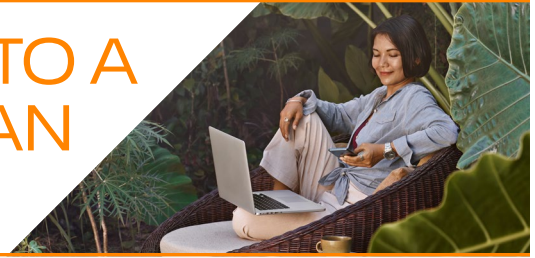# TRANSFORMING DATA INTO A STRATEGIC ASSET WITH AN ENHANCED IT PLATFORM

Saved up to IDR 10 billion in overall annual cost spend and doubled the speed of solution deployment with the use of the Cloudera-powered Data Science Workbench

Reduced infrastructure expenses by 56% and cut solution delivery times by 60%

Built more agility and scalability into the business with a more efficient IT platform that supports faster innovation

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Solution
Cloudera Data Platform

Data Architecture
Data Lakehouse

Industry
Telecommunications

Country
Indonesia

Customer Website
https://www.telkomsel.com

PT Telekomunikasi Selular (Telkomsel) is currently the largest cellular operator in Indonesia with more than 233,000 wireless base stations across the country, from densely populated cities like Jakarta to remote outer islands. With its vision to elevate IT into a strategic asset, Telkomsel is spearheading various device, network, and application (DNA) development efforts to help the country become a digital, broadband-based society through mobile technology.

Exponential data growth in Telkomsel's system

The digital era and the COVID-19 pandemic have rapidly increased Indonesia's demand for connectivity and digital services. Indonesia's mobile subscriptions are projected to grow to IDR 45 trillion (USD 5.3 billion) by 2025. Fixed broadband subscriptions will also grow as more households and businesses adopt these services. To be more competitive, Telkomsel needed to streamline its operations and exceed customer expectations.

With a growing subscriber base of more than 170 million, the company's existing IT platform had to cope with the exponential growth of data from over 200 feeds, which can generate 50TB of data per day. In 2021, Telkomsel recorded 20% YoY data growth, requiring greater capacity to store and process the enormous volume of data and lower its total cost of ownership.

Telkomsel needed a transformational approach to meet the demands of this drastic data growth, and selected Cloudera for its modern data architecture. With Cloudera, the telco could extract, transfer and load data more efficiently without slowing down its operations and customer service.

Deploying a leaner architecture to leverage data effectively

To upgrade its current IT platform, Telkomsel sought an open-source solution with enterprise support and full data integration functionality, scalability and end-to-end system interoperability. Telkomsel worked with Cloudera and IT partner Wipro to build a data architecture that met these requirements. Leveraging their expertise and solutions, Telkomsel managed to reduce overall annual spend by IDR 10 billion ($665,000) and deployed the architecture two times faster with lower vendor dependencies.

> "At Telkomsel, we continue to position ourselves as a market-leading telco by consistently moving forward in our commitment to empower Indonesia with better telecommunication and data offerings. We aim to become even more agile with hybrid cloud and utilize AI that can help us create more impactful digital advertising. Cloudera has been one of our partners in transforming our business to offer services beyond telco."

Bharat Alva, Chief Information Officer, Telkomsel

About Cloudera
At Cloudera, we believe that data can make what is impossible today, possible tomorrow. We empower people to transform complex data into clear and actionable insights. Cloudera delivers an enterprise data cloud for any data, anywhere, from the Edge to AI. Powered by the relentless innovation of the open source community, Cloudera advances digital transformation for the world's largest enterprises.

Learn more at cloudera.com

With its modern data architecture, the Cloudera data lake stores all datasets derived from Telkomsel's first-party sources. Apache NiFi serves as the pipeline that moves Telkomsel's data within the system. Implemented as a unified data fabric, the system builds a single source of truth by ingesting data from first-, second- and third-party sources as well as transactional data from applications like video marketplace MaxStream and Dunia Games.

Using the Cloudera Data Science Workbench (CDSW), Telkomsel leverages the data lake for their Customer Data Platform application. CDSW utilizes rule-based segmentation derived from clustering and mathematical equations to extract the relevant information from the company's customer database.

Reducing costs and empowering employees for data-driven innovation
The Cloudera-powered architecture enhanced Telkomsel's infrastructure operations by creating a more efficient data pipeline with fewer resource requirements. With a newly established internal Centre of Excellence designed to leverage Cloudera solutions, the platform helped Telkomsel reduce infrastructure expenses by up to 56% and solution delivery costs by 60%.

As a business, Telkomsel has become more responsive by pivoting to a fully open-source framework. With easy access to data and an open-source framework, Telkomsel avoids the operational limitations of being locked in with vendors. The company can drive innovation projects at its own pace, empowering its employees to embrace data and harness the tools and platforms available to them. The telco's teams of data scientists, data engineers, machine learning engineers, business translators and customer value management (CVM) experts use the new IT platform to drive use cases, data science use case development, compliance reporting and cybersecurity. The company's data engineers can now extract data and work with developers to create new apps. App development time has significantly decreased as well, allowing new offerings to be pushed out faster to customers.

Since partnering with Cloudera, Telkomsel is better prepared to meet the needs of Indonesia's vibrant telco market. The company plans to leverage new solutions, such as Cloudera Data Platform, to continue providing market-leading offers and services to its customers—both existing and new.

CLOUDERA