DATA ANALYTICS
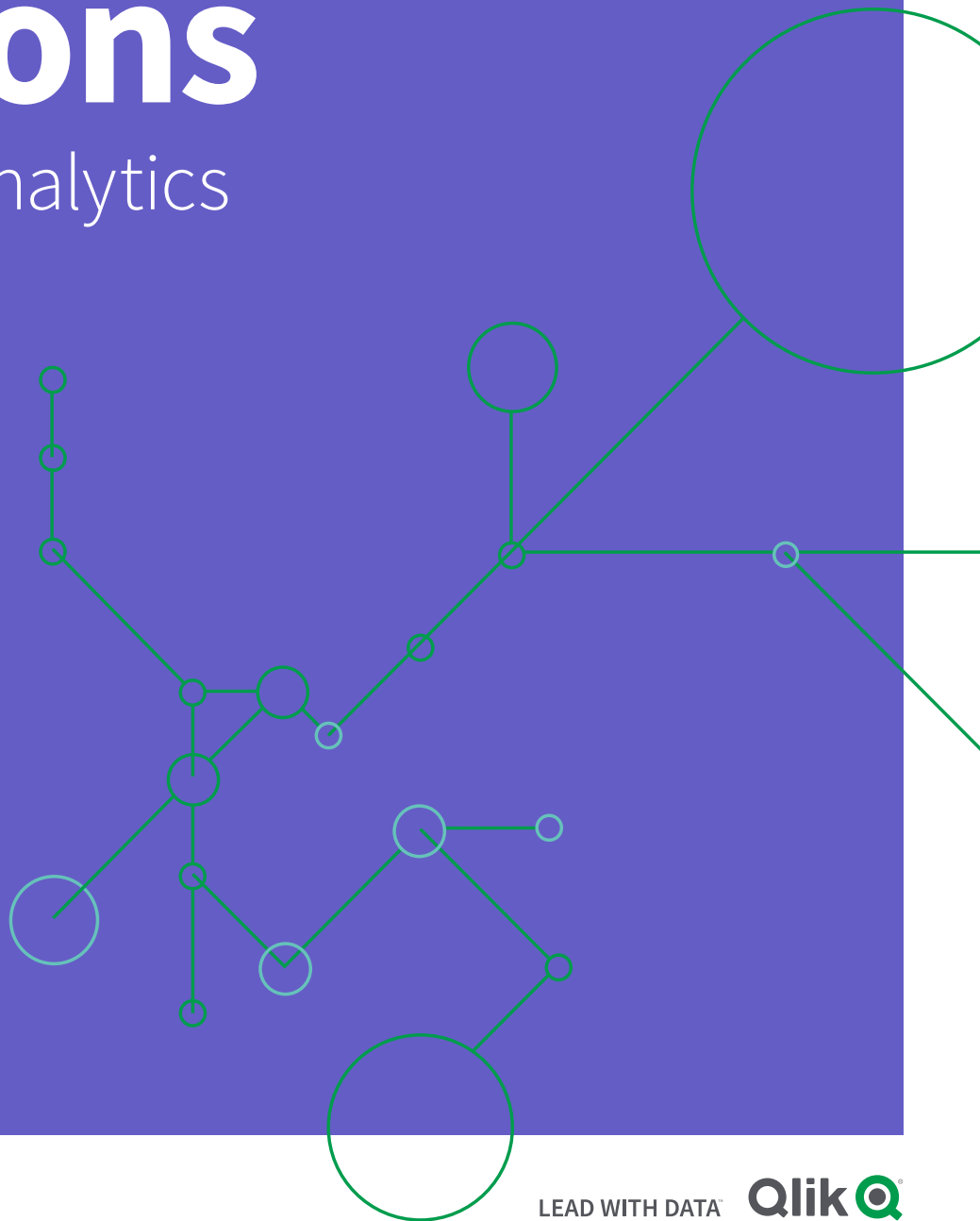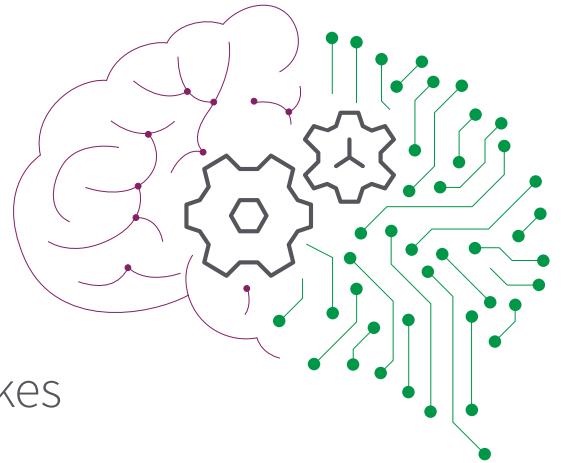
Deeper Insights and Data-driven Decisions

Augmented Analytics
by Qlik

LEAD WITH DATA™ Qlik

The AI paradox is a simple notion. People think AI will make analytics less human, replacing human decision making. But the truth is, AI actually makes analytics more human.

Most business problems can't be solved purely by algorithms or machine learning. They require human interaction and perspective. At Qlik®, we've always believed in empowering people and maximizing their potential. To that end, we use AI that works in combination with human-centric analysis, helping more people uncover the best insights that accelerate business value.

Augmented analytics allow organizations to finally break through the low levels of adoption and limitations of second-generation visualization tools, reaching the "other 75%" – information workers who are not necessarily analysts. For example, business users struggle with accessibility, typically lacking data literacy skills and the desire to create visualizations or even navigate dashboards. But they need answers to make informed decisions. Business analysts tend to have an efficiency problem. They spend 80% of their time wrangling with data and creating visuals, leaving little time to actually analyze your business. This means they often miss opportunities to make a real impact. And data scientists need broader reach. They build robust models that can generate important predictive information but lack the means to put this power into the hands of decision makers in a usable way. This is where AI comes in. Third-generation augmented analytics, if done right, can lift these constraints and allow organizations to realize the full value of their data.

Augmented Analytics Help Everyone

Business Users – More accessibility through search and conversation

Business Analysts – Efficiency gains through automation and assistance

Data Scientists – Broader reach by delivering interactive calculations

True augmented analytics facilitate two-way human / machine interaction. Bi-directional sharing means the human drives context about where analysis is going, and the machine takes that context and presents new insight and additional context back to the user. It is a genuine partnership that

creates a powerful synergy. And it should happen across all user experiences, from conversational interaction to visual analysis to creation. Yet it's only possible if AI is an integral part of the technology, core to the platform and not a bolt-on or black box.

Insight Advisor – Your Intelligent Assistant

Qlik offers a unique technology advantage, delivering true augmented analytics built into our platform at a foundational level. We support human exploration with our one-of-a-kind Associative Engine – a game-changing technology that gives people "peripheral vision," allowing users to freely explore their data without the limited "tunnel vision" offered by SQL/RDBMS query-based tools. And we combine this with AI and cognitive technology that broadens insight and simplifies interaction with data. The result is augmented analytics with a full picture of your data and powerful, context awareness.

Drawing from these core technologies, Insight Advisor in Qlik Sense® is your intelligent assistant that enhances just about everything you do across the analytics lifecycle. It auto-generates analyses and insights – both visual and associative in nature, automates and accelerates analytics creation and data preparation, supports natural language interaction for conversational and search-based analysis, and delivers the power of data science to everyone through real-time advanced analytics. It includes machine learning for more relevant insights over time, business logic for customization, and leverages the Qlik Associative Engine for context and peripheral vision.

January   February   March   April   May
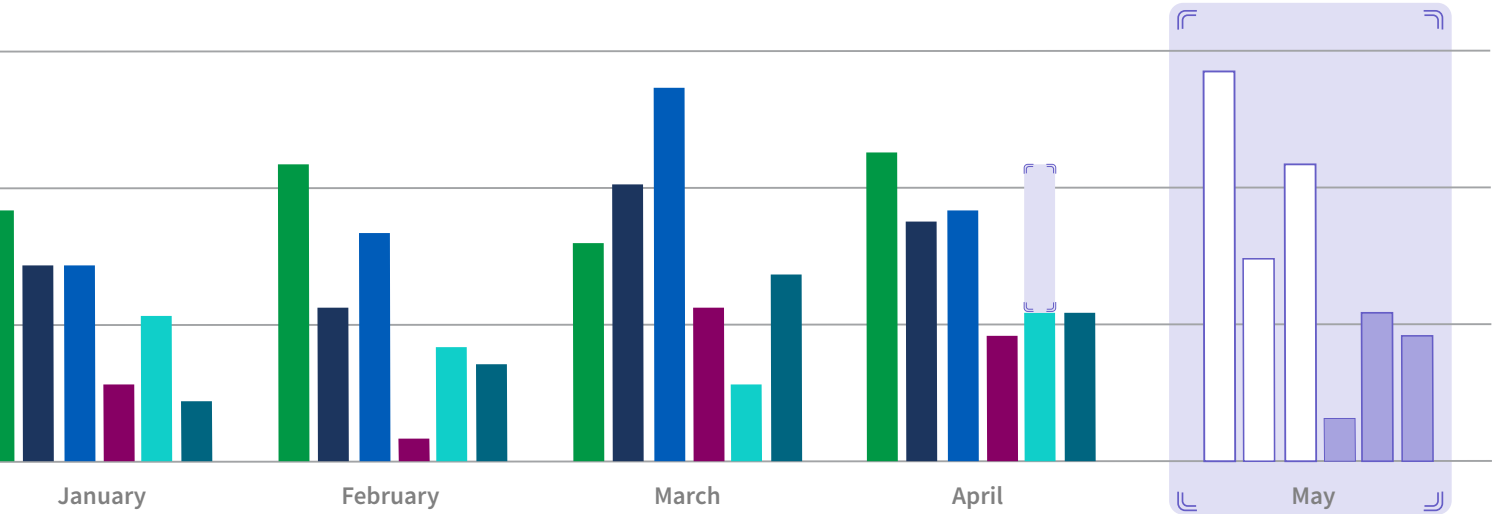
The Associative Difference®

When you're using data to transform your organization, you need the expertise of your entire workforce – and that means enabling everyone to freely explore all their data. Most query-based tools, however, limit people to "tunnel vision" – predefined questions based on partial subsets of data. This blocks free exploration and puts the brakes on discovery.

Qlik does things differently. At the heart of our platform is a one-of-a-kind, high-performance Associative Engine, built from the ground up to give people "peripheral vision." With Qlik, users of all skill levels can easily search and explore across all datasets, in any direction. By keeping all analytics in context together and exposing both related and unrelated data relative to selections, our Associative Engine helps users consistently discover hidden insights that would be missed with query-based tools.

Search-based Visual Analysis

Insight Advisor surfaces new, hidden insights while minimizing cognitive bias, amplifying discovery, and driving data literacy. With search-based analysis, it auto-generates the most relevant and impactful visualizations and analyses for users, based on natural language processing. Users get a series of newly created and prioritized charts, which they can edit and adjust and then directly add to fully interactive dashboards for further exploration.
A robust business logic layer allows for customization of insight generation, and machine learning ensures that suggestions get smarter and more relevant over time. And search-based visual analysis in Qlik Sense is uniquely context aware — working in conjunction with our Associative Engine to reflect the user's selection state in auto-generated visualizations.

In addition, Insight Advisor provides associative insights, directly combining the power of our Associative and Cognitive Engines to suggest the most significant data relationships for users to explore further. Our Associative Engine identifies data values unrelated to user selections, and our Cognitive Engine analyzes these values to assess potential impact and offer suggestions about the most significant areas to explore further. Users can then directly apply selections and generate visual analysis using the new context. This capability magnifies peripheral vision — offering people guidance to hidden data relationships and prompting them to ask additional questions.

Conversational, Natural Language Analytics

Conversational analytics allow people to interact through natural language, boosting adoption and unlocking the power of data for less sophisticated analytics users. With conversational analytics, your organization can reach far more users with a faster and easier way to ask questions, generate insights, and make data-driven decisions. Insight Advisor Chat offers a fully conversational, natural language analytics experience in the Qlik Sense hub. Multi-language natural language processing (NLP) understands user intent, while natural language generation (NLG) delivers added insight and perspective for a deeper understanding. Insights include auto-generated charts, narrative insights, observations and more. And because it works across Qlik Sense apps, people find the right insights even if they don't know where to look.

Conversational Analytics in Qlik Sense bridge the gap between natural language and visual analysis. Accessible to users of all skill levels, they are a great way to quickly ask questions and get answers. However, open-ended questions and business challenges often require visual discovery to dig deep and uncover hidden insights. Because Qlik Sense runs on our unique Associative Engine, users can ask questions in a conversational manner, and then dive directly into search-based visual analysis for further exploration. Unlike standalone products, this approach offers the best of both worlds – giving people the right tools for the problem at hand.

Accelerated Creation and Data Preparation

Even with Augmented Analytics-generated insights, business analysts and power users still need to create analytics using a traditional build process. And here again, Insight Advisor is your assistant. You can easily create, modify, and personalize based on their own skill level, with Insight Advisor accelerating and automating the process. This includes association recommendations – to easily combine different data sources and chart suggestions – that render the best types of visualizations based on the data, as well as a variety of smart data preparation and authoring functions. Users can take advantage of measures, dimensions, and analytics contained in governed libraries, to conform to business standards. And because it's our Associative Engine, there's no need to wire visualizations to update together or construct complex SQL queries.
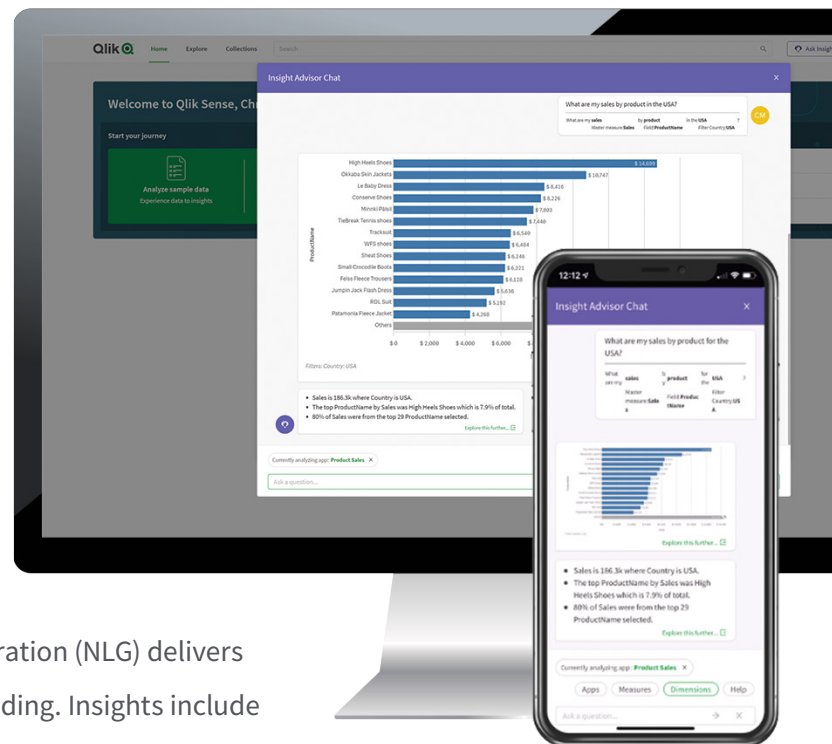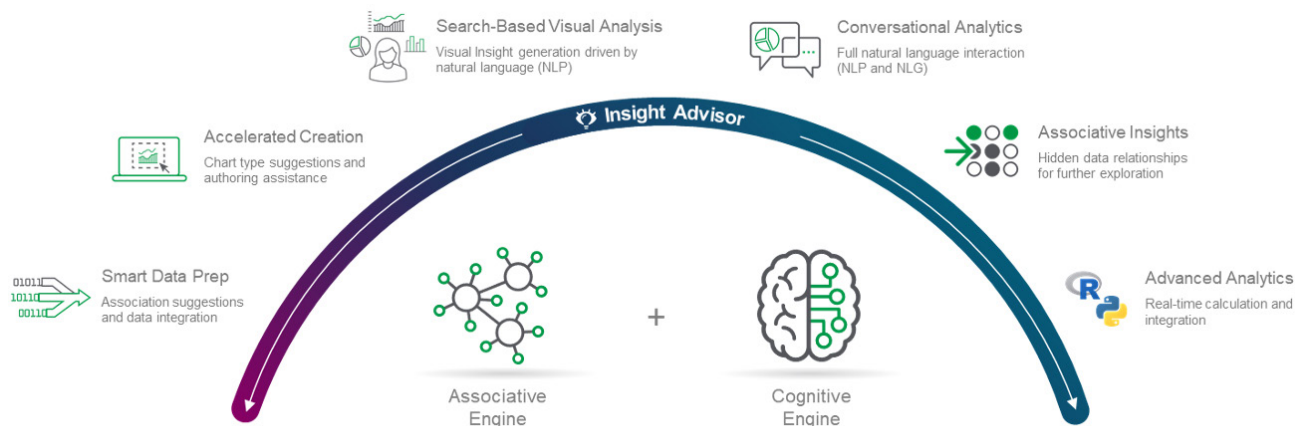
Qlik Sense provides a complete set of data preparation and integration capabilities, allowing users to work with nearly limitless combinations of data, both big and small. This allows non-technical users to visually combine, transform, and load data from multiple sources — without leaving any data behind. Users can easily combine data sources using visual drag-and-drop functionality, with Insight Advisor helping to identify the best associations to link them together. Intelligent profiling automatically processes various data types and provides descriptive statistics. And Qlik Sense includes a full set of visual transformation features such as derived fields, binning, and concatenation.

Real-Time Advanced Analytics

Qlik Sense allows people to directly interact with advanced analytics and predictive models, updating calculations in real-time as users make selections. This interactivity allows people to refine context and then evaluate the results within visualizations. It's a radically different approach than typical batch processing and static delivery, putting the power to ask unique questions in the hands of everyone. And it works with both on-board advanced calculation and integration with third-party engines. On-board capabilities include K-means clustering for grouping similar data points, correlation for determining relationships between fields, a variety of statistical functions, and advanced geographic calculation for geospatial use cases.

Advanced analytics integration takes this a step further, allowing your organization to deliver the power of third-party data science and predictive models directly to business users. Open APIs provide direct, engine-level integration between Qlik Sense and third-party tools, with data being exchanged and calculations made in real-time as the user explores. Our Associative Engine only passes relevant data based on user selected context, minimizing processing times and providing an interactive, real-time experience. Advanced analytics integration can be used with any third-party calculation engines. We offer open-source connectors for R and Python, and established integrations with partners such as DataRobot.

Search-Based Visual Analysis
Visual Insight generation driven by natural language (NLP)

Conversational Analytics
Full natural language interaction (NLP and NLG)

Accelerated Creation
Chart type suggestions and authoring assistance

Associative Insights
Hidden data relationships for further exploration

Insight Advisor

Smart Data Prep
Association suggestions and data integration

Advanced Analytics
Real-time calculation and integration

Associative Engine

+

Cognitive Engine

Deeper Insights and Data-driven Decisions for All

Augmented Analytics enabled solutions are only as good as their weakest link. Some may have robust algorithmic capabilities, but if they can't support the human mind and how it thinks, insights will be flawed and mistrusted. Or, if a solution is based only on a single type of user experience (i.e. search), it will only handle one type of business problem well. And if AI is simply a bolt-on, you lose the real power of augmented capabilities core to the analytical experience.

Qlik Sense is the most complete solution available for third-generation, augmented analytics. With Qlik Sense, you can empower a full range of users with augmented capabilities, driving more value from data in more areas of your business, and supporting everyone with the right types of experiences to make the best decisions. And you can do this with unmatched performance, robust governance, and the choice of SaaS, multi-cloud and on-premises deployment for the most demanding enterprises.

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 provides an end-to-end, real-time data integration and analytics cloud platform 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 does business in more than 100 countries and serves over 50,000 customers around the world.

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