

BI-WEEKLY

# NEWSLETTER

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# RSI

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*Global News, financial analyses, data center related laws & regulations and further latest updates about technologies transforming the data center industry.*

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## KDDI announced the financial results for the third quarter of the fiscal year ending March 2024

KDDI has released its financial results for the third quarter of the fiscal year ending March 2024. During this period, consolidated operating revenue rose by 2.0% year on year to ¥4,265.5 billion. Consolidated operating income also increased by 0.4% to ¥847.9 billion, primarily driven by profit growth in key areas despite a decrease in roaming revenue. Profit attributable to owners of the parent saw a year-on-year increase of 2.2% to ¥545.6 billion. These results indicate that KDDI has achieved 78.5% of its consolidated operating income target for the full fiscal year, demonstrating substantial progress towards its goals.

Source : [KDDI](#), February 2nd, 2024

## Banks told to anticipate risks from using AI and machine learning

On April 17, 2024, Reuters reported that banks are being urged to be proactive in managing the risks associated with the use of artificial intelligence (AI) and machine learning (ML) in their operations. The Bank of Spain's Governor, Pablo Hernandez de Cos, who also chairs the Basel Committee on Banking Supervision, highlighted the potential prudential and financial stability challenges posed by AI in banking. He warned that unchecked AI models could exacerbate future banking crises and emphasized the need for cross-border and cross-sectoral collaboration among central banks and regulators to establish a regulatory baseline for overseeing AI and ML. He stressed the importance of banks incorporating risk management and governance arrangements for AI/ML into their daily operations. The Basel Committee is expected to soon release a comprehensive report on the implications of finance digitalisation for regulation and supervision.

Source : [Reuters](#), April 17th, 2024

## Oracle has announced plans to invest approximately 1.2 trillion yen in the Japanese market over the next 10 years.

Oracle has unveiled a plan to invest over 80 billion USD (around 1.2 trillion yen) in Japan over the next decade, aimed at expanding its cloud service, 'Oracle Cloud Infrastructure' (OCI), to meet the surging demand for cloud and AI infrastructure. The plan includes bolstering its customer support and domestic operation teams for 'Oracle Alloy' and 'OCI Dedicated Region' to cater to the cloud needs of the government and large corporations. Additionally, Oracle intends to significantly augment its Japan-based operations and support engineering teams to better assist Japanese customers and partners. A strategic partnership with

Fujitsu has also been announced to provide sovereign cloud services in the Japanese market, with Fujitsu managing the service for Japanese customers using 'Oracle Alloy' housed in domestic data centers. Oracle's CEO, Safra Catz, emphasized that this investment comes at a pivotal time for Japan's economy, with an increasing demand for top-tier technology. She also expressed that this investment is a testament to Oracle's trust in Japan, making it a significant opportunity for the Japanese technology industry.

Source : [NHK](#), April 18th, 2024

## Morgan Stanley flips from EBay's biggest bear to top bull on AI

Morgan Stanley has significantly upgraded its outlook on eBay Inc., shifting from a skeptical view to a highly optimistic one, largely due to eBay's strategic implementation of artificial intelligence. The financial firm anticipates eBay's stock to rise by an additional 25% within a year, with analyst Nathan Feather upgrading the rating to overweight and increasing the price target to \$62. This bullish stance is supported by eBay's recent 13% stock increase and Morgan Stanley's confidence in eBay's growth potential through AI-driven initiatives.

Feather, who took over as the lead analyst for eBay in February with an initial underweight rating, now suggests a strategic trade with Etsy Inc., considering the closing valuation gap between the two companies. Following this upgrade, eBay's stock saw a 3.5% increase in premarket trading, while Etsy experienced a 3.7% decline after being downgraded by Morgan Stanley

Source : [Bloomberg](#), April 18th, 2024

## Energy Transmission Through the Soil to Powerup Sensors

Researchers at Tennessee Technological University have developed an innovative approach to powering agricultural Internet of Things (IoT) sensors. These sensors are often scattered across fields and require energy to track and report various data, such as GPS coordinates, moisture levels, temperatures, soil acidity, nutrient concentrations, and pest invasions. The new system, called Through-The-Soil (TTS), directly transmits electrical power through the soil to these remote sensors. The TTS system offers a promising solution for powering IoT sensors in agriculture, directly transmitting electrical energy through the soil to enable efficient and sustainable monitoring of crops and environmental conditions.

Currently, the Tennessee Technological University has filled for a worldwide patent; and with the collaboration with Terra Watts, a startup company, the researchers are trying to make the system commercially available. In addition, the researchers are trying to improve on the system by lowering the contact resistance and running the currents at a higher frequency hoping to demonstrate a power transfer up to 150-200 meters in radius by the end of summer 2024.

Source : [IEEE Spectrum](#), May 1st, 2024

## The Efforts in Bioenergy with Carbon Capture and storage

One of the processes to capture carbon and alleviate the goals set for the net-zero by the governments and organizations, is from biomass which includes organic matter such as wood, agriculture residues, and algae. These biomasses absorb the CO<sub>2</sub> from air and is captured during the industrial processes before it gets released back to the air which in turn can be stored underground or be applied to land as a biochar. Currently around 2 Mt (Million tons) of CO<sub>2</sub> is captured which lags far behind the goals set for carbon capture by 2030 and 2050, in addition to the shortage of technology to capture and store it.

The technologies and methods which are currently in use, is the carbon capture from bioethanol which has been started from 2000s and is well established currently. Another method or technology is the carbon capture from biomass combustion sites which has reached the commercial stage, for instance, one site was commissioned in Mikawa power station on October 2020. Additionally, on a industrial scale, Biomass co-firing is already commercially implemented in various industries such as pulp and paper mills, cement plants, and steel blast furnaces.

Source : [IEA](#), April 25th, 2024

## Fujitsu General has signed a memorandum of understanding with the U.S. Energy as a Service (EaaS) company Budderfly Inc.

Fujitsu General has entered into a strategic collaboration with U.S. Energy as a Service (EaaS) company Budderfly Inc. The goal is to accelerate the adoption of their high-efficiency air conditioning technology, "AIRSTAGE," in the North American market. Key points include expanding the provision of "AIRSTAGE" in the light commercial sector, leveraging Budderfly's energy facilities and control technologies, utilizing "AIRSTAGE Cloud" for easy installation and remote management, and aiming to reduce greenhouse gas emissions and power consumption. Fujitsu General's ambitious target is to deploy around 10,000 "AIRSTAGE" systems by the end of fiscal year 2028, with an estimated sales value of approximately 130 million dollars. This collaboration contributes to sustainable practices and energy efficiency.

Source : [Datacenters](#), April 16th, 2024

## DataBank Establishes \$725 Million Financing Facility to Support the Next Phase of Expansion

DataBank has secured a new \$725 million credit facility to support its ongoing and future data center construction projects. This funding will fuel expansion in existing markets like New York, Denver, Minneapolis, Salt Lake City, and Dallas.

The facility involves 14 leading digital infrastructure banks, with TD Securities serving as the Administrative Agent and Joint Lead Arranger. DataBank's commitment to sustainability is evident through its second green financing initiative, following a Green Bond in February 2024. Projects funded by the new credit facility must meet specific sustainability criteria, aligning with DataBank's goal of achieving net zero scope 1 and 2 emissions by 2030.

Kevin Ooley, DataBank's President and Chief Financial Officer, highlights the increasing demand for data center capacity driven by new and emerging AI applications, underscoring the importance of the new credit facility in meeting this demand efficiently.

Source : [DataBank](#), April 9th, 2024



## Staff Wellbeing Now the Top Driver for Diversity and Inclusion in Australia, Global Research from Workday Reveals

Workday's latest global study reveals that in Australian organizations, prioritizing staff well-being (46%) has surpassed attracting a diverse workforce (43%) as the top driver for Diversity, Equity, and Inclusion (DEI). The study surveyed 2,600 business leaders worldwide. It also indicates a growing emphasis on DEI in Australian businesses, with 74% stating its increasing importance. Nearly all Australian respondents (97%) have DEI initiatives, reporting positive outcomes such as increased belonging (72%), representation (71%), and profitability (51%). Jo-Anne Ruhl, managing director of Workday ANZ, emphasizes the shift in DEI as a priority among Australian businesses and suggests leveraging technology like AI for further advancements.

Source : [Workday Inc.](#), March 22nd, 2024



# “Immersion Cooling”

## A new cooling solution for data centers

It is an obvious fact that the performance of computers, including data center servers, is improving year by year. We are facing the problem that the heat generated by the increased processing power can't be handled by traditional cooling methods. A shift change from traditional air-cooling using fans is urgently needed, especially as GPU servers for AI applications have become a hot topic in recent years.



### SOLA : An Advanced Immersion Cooling Solution

SOLA is a solution jointly developed by RSI, Shinohara Electric, and Taisei Corporation, aiming to address new and evolving applications and needs for HPC, IoT, Edge Computing, Cloud. SOLA is ideal for high-density GPU servers. RSI and its partners developed the SOLA™ (Standard) and SOLA® mini solutions. It is more than 90% efficient than air-cooling in terms of space and cooling costs. Also a single immersion tank can operate with the equivalent power and heat removal of 10 conventional IT racks.



Servers and other IT equipment are submerged in a non-conducting dielectric fluid.

### Comparison between air cooling and immersion cooling

	Air Cooling	Immersion Cooling
IT Load	50kW	50kW
Space	5kW/rack x 10racks  Rack (0.7x1.2x2.2m)	50kW/Unit x 1unit  Unit (1.1x1.1x2.0m)
Energy	pPUE = 1.40 Cooling 20kW Servers 50kW 70kW	pPUE = 1.04 Cooling 2kW Servers 50kW 52kW

### CONTACT US For implementation

We will consult you in customizing the cooling method, capacity, immersion tank shape, and containment method to suit your device and system.



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