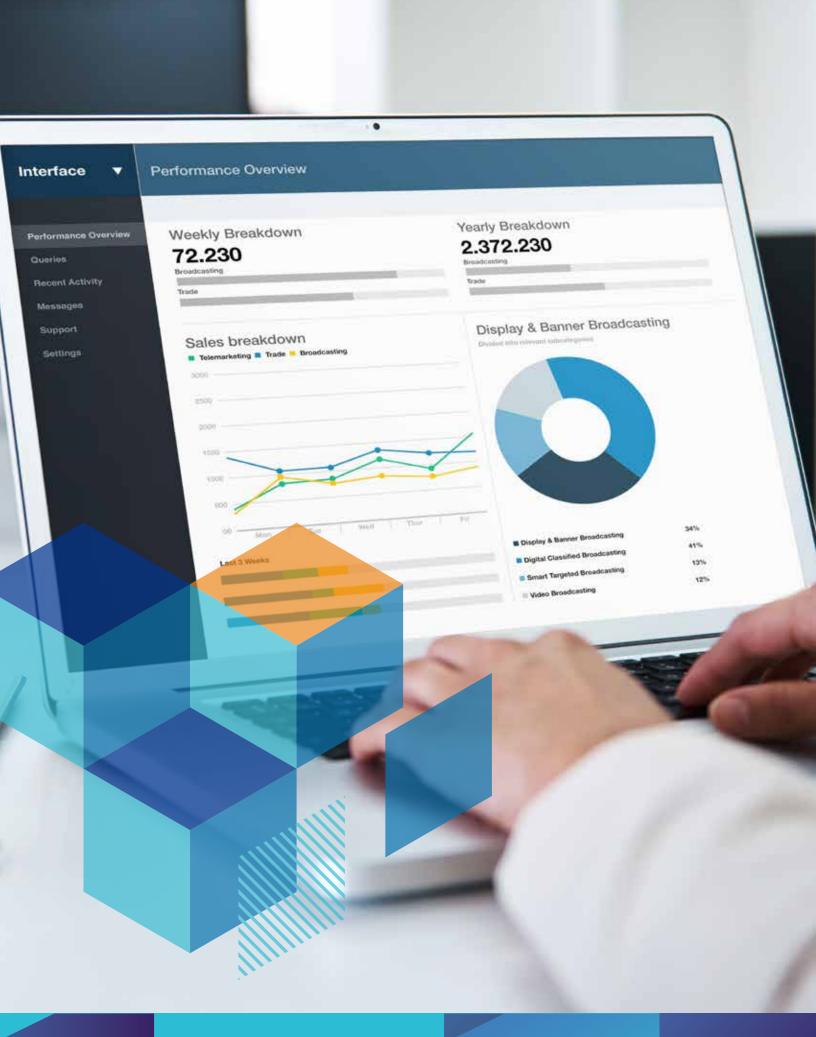


# ACTIVATING BIG DATA

THE KEY TO SUCCESS WITH MACHINE LEARNING AND ADVANCED ANALYTICS





### THE ALLURE OF BIG DATA

Today the idea of leveraging insights generated from big data holds much promise for enterprises in every industry — to improve business decisions, increase revenue, lower costs, and disrupt markets. This is in stark contrast to years past, when few industries had the tools to use data in the same way as forward-thinking digital companies such as the likes of Amazon and Facebook.

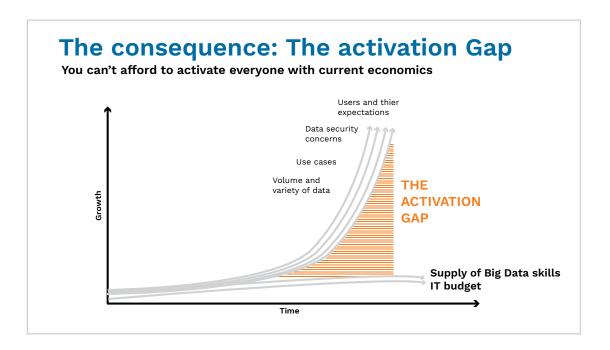
With the connectivity and proliferation of data-producing devices, instrumented systems, and applications, enterprises are capturing and processing unprecedented amounts of data globally. Companies saw a 10x increase in data generated from 2013 to 2016, and the total amount is projected to reach 163 zettabytes (ZB) by the year 2025.

The increase in available data coupled with advances in technology now enable companies to leverage numerous data sources, in addition to the customer data they already possess, to build data-driven business strategies and **outperform their peers.** Yet businesses continue to face difficulties around translating amassed data into actionable insights. In fact, industry reports indicate that **less than one percent** of big data captured in an unstructured format is analyzed or put to use.

# THE CHALLENGE WITH SCALING BIG DATA ANALYTICS

The critical challenge for today's enterprises extends beyond bringing all data together into a cloud or on-premise data lake and generating data insights for analytics and machine learning. All captured big data — not just one percent — must be accessible to help drive business value.

Companies venturing into big data understand that **using data to inform business operations** delivers more value. However, expanding big data projects to a more comprehensive role often reveals big problems with the economics of scaling and making data available across all consumption points. And most companies fail to fully realize the business value of big data in the form of increased revenue generation, lowered operating costs, organic identification of new market opportunities, and so on.<sup>[1][2]</sup>



To expand from a few focused projects and transition to a truly data-driven business — where data informs every business decision, every user has access to the data they need, and a critical mass of data is activated — companies need to bridge what we refer to as the big data activation gap, which is the difference between the usage and supply of data.

To realize the value of big data, organizations must economically maximize both sides of the data activation equation. Businesses must make all of their generated data available to users for a multitude of use cases, ranging from analytics to machine learning and artificial intelligence.

### THE DATA EQUATION: A DELICATE BALANCE

The fact that both ends of the data activation equation are expanding rapidly only exacerbates the problem. On the supply side, companies collect big data in greater volume and variety as the world of connected devices, IoT, and Al grows. On the demand side, users are clamoring for greater and greater access to data as the enterprise transitions to becoming data-driven in their pursuit of innovation or disruption.

Companies must balance their users' data demands with the economics of scaling up their data operations — in terms of both infrastructure and staffing — while ensuring data security and appropriate access management. Often, IT infrastructure and skills cannot keep up with user demand, which leads to the activation gap. The effects of this widening gap are very real and severe — in many organizations, 90 percent of captured data remains idle, while only 10 percent is activated — and access is limited to a handful of people.

## Data teams are getting overrun

### increasing workloads, costs and risks

Missed SLAs' More users want data delayed is on demand data denied access to data Manual provisioning makes it impossible to scale **Data teams** under pressure Big data infrastructure Exploding data, Not enough changing expertise to go workloads new around: 190K data types unfilled jobs in Petabytes of data US alone overwhelm data team

These serious challenges cannot be addressed with the current approach to data activation. Bridging the activation gap requires a radically different method that will offer economies of scale and affordable activation of all data — with frictionless data access for all users — while ensuring appropriate governance and security.

### **BRIDGING THE ACTIVATION GAP**

Succeeding at this strategy requires a rethinking of the role that data teams serve in providing users with data services. Of equal importance is a big data platform for analytics and machine learning, specifically designed to improve data access without increasing the burden on data teams.





The key requirements for a Big Data Activation Platform are:



### Cloud-Native Architecture

Cloud-native architecture that takes full advantage of how the cloud separates compute and storage, allowing for each to be scaled independently to suit user needs.



### Rich Platform Automation Features

Rich platform automation features to automate tedious administration tasks, thereby making the organization more efficient.



## A Fully Optimized Platform

A fully optimized platform that allows you to scale up and scale down data processing needs, so you only pay for the compute resources you use.



## The Ability To Handle Diverse Workloads

The ability to handle diverse workloads such as ETL, analytics, and machine learning within a single platform.



### **Diverse Tools**

Diverse tools that support multiple user personas — data scientists, data analysts, data engineers, and even non-technical users — so users can pick the best tools and technology for their use case.



### A Common Workbench

A common workbench to eliminate data silos by allowing multiple user personas to access the same data under different user roles, thus increasing collaboration and making the entire team more productive.



### Enterprise-Grade Security, Governance, And Regulatory Compliance

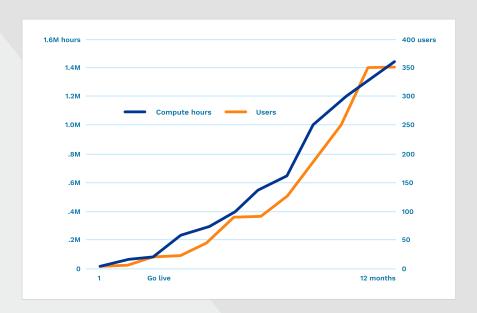
Enterprise-grade security, governance, and regulatory compliance without requiring massive investments of time and money.



#### No Lock-In

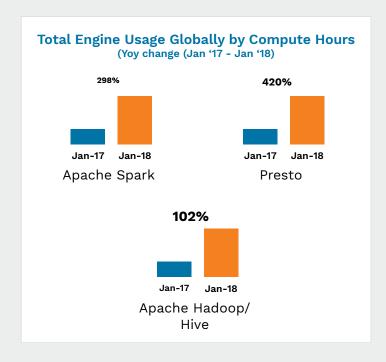
No lock-in. A big data platform for analytics and machine learning built on open source will provide inherent flexibility, allowing customers to evolve with the market and always use the best tool for the job without getting stuck with a legacy choice.

# QUBOLE IS A CLOUD-NATIVE PLATFORM TO ACTIVATE YOUR BIG DATA



The chart below shows activation growth for five customers who deployed Qubole. On average they were able to onboard over 350 users in the first 12 months, and they used an average of 1.5M compute hours that represented high data activation and multiple use cases.

In addition, our customers are using multiple engines such as Apache Hive, Apache Spark, and Presto, indicating that data is activated for multiple users — data scientists, data engineers, analysts, and business users.





A Big Data Activation Platform that meets these requirements will enable companies to disrupt, thrive, and innovate using all of their data and users for the first time. As the diagram below shows, this can be a game-changing flip of the equation.

### NOW **NEXT Activation Gap Fully Activated Data Data Sllos** True shared data access 10% active / 90% inert data 90% active / 10% inert data 3. 1:10 ops/users, throw 1:200 ops/users: run on TO bodies at problem automation, algos/ml 4. Serviced access to data, 4. Self service, Collaborative tools access to data, tools 5. Focus on infrastructure Focus on business impact 6. Costs rise faster than usage 6. Cost efficiency continuously improves with scale

Each of these customers (see side bar) was able to improve business outcomes while reducing marginal costs — clear evidence that a big data platform that activates data can allow companies to close the activation gap. Businesses can break through the growth barrier currently preventing them from scaling their analytics and machine learning-based operations alongside the growth of data itself.

As the data illustrates, big rewards are within reach for the companies that take the time to develop a strategy to activate their big data. Fundamental to such an initiative is addressing the critical accessibility gap between users and the wealth of data that is available.



Here are just a few companies who have successfully activated their big data with Qubole.....



TubeMogul (now part of Adobe), a software company that analyzes massive amounts of data, adopted Qubole to control cloud costs and allow business users to run queries on a self-serve basis. With Qubole they saw a 30% cost reduction and a 5x increase in query execution.



Datalogix (now Oracle Data Cloud), a consumer insights company, recently consolidated their data infrastructure on the cloud. With Qubole, Oracle Data Cloud saw a 50% reduction in cloud spending.



Lyft, a ride-sharing platform, was looking to increase data access to its users and improve their administrator-to-user ratio. After just a few months of using Qubole, they achieved a 1:65 administrator-to-user ratio.



Samsung's IoT team processes large volumes of data from millions of connected devices. With Qubole, they saw a 10x increase in IoT data processed.



### **ABOUT QUBOLE**

Qubole is passionate about making data-driven insights easily accessible to anyone. Qubole customers currently process nearly an exabyte of data every month, making us the leading cloud-agnostic big-data-as-a-service provider. Customers have chosen Qubole because we created the industry's first autonomous data platform. This cloud-based data platform self-manages, self-optimizes and learns to improve automatically and as a result delivers unbeatable agility, flexibility, and TCO. Qubole customers focus on their data, not their data platform. Qubole investors include CRV, Lightspeed Venture Partners, Norwest Venture Partners and IVP. For more information visit www.qubole.com



#### For more information:

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