**Top 8 trends for big data in 2016**

Bigger, faster, and cloudier – that’s where big data is heading in 2016

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The trend of more people doing more with their data at speed will continue as 2016 will be the year that best practice becomes clear.

The spread of self-service data analytics, along with widespread adoption of the cloud and Hadoop, are leading to many changes that are creating change and excitement in the industry, which businesses will either take advantage of or ignore at their peril.

Here are eight predictions on the shape of data in the New Year.

**1. The NoSQL takeover**

NoSQL technologies, commonly associated with unstructured data, have seen significant adoption over the last 12 months. Going forward, the shift to NoSQL databases as a leading piece of the enterprise IT landscape becomes clear as the benefits of schema-less database concepts become more pronounced.

Nothing shows the picture more starkly than looking at Gartner’s Magic Quadrant for Operational Database Management Systems, which in the past was dominated by Oracle, IBM, Microsoft and SAP.

In contrast, in the most recent Magic Quadrant, the NoSQL companies, including MongoDB, DataStax, Redis Labs and MarkLogic, are set to outnumber the traditional database vendors in Gartner’s Leaders quadrant of the report.

**2. Apache Spark lights up big data**

[**Apache Spark**](http://spark.apache.org/) has moved from a being a component of the Hadoop ecosystem to the big data platform of choice for a number of enterprises.

Spark provides dramatically increased data processing speed compared to Hadoop and is now the largest big data open-source project, according to Spark originator and Databricks co-founder, Matei Zaharia.

More and more compelling enterprise use cases around Spark are emerging, such as at[**Goldman Sachs**](https://spark-summit.org/east-2015/talk/matthew-glickman), where Spark has become the “lingua franca” of big data analytics.

**3. Hadoop projects mature: enterprises continue their move from Hadoop proof of concepts to production**

In a recent survey of 2,200 Hadoop customers, only 3% of respondents anticipated they will be doing less with Hadoop in the next 12 months and 76% of those who already used Hadoop planned on doing more within the next three months.

**4. Big data grows up: Hadoop adds to enterprise standards**

As further evidence to the growing trend of Hadoop becoming a core part of the enterprise IT landscape, investment will grow in the components surrounding enterprise systems such as security.

Apache Sentry project provides a system for enforcing fine-grained, role-based authorisation to data and metadata stored on a Hadoop cluster.

These are the types of capabilities that customers expect from their enterprise-grade RDBMS platforms and are now coming to the forefront of the emerging big data technologies, thus eliminating one more barrier to enterprise adoption.

**5. Big data gets fast: options expand to add speed to Hadoop**

With Hadoop gaining more traction in the enterprise, there will be a growing demand from end users for the same fast data exploration capabilities they’ve come to expect from traditional data warehouses.

To meet that end-user demand, adoption of technologies such as Cloudera Impala, AtScale, Actian Vector and Jethro Data that enable the business user’s old friend, the OLAP cube, for Hadoop will grow – further blurring the lines behind the “traditional” BI concepts and the world of big data.

**6. The number of options for ‘preparing’ end users to discover all forms of data growth**

Self-service data preparation tools are exploding in popularity. This is in part due to the shift toward business-user-generated data discovery tools that reduce time to analyse data.

Business users want to reduce the time and complexity of preparing data for analysis, something that is especially important in the world of big data when dealing with a variety of data types and formats.

**7. MPP data warehouse growth is heating up – in the cloud**

The “death” of the data warehouse has been overhyped for some time now, but it’s no secret that growth in this segment of the market has been slowing.

But there is now a major shift in the application of this technology to the cloud where Amazon led the way with an on-demand cloud data warehouse in Redshift.

Redshift was AWS’s fastest growing service but it now has competition from Google with BigQuery, offerings from long time data warehouse power players such as Microsoft (with Azure SQL Data Warehouse) and Teradata, along with new start-ups such as Snowflake, winner of Strata + Hadoop World 2015 Startup Showcase, also gaining adoption in this space.

Analysts cite 90% of companies who have adopted Hadoop will also keep their data warehouses and with these new cloud offerings, those customers can dynamically scale up or down the amount of storage and compute resources in the data warehouse relative to the larger amounts of information stored in their Hadoop data lake.

**8. The buzzwords converge: IoT, cloud and big data come together**

The technology is still in its early days, but the data from devices in the Internet of Things (IoT) will become one of the “killer apps” for the cloud and a driver of petabyte scale data explosion.

For this reason, leading cloud and data companies such as [**Google**](https://cloud.google.com/solutions/iot/),[**Amazon Web Services**](https://aws.amazon.com/iot/) and[**Microsoft**](https://azure.microsoft.com/en-us/solutions/iot-suite/) will bring IoT services to life so the data can move seamlessly to their cloud-based analytics engines.

>See also: [**How to sail the perfect storm of big data**](http://www.information-age.com/it-management/strategy-and-innovation/123460378/how-sail-perfect-storm-big-data)

Though these changes and trends may seem disparate, they’re all linked by the need to work with data quickly and conveniently.

As big data changes and new ways of working with that data pop up, the details shift, but the song remains the same: everyone’s a data analyst, and there’s never been a more exciting job.

*Sourced from Bob Middleton,*[***Tableau***](http://www.tableau.com/)