Data Beyond Dashboards:

# Conversational Analytics for Instant Insights

Qlik

The modern data challenge: instant insights for real-time action.

Business today operates at the speed of data. If you want to stay relevant, pull ahead and win, you have to act on information in real time. And not just within one team or department. Success requires acting on data pervasively – that is, giving users at every level of your business access to in-the-moment insights they can understand and use.

But most businesses today can't deliver insights in real time. Why not?

COMPLEXITY. Even in the earliest days of business intelligence, data was complex. Today, torrents of data are pouring in from a huge variety of sources in a wide range of formats at ever-increasing speeds. Preparing that data for use in analytics is, to put it mildly, a challenge.
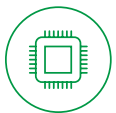
TECHNOLOGY. The vast majority of business data is still being integrated through manually intensive, batch-oriented ETL processes. While some organizations are streaming limited data to make it available for analysis, they still have to perform extensive transformation on that data. And because only a limited number of workers have the skills to handle those manual processes, delays are common. The result is a data delivery cycle that lasts weeks or even months.

METHODOLOGY. Historically, most organizations have drawn a sharp line in the sand between their data management and governance processes (generally centralized) and the data analysis teams (generally decentralized). Without communication, collaboration or iteration, further delays are common – because of misunderstandings, errors and/or changing needs.
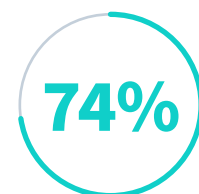
Businesses that get data to users faster show considerable gains:[1]

76%
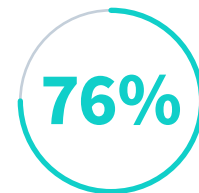
see improved operational efficiency

75%

see increased revenue

74%

see increased profit

Interacting with data: a double standard.

The speed of analytics-ready data delivery is part of the problem. The method of delivery – the quality of user interactions with data – is another. While consumer experiences with data have undergone profound advances, evolving into everything from voice-activated assistants to wearable devices, user interactions with BI have remained largely locked inside the dashboard. And that's holding the business back.

Here are three key ways that BI is trailing consumer interactions:

1. SPEED

The gap. It still takes hours, days or weeks to get access to data at the office, when data-driven interactions in our personal lives are up-to-the-minute. Imagine checking your flight status and seeing data from several hours earlier or getting weather updates on a half-day delay. The gap renders the data useless – and that's why it doesn't happen.

The impact. In business, late data can contribute to everything from poor decisions based on outdated data to missed opportunities to act and build competitive edge.

2. INTELLIGENCE

The gap. Most BI tools aren't contextually aware. When a user generates a query, the machine doesn't understand intent and therefore doesn't come back with the most relevant information. But when you ask Siri a question, the software uses contextual data to get as close to your intent as possible. For example, if you ask for the capital of Georgia when you're located in Europe, Siri will return the capital of the country, not the American state.

The impact. More delays. And whenever you fail to get timely data, you can't get a complete picture of your business. By the time you course-correct, it may be too late.

3. FORMAT

The gap. At home, users can speak a question into the air; at work, they're stuck with a dashboard. And while dashboards are important, they're also limited. First, they require skill to use – even the most intuitive ones. Second, they take time; a user has to open an app, pull it up and click or tap through it. And third, most dashboards strictly limit the type of data you can query and the types of answers you can get, with predefined pathways and pre-curated data sets. There's only so much insight available from a dashboard like that.

The impact. Dashboard-only BI creates a barrier to adoption by requiring skill. It creates a barrier to use by requiring the opening of a separate app. And query-based dashboards limit discovery, hobbling the potential for data to provide competitive edge.

Dashboards are useful.
But we need more
than dashboards.

Simple dashboards with limited interactivity are outdated. However, sophisticated apps that allow users to freely explore data and uncover profound connections are essential – and that's a good thing. Both highly skilled data analysts and users with less advanced skills benefit greatly from these types of interactions with data.

Still, anyone who interacts with Alexa or Google knows: Dashboards shouldn't be the only tool in the kit. To truly democratize data and analytics, we need to bring insights to users in other ways.

In 2021, "the rise of the augmented consumer" is one of Gartner's Top 10 Data and Analytics Trends.[2]

The rise of the voice in digital communication.

In 2020, the use of voice interfaces grew by more than 9%, with **43% of the world's internet users between the ages of 16 and 64 using voice search and voice commands** on a device each month.[3]
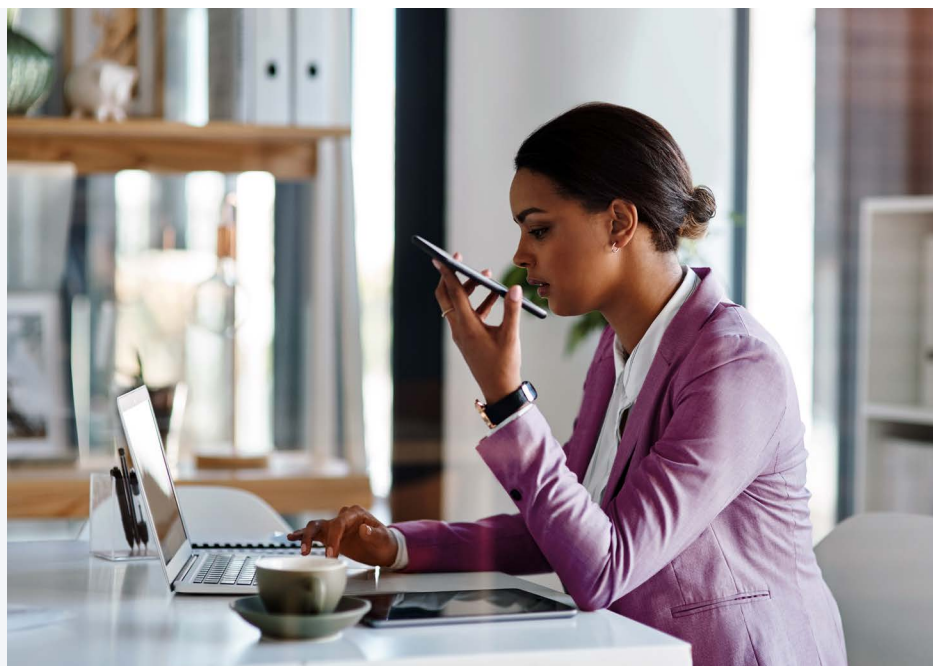
The two-part solution: modern data integration and conversational analytics.

It's time for data delivery to move beyond the dashboard to offer intuitive, human, consumer-oriented experiences in real time. As a CIO or CDO, you want your users to be able to:

1. Ask questions in plain language, from any device and at any moment, without opening an app

2. Have the technology understand the context

3. Get immediate, relevant answers

Fortunately, all of the above is possible with existing technology and methodology. There are two components to making it happen:

MODERN DATA INTEGRATION WITH DATAOPS METHODOLOGY

- **Modern data integration.** Innovative technologies like change data capture and data warehouse/lake automation dramatically speed data preparation and delivery – by streaming data instead of batching it and by transforming manual processes into automated ones.

- **DataOps.** With this methodology based on DevOps, you can revolutionize the way data is delivered and the speed at which it happens. DataOps includes the adoption of modern technologies, the reinvention of the processes that transform data and the collaboration among the teams that work with data.

CONVERSATIONAL ANALYTICS

Outside the dashboard, natural-language interactions in the form of search, texts and chatbots enable users to ask questions of their data in conversational language and receive responses immediately. These Alexa- and Google-like implementations are already available in BI, powered by AI and machine learning. And they'll only get more sophisticated, useful and pervasive over time.

Important:
Context-awareness changes the game.

When a user asks a question in natural language and the AI goes off to find the answer, one thing is vital: The system should understand user context and intent. If not, so-called "natural-language" interactions won't be natural at all. The "discussion" won't have any of the context that a user would experience in a conversation with an actual human, and the insights delivered won't be nearly as relevant as you need them to be.

What does mature context-awareness look like?

The solution understands the business context of any question and offers appropriate interactions – including known questions, investigate questions and predictions of future outcomes

The solution meets users where they are – in the moment, on their device, in their location, with relevance to their specific question

Over time, through machine learning, **the solution becomes able to distinguish among user types** – from CEO to analyst to salesperson – and provide appropriate interactions

Over time, through machine learning, **the system becomes able to understand the user's skill set** based on behavior and offer appropriate interactions

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Contextual AI does not refer to a specific algorithm or machine learning method – instead, it takes a human-centric view and approach to AI. The core is the definition of a set of requirements that enable a symbiotic relationship between AI and humans. Contextual AI needs to be intelligible, adaptive, customizable and controllable, and context-aware."

OLIVER BRDICZKA
AI and ML Architect, Adobe

How Qlik® can help.

At Qlik, we enable you to deliver conversational analytics to all your users, at any skill level, in the moment and on any device. And because contextual awareness is baked into our analytics products, you can be assured that insights are relevant.

How does it work?

1   On the data-delivery side, you can vastly accelerate the availability of real-time, analytics-ready data to the cloud of your choice by automating data streaming, refinement, cataloging and publishing.

> Take a look at our **Data Integration Platform**, including data warehouse automation, data lake creation and cataloging.

2   On the analytics side, you can uncover every connection in any combination of data thanks to our Associative Engine, which enables free-form exploration that always understands the context of all your data – not just linear exploration of queried subsets of data. For conversational analytics, our AI assistant, Insight Advisor, enables natural language interactions and provides suggestions to enhance insights. The Associative Engine enables Insight Advisor to get context from all the data at all times, so suggestions are much more relevant than they otherwise would be – and much more relevant than the insights served by query-based analytics tools.

> Get details on **conversational analytics** in Qlik Sense.

## What's the problem with query-based tools?

They pre-select (and therefore strictly limit) data sets and data relationships before analysis takes place. When AI capabilities are built on top of that foundation, the AI is limited to the same pre-selections. The machine never gets access to the complete data set, so it can't assess in-the-moment context.

Real-time conversational analytics: a must-have for today's enterprise.

When you bring data and insights to users in a form they can instantly and easily interact with, it changes the game for business intelligence. Suddenly, anyone at all can access data. Any decision can be informed by data. And any employee in your business, at any level, can act on data in real time.

All of those advances are major factors in creating the conditions for Active Intelligence, a state of continuous intelligence that uses real-time data pipelines to trigger immediate action – and the ideal state for any organization that wants to compete in the digital era. At Qlik, we're working to make Active Intelligence a reality for all of our customers, with end-to-end solutions for establishing real-time data pipelines based on up-to-the minute data.

Ready to learn more? **Download the Active Intelligence eBook** →
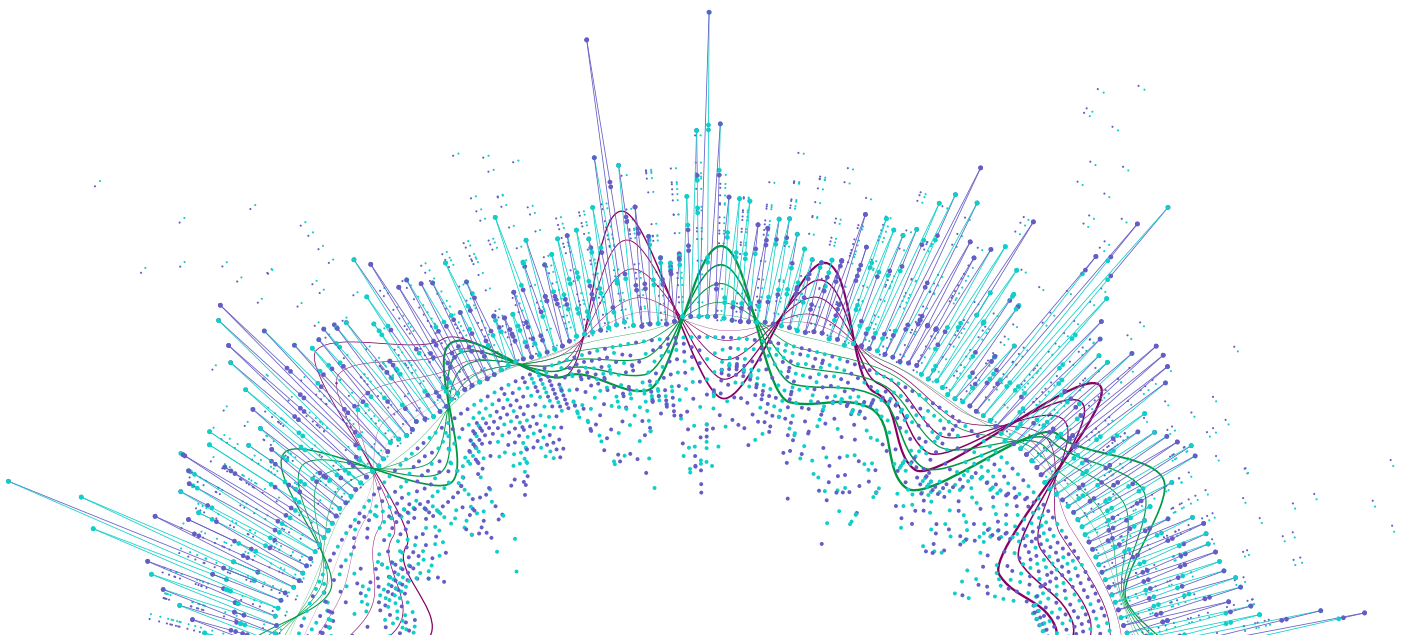
1 IDC InfoBrief, sponsored by Qlik, "Data as the New Water: The Importance of Investing in Data and Analytics Pipelines," June 2020.

2 Smarter With Gartner, "Gartner Top 10 Trends in Data and Analytics for 2021," February 22, 2021. https://www.gartner.com/smarterwithgartner/gartner-top-10-data-and-analytics-trends-for-2021/.

3 GlobalWebIndex research via https://thenextweb.com/growth-quarters/2020/01/30/digital-trends-2020-every-single-stat-you-need-to-know-about-the-internet/.

ABOUT QLIK

Qlik's vision is a data-literate world, where everyone can use data and analytics to improve decision-making and solve their most challenging problems. Qlik offers real-time data integration and analytics solutions, powered by Qlik Cloud, to close the gaps between data, insights and action. By transforming data into Active Intelligence, businesses can drive better decisions, improve revenue and profitability, and optimize customer relationships. Qlik serves more than 38,000 active customers in over 100 countries.

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