



From insights to innovation

How cloud data visualization and analytics solutions are transforming healthcare





Data drives medicine forward

WHEN IT COMES TO INNOVATION, THERE MAY BE NO MORE DATA-CRITICAL FIELD THAN HEALTHCARE. FROM PROVIDERS, TO PAYERS, TO RESEARCHERS WHO ARE WORKING DAILY TO DISCOVER INTERVENTIONS THAT CAN SAVE LIVES, DATA IS AT THE HEART OF JUST ABOUT EVERY SOLUTION. EVIDENCE-BASED INTERVENTIONS, DRUG TRIALS, AND EVEN PATIENT ADHERENCE TO TREATMENT REGIMENS CAN BE TRACKED AND IMPROVED THROUGH A CLOSE EXAMINATION OF DATA.



The challenge is often excess. There is simply so much data available that it can be difficult to determine how best to view, analyze, and work with the data at hand to find the most meaningful insights. The most powerful data analysis tools available today are empowering professionals in all roles—not only trained data scientists—to query, view, analyze, and manipulate data. These roles use data to find answers to the questions they are asking and unearth critical insights to best serve the patient care ecosystem.

Cloud-based data visualization is helping Healthcare and Life Sciences organizations get started quickly, scale easily, and pay for only the compute power they consume, while taking advantage of modern analytics technologies. This eBook highlights ways in which self-service, cloud-based, governed analytics and data visualization solutions are helping three specific roles in the Healthcare and Life Sciences industries: healthcare providers, healthcare payers, and life sciences researchers.

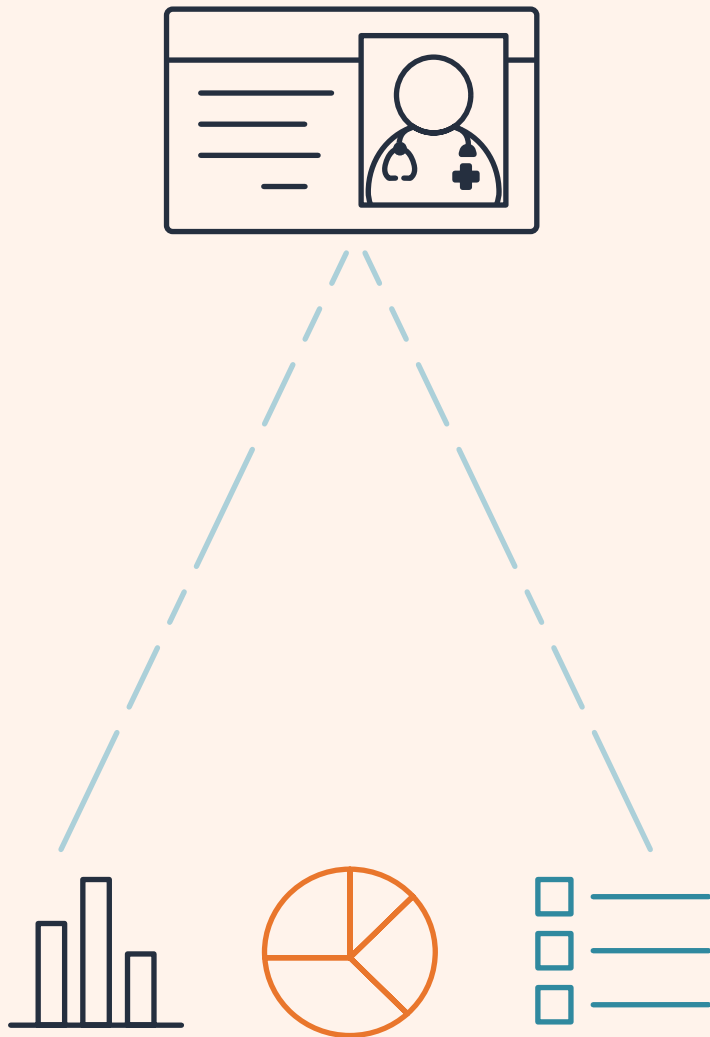


Data visualization for the healthcare provider

Health care providers (HCPs) and healthcare organizations (HCOs) are using data analysis to identify insights that benefit many departments and roles. Easily-accessible data visualization and analytics can help spot inefficiencies, monitor the supply chain for expiring medical products, reduce costs, and create benefits in the healthcare ecosystem that ultimately improve patient care.

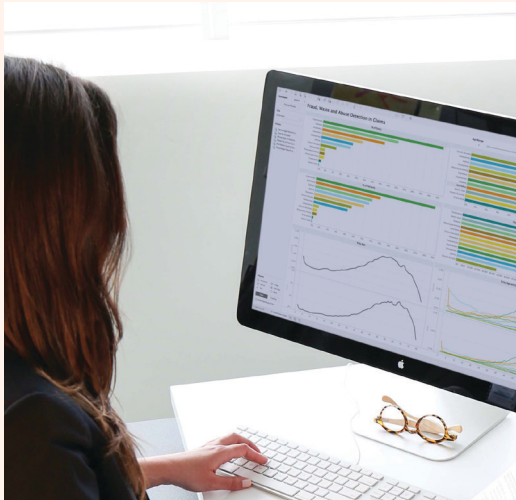
Inside a hospital system, these use cases can stretch across virtually every role. One large hospital implemented data visualization across multiple departments to manage demand flow for medical products, with the following results:

- **Supply chain:** The team used data visualization to track product inventory and delivery information in a way that has allowed the team to reduce both overstocked inventory and expired product. This innovation led to over \$100,000 in annual savings.



- **HCPs:** Healthcare providers benefited from this innovation by gaining confidence in the new system and the ability to focus on patient care, knowing that inventoried items will be available when needed. The streamlined inventory system led to savings of more than 40,000 clinical hours annually.
- **Supervisory staff:** The ease of a cloud-based data visualization and analytics platform allowed hospital supervisors to quickly scan customized dashboards to ensure products were delivered on schedule.

The overall value of the solution can be summarized by feedback from a nurse on the hospital's staff: "We LOVE demand flow!"

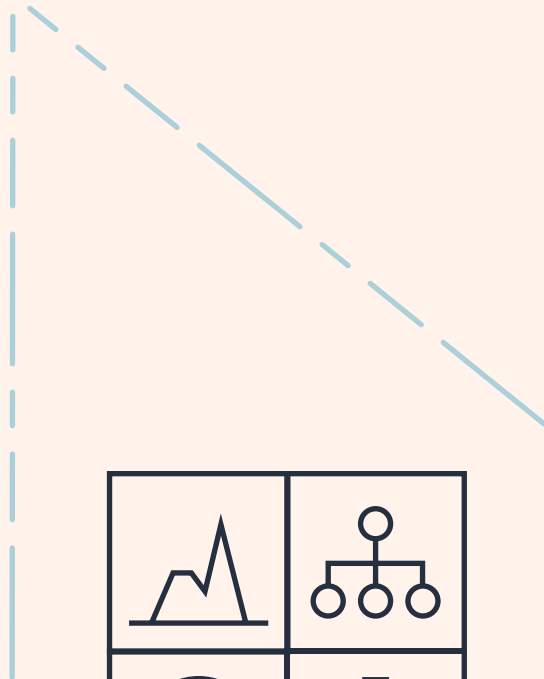
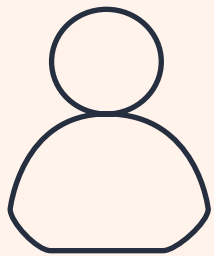


Data visualization for the healthcare payer

Healthcare payers play an essential role in today's value-based healthcare delivery system. Insurance companies must quickly process claims and issue payments. At the same time, they must control internal costs, manage competition, and attract new customers. Root causes of business challenges must be identified quickly to sustain high performance. Self-service data discovery and analytics can help create efficiencies, lower administrative costs, and identify areas for growth in the healthcare payer ecosystem.

Specific use cases for healthcare payers include the following:

- **Ad-hoc analytics for claims management:** Streamlines screening for fraud, waste, and abuse, leading to significant time and risk reduction associated with claims management. One healthcare payer reported using cloud analytics helped its claims process reduce from four weeks to four hours.



- **Improving employee productivity using real-time analytics:** In one recent case, a healthcare payer discovered that only a small subset of customers was taking advantage of online customer service support tools. By creating an awareness campaign, they were able to save a significant amount of employee hours by reducing call volume.
- **Enabling a risk-based approach to wellness and disease management.** The availability of public health data and self-service analytics makes it possible for payers to analyze large data sets quickly for insights into health management. These findings can be used to segment, target, and improve population health to drive wellness and disease management initiatives for customers.
- **Enhancing customer service through new product development.** Data visualization can be used to increase customer engagement and enhance price transparency for policyholders, helping to reduce the burden of healthcare expenses with new offerings and full visibility into benefits packages.

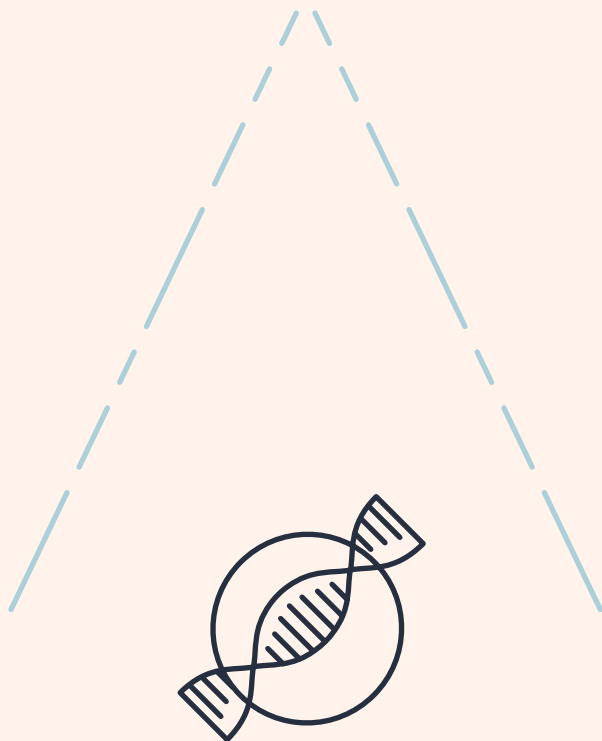
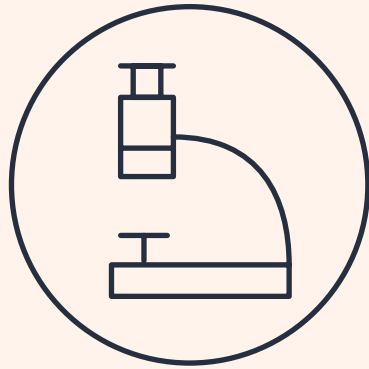


Data visualization for the life sciences researcher

Visual analysis of data, particularly for large, complex data sets involved in Life Sciences such as genomics research and drug discovery, can impact all aspects of the research and development lifecycle. From the laboratory to the boardroom, time to insight is a crucial part of the innovation process, and cloud-based data visualization can help reduce that time considerably, while increasing the value of those insights.

For biomedical researchers, data visualization can be used for:

- Controlling the quality of high-volume assays
- Analyzing large data sets (such as the human genome) to determine ancestral origins for specific traits
- Monitoring results of drug-discovery research



For business leaders in pharmaceutical organizations, use cases for marketing and business development include:

- Improving field sales performance
- Analyzing marketing results for specific products

In one recent case, a research organization used cloud-based data visualization and analytics tools to map data related to the ancestral origins of specific genes in the human genome. The ultimate goal is to understand the potential origins of preventable diseases by analyzing the genomes of newborns and use that insight to predict—and even potentially proactively treat—health issues before they become major concerns. This could elicit a major step forward in the drive towards personalized medicine.

Tableau and AWS can help your organization get started with data visualization

TABLEAU AND AMAZON WEB SERVICES (AWS) CAN HELP HEALTHCARE AND LIFE SCIENCES ORGANIZATIONS IMPROVE PERFORMANCE, SAVE COSTS, IMPROVE HEALTHCARE DELIVERY, AND GAIN IMPROVED RESEARCH INSIGHTS.



Tableau Server on AWS runs seamlessly deployed on Amazon's cloud infrastructure. Tableau works with AWS services to empower healthcare and life sciences organizations to quickly gain meaningful data insights while continuing to leverage the value of existing technology investments. There are no upfront infrastructure costs to consider, nor are there long-term licenses to procure.

Tableau's features include direct connections to AWS data sources, including Amazon Redshift (including Redshift Spectrum), Amazon Aurora, Amazon Athena and Amazon EMR. You can also connect to outside data sources such as SQL Server, Cloudera Hadoop, and numerous cloud applications, including Google Analytics and Salesforce.

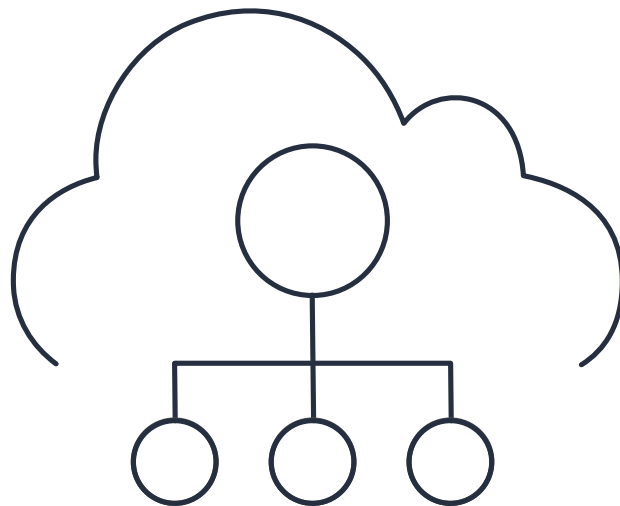


Tableau on AWS can help you:

- Scale embedded cloud-based data visualization quickly to meet your organization's specific needs.
- Use the cloud to spin up instances of Tableau Server to allow different departments and roles within your organization to analyze their own data sets.
- Obtain data insights at a lower total cost of ownership (TCO).
- Get started with data visualization and cloud analytics quickly, with no large upfront commitments.

Note: All customer success stories highlighted in this eBook are based on actual Tableau use cases.

[LEARN MORE ABOUT TABLEAU ON AWS FOR HEALTHCARE.](#)

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