



# **THE BASICS:** **AI DATA CLOUD FOR TELECOM**

Your guide to how the Snowflake AI data cloud powers competitive advantages for telecom companies

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# TELECOM LEADERS ARE ADOPTING A DATA + AI STRATEGY

**Telecommunications companies are under incredible pressure.**

High overhead expenses, continued inflation and rising energy costs are keeping annual growth rates in the **single digits**. At the same time, customers are demanding nothing less than an effortless personalized experience and want to **purchase sustainable products and services**.

Simultaneously, 5G network technology adoption is rapidly advancing, transforming telecom infrastructure. Last year, the industry saw a **66% increase in connections globally**, for a total of **1.76B 5G** global connections, which is projected to reach **7.9B by 2028**. The continued explosion of Internet of Things (IoT) devices is also intensifying demands on the network. By 2025, IDC estimates there will be **55.7 billion connected IoT devices**.

While nobody can predict the future of telecommunications, what's clear is that **telecom companies have a unique opportunity to meet current challenges and become more resilient and sustainable in the long run.**

Today, data is a powerful tool for forging ahead. Data can help telecoms unlock insights that will help with every aspect of the business, from making better business decisions to real-time and proactive network optimization. But to do so, telecoms must be able to collect, analyze and collaborate on data effectively, efficiently and securely.

**Telecom customers are adopting the Snowflake AI Data Cloud for Telecom** to gain modern data capabilities. In doing so, they are easing barriers to data collaboration and monetization, speeding innovation, and making smarter, data-driven decisions. They are also leveraging AI for a range of business use cases, from personalizing customer experience to automating administrative tasks.

At Snowflake, we're leading the way in helping telecom companies securely and compliantly leverage their vast amounts of data and AI to drive better business results. This ebook explores the Snowflake AI Data Cloud for Telecom and Snowflake's AI capabilities as well as the innovative and exciting ways our telecom customers are unlocking the value of data to transform their business.

# SNOWFLAKE AI DATA CLOUD FOR TELECOM

## EASY. EFFICIENT. TRUSTED.

Telecom organizations are searching for new cost-effective and innovative ways to effectively compete and grow in a rapidly changing, highly complex and uncertain environment. More than ever, industry leaders recognize the necessity of data-driven decision-making, powered by a modern data and AI strategy. The AI Data Cloud for Telecom is at the center of their data strategy, allowing them to unlock the value of their sensitive data and collaborate across the business in a secure, governed and scalable way.

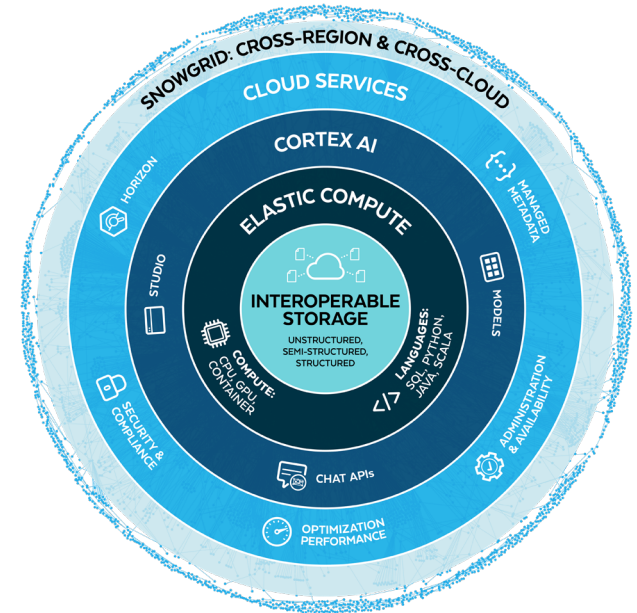
The **AI Data Cloud** is a single, fully managed platform that provides the collaborative, app and AI and generative AI (gen AI) tools and interoperability organizations need to move with agility and scalability while delivering the best experiences for customers and optimal results for the business. Snowflake's powerful core **platform capabilities** provide telecoms with a wide range of benefits.

## AI DATA CLOUD FOR TELECOM

- An easy-to-use, fully managed global platform
- Transparent, consumption-based pricing (no hidden costs)
- Business-critical workloads and unified data governance
- Optimized performance at scale
- Easy and secure AI and gen AI
- Efficient and secure data collaboration

## IT JUST WORKS.

The AI Data Cloud for Telecom is purpose-built to maximize telecom business value and revenue and drive efficiencies across the telecom ecosystem. As an easy-to-use, global platform, the AI Data Cloud securely connects data of any type and scale across the telecom ecosystem and powers secure AI and gen AI solutions, applications and monetization.





## AI DATA CLOUD DELIVERS BUSINESS VALUE

From personalized experiences to network optimization, the AI Data Cloud for Telecom delivers a multitude of benefits for telecoms. Below are some of the key use cases.



### Customer experience

Personalize the customer experience through advanced subscriber insights, product upsell/cross sell, dynamic service policy, and near real-time service optimization.



### Agile business operations

Improve operational speed, efficiency and effectiveness by breaking down and converging data silos, enabling data collaboration and access to new, rich data sources



### Modernize network operations

Power AI-driven service operations and network infrastructure, intelligent and predictive lifecycle management, and rich self-service network and operations analytics.



### Data powered edge services

Enable secure and empowered intelligent, multivendor edge services, while powering best-in-breed data and app ecosystem solutions and proactively optimize edge service delivery.



### Energy management & sustainability

Deliver tools and capabilities to help Telecom Service Providers reduce energy cost and footprint, while delivering platform capabilities for reporting, auditing and compliance.

## SNOWFLAKE MARKETPLACE: A GLOBAL MARKETPLACE FOR TELECOM



snowflake

**MARKETPLACE**

*Monetize and access data, and discover  
AI products and apps*

[Snowflake Marketplace](#) connects companies to Snowflake customers in search of your valuable data and over 580 providers, offering more than 2,500 live, ready-to-use data, apps and [AI products](#) (as of April 30, 2024).

Datasets available on Marketplace include:

- Neustar | Telco Customer Lifetime Value Score
- Consumer Intelligence Group | Canadian Telecom Home & Wireless Provider
- Cybersyn | Weather & Environmental Essentials
- S & P Global Market Intelligence | Economic Data
- Seismic | Leading Sales Enablement Platform

Visit [Snowflake Marketplace](#) for more details.

# SNOWFLAKE CORTEX AI

Built for the enterprise, **Cortex AI** allows companies to build AI, gen AI and LLM applications easily and securely, enabling them to chat with their data to deliver data-driven insights, business-critical solutions and innovations faster.

Cortex powers business intelligence for key use cases, including:

- Document chatbots
- Analytics assistants
- Batch text processing and more

## CORTEX AI CAPABILITIES

### Easy

Skip the infrastructure management with serverless AI to analyze unstructured data, build chatbots and other AI apps.

### Efficient

Run top-tier LLMs, state-of-the-art hybrid search and other services next to your secure, governed data.

### Trusted

Protect the value of your data and models with industry-leading security and unified governance trusted by thousands of organizations.

## CORTEX AI OVERVIEW



### Analytics in seconds

Use AI and LLMs in everyday analytics **within seconds**. No AI expertise or integrations needed.



### Deliver AI solutions in minutes

Build and deploy AI and LLM apps in as little **as minutes**. Deliver quick apps in minutes or go fully custom in days.



### Robust security and governance features

Robust foundation to **safeguard your data, models and IP** from unintended use with role-based access definitions on data, models and apps in Snowflake.

## BUILT ON SNOWFLAKE CORTEX AI

Fully managed AI experiences are available inside **Snowsight** including:



### Snowflake Copilot

Improve productivity with a breakthrough AI-powered assistant that refines queries or questions of the data through conversation.



### Document AI

Extract data points from multiple PDFs and other documents using Arctic-TILT, a multimodal LLM developed by Snowflake.



### Universal Search

In one search, find data and apps fast across both your Snowflake account and Snowflake Marketplace.



To learn more about gen AI in the industry, download our **The Future of Telecoms: How Gen AI is Changing the Game** ebook.



# KEY USE CASES FOR TELECOMMUNICATIONS



# 1. POWER PERSONALIZED CUSTOMER EXPERIENCES

## THE CHALLENGE

Today's competitive telecom marketplace requires service providers to provide customers a unique, responsive experience. In 2024, consumers have **many more options than in previous years** for broadband connectivity and increasingly see cloud providers as viable alternatives to communication services providers for multiple services, according to a recent Deloitte report. To meet and hopefully exceed customer expectations, telecom companies need to personalize services throughout the customer journey — from reach to retention. A recent McKinsey **report** found that **“76% of consumers are more likely to consider purchasing from brands that personalize”** and that personalization drives performance and better customer outcomes. Personalizing customer interactions involves achieving customer 360 and using advanced analytics to optimize the customer experience. But this is difficult when data is siloed across the organization and stuck in outdated data systems.

## SNOWFLAKE'S SOLUTION

With the Telecom Data Cloud, service providers can seamlessly access and share data to improve the customer experience through personalization. The AI Data Cloud helps organizations remove data silos and centralize data in one location, enabling advanced analytics and customer 360. With easy data sharing that doesn't require moving or copying data, companies can share customer data securely across the organization so that all departments can access the same customer information to provide a consistent, customized experience. Companies can also use the **Snowflake Marketplace** to access third-party data, achieving broader and deeper insights on both current and potential customers.

## CUSTOMER SPOTLIGHT

Cox Communications



**HEADQUARTERS** Atlanta, Georgia  
**INDUSTRY** Broadband service provider

Cox Communications is the largest private broadband provider in the United States, serving nearly 7 million residential and business customers. Snowflake's AI Data Cloud platform helps Cox streamline its data ecosystem and power advanced analytics and insights with Snowflake's **Snowpark**. Now, Cox is able to obtain more data and process it faster to improve customer experiences and product engagement. Plus, Snowflake's flexible and scalable platform allows Cox to more easily disseminate information and insights across the business to multiple organizations that are increasingly hungry for data to inform operational decisions.



## 2. MAXIMIZE OPERATIONAL EFFICIENCY

### THE CHALLENGE

Telecom service providers hold an enormous amount of data, but much of it is scattered and siloed across the enterprise. For example, operational data is captured from multiple legacy technologies, like 3G or 4G, and used across business platforms, including operational and business support systems. When these systems are not connected, it creates a data silo that makes fully utilizing data difficult. **Compounding this problem is the tendency of many independent software vendors within the value chain to maintain their own data in walled garden environments, where it cannot be accessed or shared.** This makes it problematic to consolidate, govern, share and collaborate on data across the organization and with partners for better, faster business decision-making and optimization.

Adding to the difficulties facing telecoms is rising energy costs that directly impact their bottom line. According to GSMA Intelligence, energy consumption accounted for 15%–40% of service providers' operating expenditures in 2021, and that figure is only expected to rise. For mobile network operators, the majority of their energy consumption (60%–75%) is from radio access networks.

### SNOWFLAKE'S SOLUTION

The AI Data Cloud for Telecom provides visibility into business operations, from network maintenance and system processing to marketing and customer service. With unified governance and real-time data insights, telecom service providers can optimize the quality of service, analyze network traffic, and plan infrastructure investments while decreasing operational inefficiencies and increasing responsiveness to changing technology and customer needs. And, by reducing data silos and mobilizing enterprise data, service providers can perform fraud analytics for predictive maintenance using machine learning models. With Snowflake, service providers can improve service and maximize business operations.





# 3. MODERNIZE TELECOM OPERATIONS

## THE CHALLENGE

Faced with increased competition, telecom service providers must reduce operational complexity and costs to optimize across their business and better serve customers. With huge advances in network technology requiring widespread digital transformation, and the reality that most telecom companies have both legacy and multi-cloud environments, it's plain to see that the complexities facing telecom companies have multiplied quickly. **Unlocking the potential of data to gain insights into ways to advance the business—including more effective data collaboration with partners and equipment maintenance and optimization—is difficult when dealing with data silos and outdated data systems.**

## SNOWFLAKE'S SOLUTION

The AI Data Cloud for Telecom accelerates digital transformation with superior data integration and collaboration, providing visibility and insights into operations throughout the business, from network maintenance and financial management to marketing and customer service. With unified governance and real-time data insights, service providers can decrease operational inefficiencies, enabling them to be more responsive and adaptable to changing technology, market conditions, and customer needs. Most importantly, no matter the cloud, region, or workload, telecoms are able to consistently enforce policies and protections that follow the data, keeping it safe and secure. With Snowflake, telecom service providers can accelerate their transformation while reducing operational cost.



## 4. MONETIZE DATA TO DRIVE REVENUE

### THE CHALLENGE

The data monetization market in telecom is expected to **grow exponentially** over the next few years, from \$4.47 billion in 2023 to \$12.08 billion in 2028, according to a report by the Business Research Company. Telecom companies can monetize various types of data, including user behavior and usage, network performance, security and fraud prevention data. Companies that can capitalize on this opportunity will be able to mitigate the shrinking profit margins and slow revenue growth mentioned earlier. But data often resides in hard-to-reach silos across the business and is difficult to share securely across and outside of the organization. And in today's privacy-focused environment, telecoms must ensure they are leveraging and sharing their enterprise data in a manner that is compliant with privacy regulations and customer expectations.

### SNOWFLAKE'S SOLUTION

Snowflake's AI Data Cloud for Telecom unites data in one secure, governed location so it can be securely accessed by departments and partners across the enterprise. Features like **Secure Data Sharing** and **Snowflake Data Clean Rooms** allow for multiple parties to securely collaborate on sensitive or regulated data, surfacing valuable insights while preserving the privacy of the data. And instead of relying on performance-constrained and hard-to-maintain APIs to share data outside of the organization, companies can use the Snowflake Marketplace to easily publish a variety of data sets — as well as apps — that then become immediately available for use or purchase by other Snowflake users.



# LEARN MORE ABOUT THE AI DATA CLOUD FOR TELECOM

With the Snowflake AI Data Cloud for Telecom, leading telecom companies are gaining the robust data-driven insights, analytical power, collaborative tools and AI solutions they need to turn the challenges of a complex market and tech ecosystem into a true business advantage. With Snowflake, telecoms can focus on new business opportunities, driving sustainability efforts and delighting customers while maintaining strict levels of data security, governance and compliance.

To learn how your telecom organization can unlock the power of data, visit [Snowflake AI Data Cloud for Telecom](#).



**SEE MORE SNOWFLAKE TELECOM  
CUSTOMER SUCCESS STORIES.**



# ABOUT SNOWFLAKE

Snowflake makes enterprise AI easy, efficient and trusted. Thousands of companies around the globe, including hundreds of the world's largest, use Snowflake's AI Data Cloud to share data, build applications and power their business with AI. The era of enterprise AI is here.

Learn more at [snowflake.com](https://snowflake.com) (NYSE: SNOW)



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