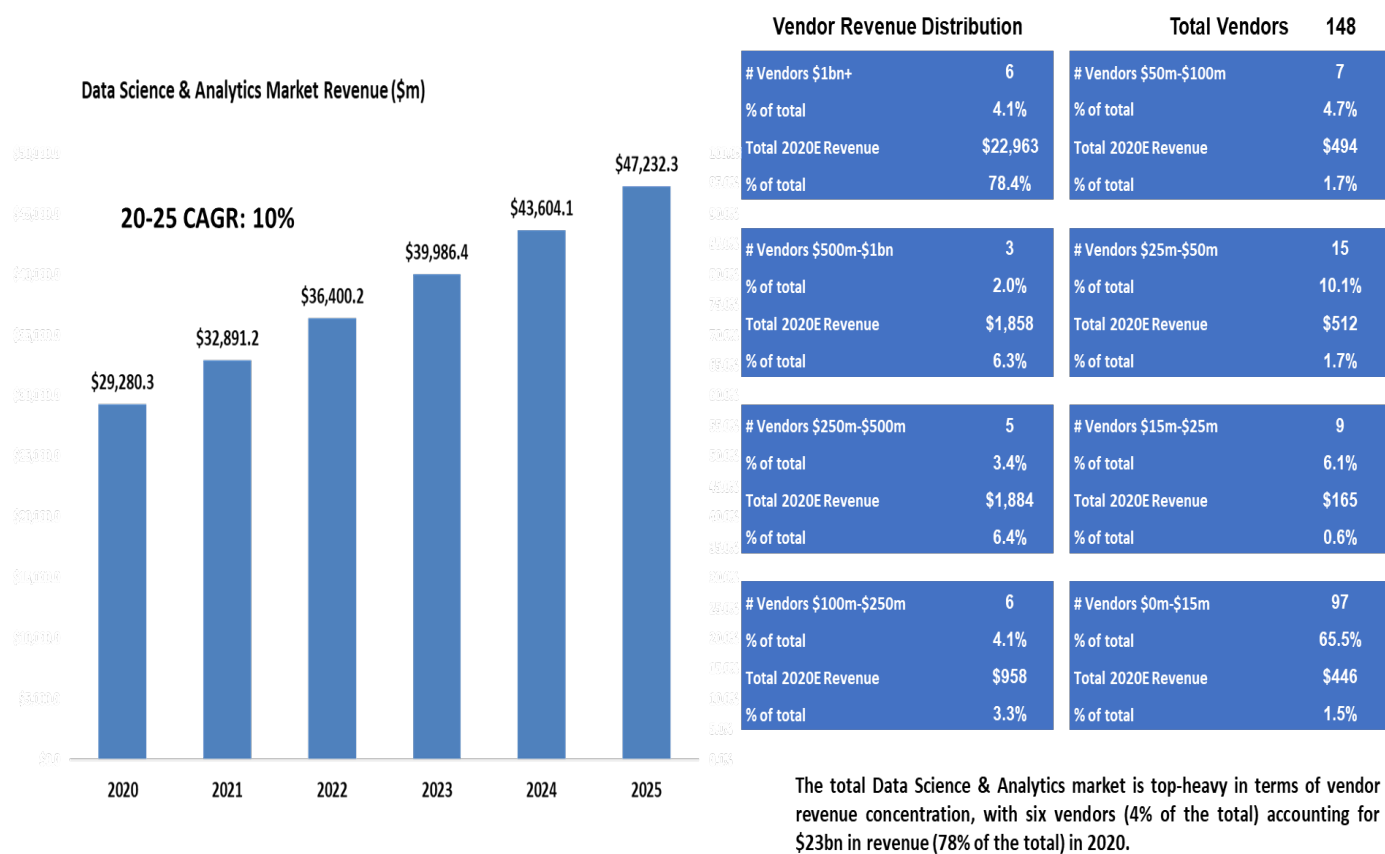
The 451 Take

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 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.

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



451 Research

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

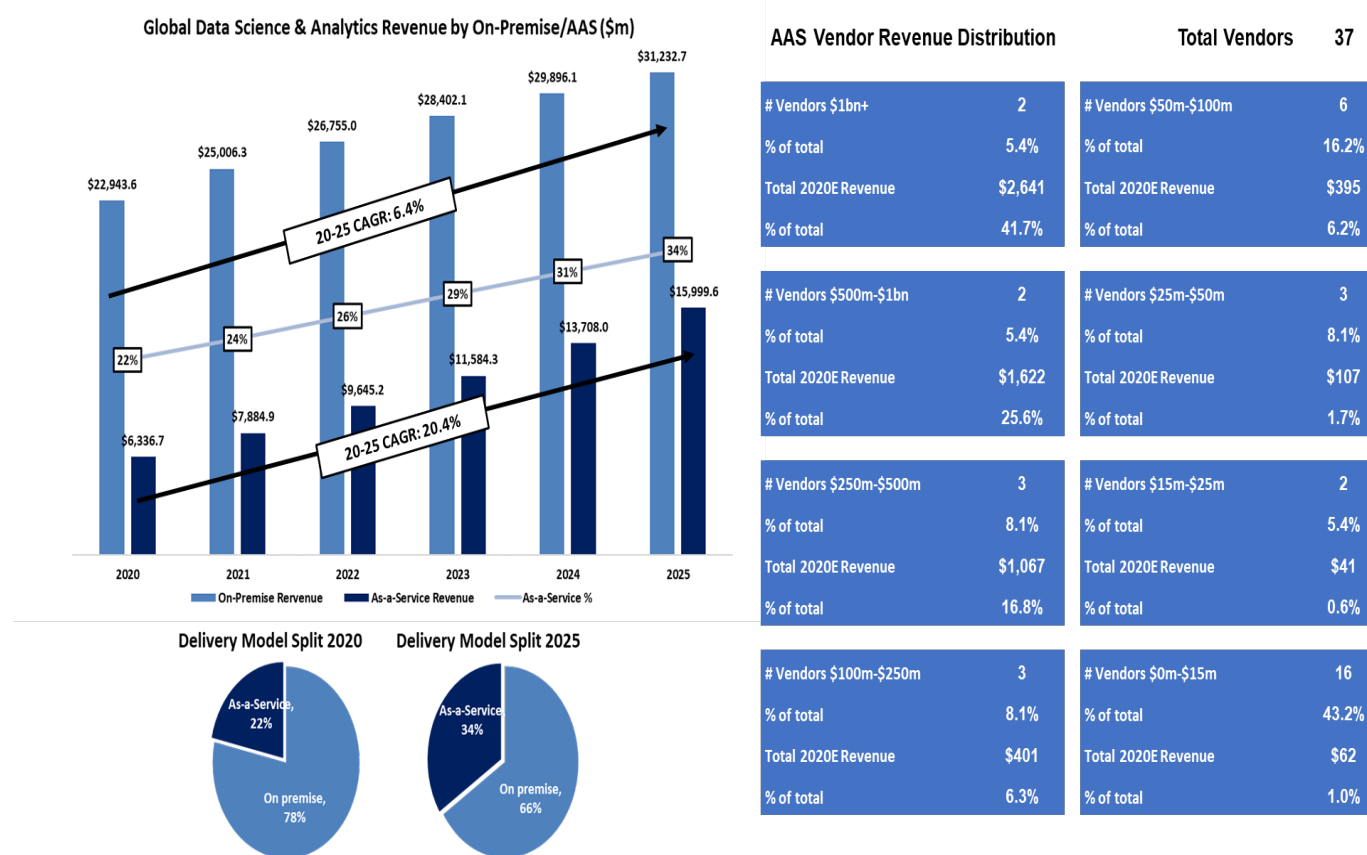
As noted earlier, our 2021 survey indicates that the percentage of respondents using on-premises, noncloud infrastructure for data management and analytics workloads is expected to decline from 47% today to 33% two years from now. In contrast, IaaS/PaaS/public cloud adoption is expected to increase from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

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.

Figure 2



451 Research

451 Research leverages a 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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