

# CLOUDERA

EBOOK

## A New Data Strategy for Telecoms

How ESG is Reshaping  
Data Strategy and Creating  
New Opportunities for the  
Telecommunications Industry



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# Introduction

The Telecommunications (Telecoms) sector is an industry founded on connection. And in recent years, the desire to increase connectivity at a social and enterprise level has sky-rocketed. Just take a quick look at these stats:

≈25%

of the worldwide population will live within reach of a 5G network by 2025

400M

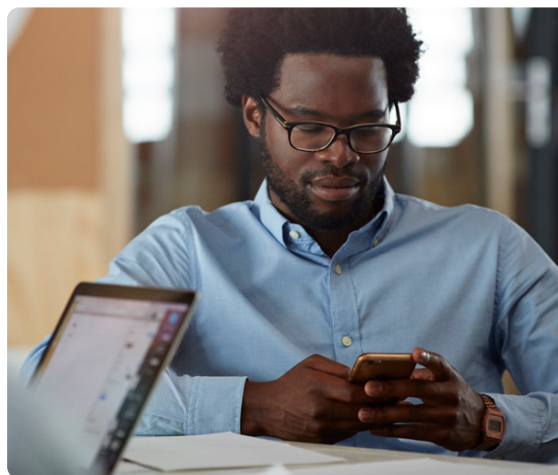
new mobile subscribers by 2025

23.3B

projected connected devices in the IoT by 2025<sup>1</sup>

Where there is growth, there is opportunity. Telecoms organizations are working hard to become the connective tissue of a new kind of business ecosystem, but doing so requires investment. Along with the push for modernization and increased desire for better, faster connectivity, investors are increasingly influenced by environmental, social, and governance (ESG) reports.

As Telecoms organizations position themselves for the future, ESG will become a core corporate strategy.



7.5B

smartphone connections by 2025<sup>2</sup>

<sup>2</sup> GSMA. The Mobile Economy 2022. <https://www.gsma.com/mobileeconomy/wp-content/uploads/2022/02/280222-The-Mobile-Economy-2022.pdf>

<sup>1</sup> GSMA. The Mobile Economy 2022. <https://www.gsma.com/mobileeconomy/wp-content/uploads/2022/02/280222-The-Mobile-Economy-2022.pdf>

# The Telecommunications Industry Now

## Shift

Telecommunications is in the midst of a shift to energy-efficient networks. This shift is primarily due to increased network densification driven by growing customer needs.<sup>3</sup> Densification is a way to add more capacity to wireless networks by adding more cell sites to keep up with demand.

Telecoms also seek to meet CO2 reductions and net-zero targets. Organizations are tackling changes by reducing direct emissions from owned sources such as company facilities or vehicles and reducing indirect emissions from purchased electricity, heating, and cooling. Though technology encourages powerful ways to connect, it also produces waste. So, reducing e-waste, such as old cell phones, is also tied to the overall shift toward better environmental stewardship.<sup>4</sup>

## 5G

The industry is seeing increased use of IoT devices and migration to 5G networks as a revenue driver. Though adoption rates in different markets vary, the general rates are trending toward growth. The momentum can be greatly contributed to post-pandemic economic recovery but is also influenced by rising 5G handset sales, network coverage expansions and marketing. Initially, 5G deployment did not have a separate infrastructure, also known as 5G non-standalone (NSA). However, the rise of 5G standalone (SA) built on an independent infrastructure is yielding benefits at the enterprise level. 5G SA benefits include massive machine-type communications that support an extremely high connection density of online devices, simplified network architecture and network cost optimization.<sup>5</sup>

## AI & ML

Artificial intelligence (AI) and machine learning (ML) are making headway in Telecoms as critical innovators for improving energy efficiency, security, and data analysis for customer insights. With the industry facing challenges in security, efficiency and adapting to a changing regulatory landscape, there is further opportunity for technologies like AI and ML to offer additional benefits.

AI even paves the way for environmental improvements. Two-thirds of mobile operators expect energy savings of over 10% from AI over the next two years.<sup>6</sup>

<sup>3</sup> GSMA. The Mobile Economy 2022. <https://www.gsma.com/mobileeconomy/wp-content/uploads/2022/02/280222-The-Mobile-Economy-2022.pdf>

<sup>4</sup> Analysys Mason. Which ESG strategies are telecoms operators pursuing? <https://www.analysismason.com/research/content/articles/esg-telecoms-operators-rma08/>

<sup>5</sup> GSMA. The Mobile Economy 2022. <https://www.gsma.com/mobileeconomy/wp-content/uploads/2022/02/280222-The-Mobile-Economy-2022.pdf>

<sup>6</sup> EY. How can risk foresight lead to fresh insight? [https://www.ey.com/en\\_gl/telecommunications/how-can-risk-foresight-lead-to-fresh-insight](https://www.ey.com/en_gl/telecommunications/how-can-risk-foresight-lead-to-fresh-insight)

# Industry Challenges and Opportunities

## Challenges

### 01 Cybersecurity and Data Governance

With the push for modernization, continuous influx of data, and spread of 5G, cybersecurity and data governance are top-of-mind for the Telecoms industry. Regarding 5G specifically, the key security issue is the difficulty of managing increased bandwidth and speed in combination with the growing quantity of new devices and connections.

### 02 Operational Efficiency

Operations in Telecoms organizations are infamously complex and challenging. There is a significant need to create efficient and effective processes to help keep operations costs controlled without adversely impacting customer service.

### 03 ESG

While the Telecoms industry's energy usage is less intensive than others, achieving improved energy efficiency is still imperative. Notably, natural disasters as products of climate change require

organizations to be prepared for the potentially harmful impact on infrastructure and customers. From a social standpoint, Telecoms directly influence digital inclusion by creating affordable digital access and communications for everyone, regardless of location. Similar to other industries, regulatory requirements increasingly focus on consumer protection, the digital divide, and data center energy efficiency.

**47%**

of operators surveyed report that they have never been more concerned about the ability to manage cyber threats<sup>7</sup>

<sup>7</sup> EY. How can risk foresight lead to fresh insight? [https://www.ey.com/en\\_gl/telecommunications/how-can-risk-foresight-lead-to-fresh-insight](https://www.ey.com/en_gl/telecommunications/how-can-risk-foresight-lead-to-fresh-insight)

**52%**

of operators expect service operations automation to drive operational expenditure savings

**42%**

of operators expect energy efficiency technologies to drive operational expenditure savings<sup>8</sup>

<sup>8</sup> GSMA. The Mobile Economy 2022. <https://www.gsma.com/mobileeconomy/wp-content/uploads/2022/02/280222-The-Mobile-Economy-2022.pdf>

## Opportunities

In the digital era, connection powers everything. Telecoms have both the power and responsibility to provide connections and influence positive change. The benefits of such a position are twofold. Within the industry is the potential for valuable ESG measures to produce economic benefits. And as a central driver of connection, the Telecoms industry is positioned to help advance ESG initiatives across sectors.

The Telecoms industry has seen an increase in the issuance of green bonds, meaning operators must commit to sustainability targets in order to access proceeds. Investors are showing an understanding of the role that ESG standards has on business value overall.

In general, from an investment point of view, ESG reporting is an attractive asset. It indicates long-term, resilient thinking that is crucial in a changing and unpredictable landscape.<sup>9</sup>

Telecoms that take the steps needed to address and report on ESG have a long-term competitive advantage and are therefore likely to win investor attention. At the same time, addressing ESG creates new business and revenue opportunities. Take healthcare, for example, where time-critical health applications, personalized health tracking, and well-being and mental wellness resources are ESG initiatives accomplished through mobile connectivity.



Enabling companies in other industries to better address ESG goals is an essential byproduct of powering connections.

### Telecoms Opportunities:

- Contribute positively to ESG measures and produce economic benefits
- Become more attractive to investors because of ESG initiatives
- Help other industries advance ESG progress and develop new sources of revenue

<sup>9</sup> Analysys Mason. Which ESG strategies are telecoms operators pursuing? <https://www.analysismason.com/research/content/articles/esg-telecoms-operators-rma08/>



# Technology and ESG Initiatives

The rise of ESG strategy adoption is parallel to the push for modernization. Cloud and hybrid solutions are uniquely positioned to help Telecoms respond to ESG efforts, densification, and security demands.

In regards to ESG, these solutions help:

- Increase transparency
- Advance reporting capacity
- Produce better analytics and insights for customer experience
- Improve data management and governance
- Enhance energy efficiency

Cloud solutions are also good for business by providing:

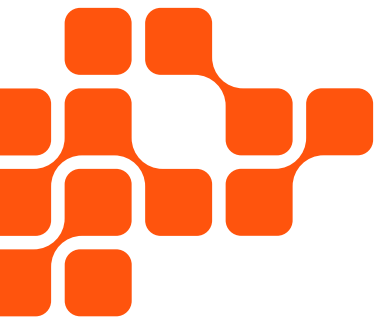
- Real-time actionable analytics
- Comprehensive security
- Faster time to value
- AI-powered data application and automation



“

We are entering an era where the value of a company won't just be measured in terms of economic or social performance, but also by its contribution to society.”

Stephane Richard  
CEO of Orange



# How Cloudera and AMD Power ESG Outcomes

**Technology has many essential roles in business; chief among them is creating operational efficiency. Beyond benefiting important business outcomes, these days pushing for efficiency also includes reducing emissions or energy use and improving customer experiences.**

Cloudera and AMD believe there is a powerful role for technology in the world of connectivity, specifically regarding supporting ESG initiatives in Telecoms. Telecoms companies that fall behind in meeting industry challenges will be at odds with customers, investors, and regulators requiring ESG reports to inform decisions.

The Telecoms industry faces some unique challenges when it comes to ESG. S&P Global outlines key material environmental, and social risks as being:

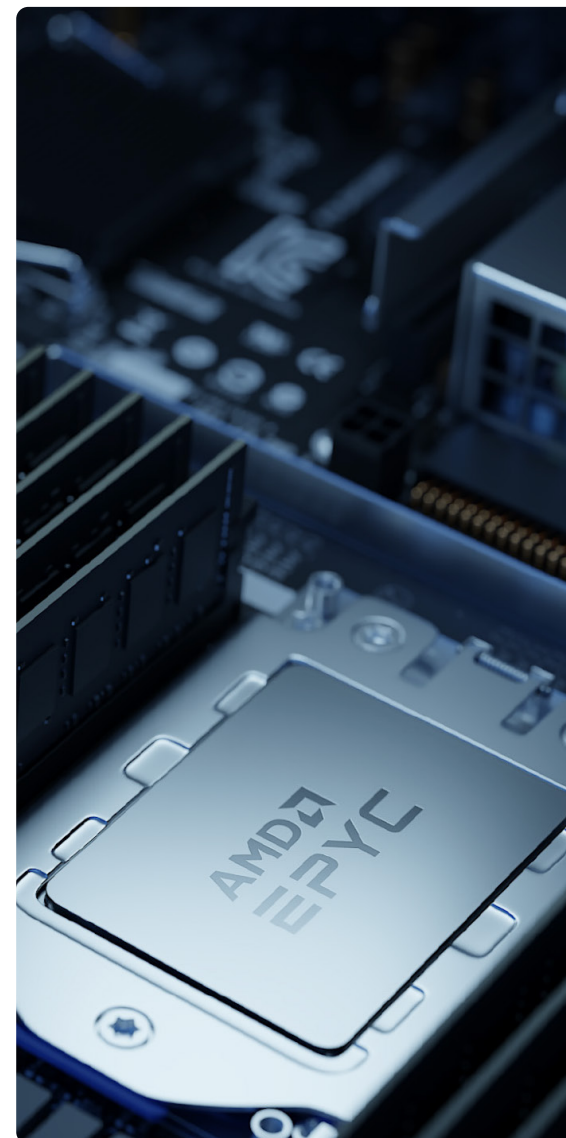
- Transition to low-carbon energy sources
- Waste management and product end-of-life
- Extreme weather event impacts above-ground equipment
- Cybersecurity and compliance management

Further, organizations enacting ESG measures are confronted with problems regarding reporting. In our recent IT and Data Leaders ESG Survey, the top three challenges to ESG reporting were:

- Not enough time and resources
- Lack of documented strategy
- Data is siloed or fragmented

With the growth of mobile subscribers and first-time Internet users, organizations need a way to take advantage of cloud benefits while balancing energy-efficient workloads. Cloudera delivers all the data services you need in one secure platform, lowering TCO and saving IT teams from technical debt accrued from disparate, redundant solutions. AMD requires less servers than the competition to do the same amount of work, all without sacrificing performance.

Cloudera's comprehensive data services help organizations achieve better transparency, reporting, and real-time insights—improving customer service, innovation initiatives, and the ability to keep investors and stakeholders informed about ESG progress.





Cloudera and AMD represent the right data and AI platform paired with the right computing platform. Here's how Cloudera and AMD help businesses respond to ESG challenges and improve outcomes:

### Impressive Performance

- Cloudera's data and AI platform paired with hybrid data cloud allow data practitioners to optimize their cloud journey by moving vast amounts of data, no matter where it resides, for experimentation and insights

### Robust Security

- AMD Infinity Guard helps protect data from internal and external threats at the silicon level<sup>10</sup>
- Cloudera Shared Data Experience (SDX) brings an always-on security and governance layer built into Cloudera so that data access and usage across deployments are continuously maintained without compromise

<sup>10</sup> GD-183. AMD Infinity Guard features vary by EPYC™ Processor generations. Infinity Guard security features must be enabled by server OEMs and/or Cloud Service Providers to operate. Check with your OEM or provider to confirm support of these features. Learn more about Infinity Guard at <https://www.amd.com/en/technologies/infinity-guard>

### AI / ML

- Use AI and ML on Cloudera to help manage data and decide what to do with it as early as possible, improving data governance, processing, and engineering
- Enable real-time applications in immersive 5G environments
- Improve operational efficiency
- Unlock insights from data that can be used for community good

AMD Infinity Guard features vary by EPYC™ Processor generations. Infinity Guard security features must be enabled by server OEMs and/or Cloud Service Providers to operate. Check with your OEM or provider to confirm support of these features. Learn more about Infinity Guard at <https://www.amd.com/en/technologies/infinity-guard>.

# 52%

of business decision makers agree that profit and ESG are no longer mutually exclusive pursuits

# 95%

of business decision makers believe that AI can be employed to some or great extent to create more sustainable business practices<sup>11</sup>

<sup>11</sup> Cloudera. Limitless: The Positive Power of AI. <https://www.cloudera.com/campaign/limitless-the-positive-power-of-ai.html>

# The New Data Strategy for Telecommunications

**How any organization in any industry chooses to respond to the exponential growth of data will be vital for future success. We'd argue that ESG measures also hold important, if not equal, influence over future success.**

With more and more people digitally engaged and 5G networks growing in density, ESG is essential for sustainability and resiliency. For Telecoms, it will require a new kind of data strategy—one that takes the growth of data and ESG into account.

The collaboration between Cloudera and AMD presents a way for Telecoms organizations to reorient based on ESG and confront industry challenges while leveraging opportunities simultaneously. With Cloudera and AMD, there's a world of possibility waiting and ready to help Telecoms take ESG to the next level.



# About Cloudera

Cloudera is the only true hybrid platform for data, analytics, and AI. With 100x more data under management than other cloud-only vendors, Cloudera empowers global enterprises to transform data of all types, on any public or private cloud, into valuable, trusted insights. Our open data lakehouse delivers scalable and secure data management with portable cloud-native analytics, enabling customers to bring GenAI models to their data while maintaining privacy and ensuring responsible, reliable AI deployments. The world's largest brands in financial services, insurance, media, manufacturing, and government rely on Cloudera to be able to use their data to solve the impossible—today and in the future.

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Cloudera, Inc. | 5470 Great America Pkwy, Santa Clara, CA 95054 USA | [cloudera.com](https://cloudera.com)

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