EMPYRION DC

BUILDING A DIGITAL INFRASTRUCTURE PLATFORM OF FUTURE-READY GREEN DATA CENTRES IN ASIA

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The Empyrion DC team

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Mark Fong, CEO

With the data centre industry rapidly evolving, Mark Fong, CEO, speaks to us about how Empyrion DC is leading the way in an environment of intensifying rack density, efficiency, and sustainability

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The data centre industry as a whole has been the subject of unparalleled growth over the course of the past few years.

This can be primarily attributed to the increased reliance on digital technologies, cloud computing, the Internet of Things (IoT), and the undeniable explosion of artificial intelligence (AI), which is expected to experience a compound annual growth rate (CAGR) of 36.8 percent over the next eight years.

At the same time, there has been a greater regulatory push towards data localisation by markets in the Asia Pacific region, including Malaysia and Indonesia.

Compounded with the exceedingly tight data centre supply in key digital hubs of Asia, including Japan, South

Korea, and Singapore, this is where Empyrion DC comes in.

Empyrion DC, a Singapore-headquartered data centre developer and operator, is a next generation Asia-focused digital infrastructure platform committed to sustainability.

"Empyrion DC aims to be the recognised green data centre partner supporting hyperscale, scale, enterprise, and network customers in Asia through innovation and customer-centricity," opens Mark Fong, CEO of Empyrion DC.

"We build where there is resilient demand from cloud and major IT enterprises and uphold a philosophy to 'Think Global, Act Local.' This helps us to focus on our mission to deliver centrally-located facilities that offer a rich and diverse ecosystem of connectivity and cloud providers in developed and emerging Asia Pacific markets."

Green walls at SG1 Dodid Data Centre

2023 AI STUDY BY MARKETSANDMARKETS:

- The market size value in 2023 stands at USD$150.2 billion and is expected to grow 36.8 percent by 2030.

- AI is revolutionising multiple industries, positioning itself as a key driver for emerging technologies such as big data, robotics, and IoT.

- The rise of generative AI tools such as ChatGPT and AI art generators highlights its mainstream prominence.

- With its continued trajectory, AI is set to persist as a powerful technological innovator, propelling advancements in the foreseeable future.

- The short-term roadmap (2023-2025) includes advancement in generative models for content creation and increasing transparency and interpretability through explainable AI methods in decision-making.

- The mid-term roadmap (2025-2028) includes more sophisticated generative AI models that boost quality and diversity, and advancements in federated optimisation algorithms and secure aggregation methods.

- The long-term roadmap (2028-2030) includes AI-generated content reaching human-level sophistication, thus redefining artificial and human creativity, and a wide deployment of federated learning to empower secure and scalable solutions across industries.

With over 23 years of experience in technology and the data centre industry, Fong has built leadership teams from the ground up and is intimately involved in capital raising, strategy and corporate development, investments, construction and operations, sales and marketing, and human talent development.

With vast experience in regional leadership positions with top technology companies, Fong is now leading Empyrion DC to capitalise on the increased regional demand for digital infrastructure, with a specific focus on investing in technology to deliver state-of-the-art green data centres that are also well-equipped to handle AI workloads of the future. ◼

EETARP GRAPHENE:

UNLEASHING DATA CENTER POTENTIAL

EETARP'S COMMITMENT TO DATA CENTER INNOVATION

At Eetarp, a proud member of Bender, we are at the forefront of innovation when it comes to Data Center solutions.

Imagine having in-depth, real-time data and information right at your fingertips, empowering you to make informed decisions and ensure optimal performance. AI Modules and recommendations based on actual conditions of the monitored systems will support you even more in decision making.

Our expertise lies in creating cutting-edge solutions that drive efficiency, optimize performance, and provide you with the tools you need to excel in the world of data management.

What truly sets us apart is our revolutionary open platform, Graphene. The core focus areas include Building Monitoring Systems (BMS), Electrical Power Monitoring Systems (EPMS), Data Centre Infrastructure Management (DCIM) and advanced Metering Solutions.

These are the building blocks of a well-functioning Data Center and with Graphene as your ally, you unlock unparalleled insights into every aspect of your Data Center's operation.

WHY US?

Why should you choose Eetarp? In an era where data is everything, we understand the importance of reliability, efficiency, and precision. We are here to provide you with all three. Join us in shaping the future of Data Center management. Together, we can revolutionize the way you handle data, optimize your resources, and ultimately drive success for your organization. With Eetarp and Graphene by your side, the possibilities are limitless.

OUR SOLUTION

- Building Monitoring Systems (BMS)
- Electrical Power Monitoring Systems (EPMS)
- Data Centre Infrastructure Management (DCIM)
- Advanced Metering Solutions

MICHAEL BREUER

Vice President Bender APAC

"Today, data's significance is undeniable, yet unmanaged data is transforming from an asset into a liability. At Eetarp, we ensure that this won't happen, empowering you with full access to opportunities through our creative team."

GREEN BY DESIGN, FUTURE-READY

Empyrion DC stands out from the crowded technology platform for myriad reasons, one of which is the "Green by Design" model that has been built into the DNA of the company since its inception.

"We pride ourselves on being Green by Design, where we adopt environmental, social, and governance (ESG) considerations and integrate them into everything we do. There is a key focus on efficiency, reduced power usage effectiveness (PUE), and water usage effectiveness (WUE) right from project inception," expands Fong.

"Due to AI, we are seeing rack densities increase from a standard four to six kilowatts (kW) per rack to 20 kW per rack. This necessitates a change in cooling technology to support higher-density workloads that need to be energy and water-efficient for future IT workloads."

Being sustainable is more critical than ever in today's climate. Empyrion DC has been investing into technologies such as the use of advanced cooling systems, high efficiency building integrated photovoltaic panels (BIPV), and exterior plant walls on its facade that reduce ambient temperature within its facility.

In an attempt to measure ESG effectiveness, each successive generation of the company's green data centres has also been working towards reducing carbon emissions over the market average and ensuring energy usage efficiency with a target PUE of 1.30 or less.

Empyrion DC also ensures that it attains local and globally recognised certifications accredited by industry bodies such as the International Standards Organisation and Uptime Institute as a benchmark against industry leading practices.

WHY EMPYRION DC?

"We are a portfolio company of Seraya Partners, an Asia infrastructure fund that invests in digital infrastructure and energy transition companies," notes Fong.

This ability to work with sister platforms in energy transition to achieve net zero targets allows a cross-synergy that offers opportunities other companies are unable to compete with.

Leveraging its superior local knowledge and partner networks, Empyrion DC acquires and develops projects in key locations, with a hyper-focus on high-growth Asian cities with

Engineers overlooking rooftop photovoltaic panels

KR1 Gangnam Data Centre

strong demand but limited land and power.

"It's all about being relevant and right sized for the markets that we enter into, with an eye on understanding our customers' needs and being able to offer flexible solutions to partner them in their digital transformation journey."

Specifically, Empyrion DC's bespoke solutions range from 100 kW to multiple megawatts (MW), including the engineering ability to design for high-density workloads and the local knowledge to optimally support each customer's scale-up across the region.

This is all alongside the company's on-demand technical resources to perform a variety of onsite 24/7 IT infrastructure-related tasks to ensure that customers' systems are continually up and running.

The strong implementation capabilities of Empyrion DC enables it to easily and comprehensively meet the current upswing in demand in data centres in the Asia Pacific region, with the strongest demand growing in metros that have high internet penetration and rapid adoption of technologies such as 5G.

> "EMPYRION DC AIMS TO BE THE RECOGNISED GREEN-FOCUSED DATA CENTRE PARTNER SUPPORTING HYPERSCALE, SCALE, ENTERPRISE, AND NETWORK CUSTOMERS IN ASIA THROUGH INNOVATION AND CUSTOMER-CENTRICITY"
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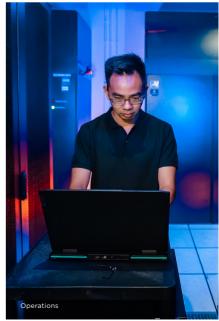> – MARK FONG, CEO, EMPYRION DC

WHAT THE FUTURE HOLDS

With the staggering growth of the data centre industry having no end in sight, ensuring the continuation of advancement and innovation is a necessity for businesses to thrive.

Empyrion DC has taken this into consideration and continues to emphasize the importance of hiring the best talent across Asia. ▶

Operations team conducting checks on cooling systems

Security

Operations

SG1 Dodid Data Centre

"We have grown to a team of more than 15 people in 12 months across three regional offices and are continuing to strengthen the team," says Fong.

"As a company, we are growing aggressively. We have established two assets in two extremely supply-tight Asian markets in less than two years. We are continuing to support customer growth throughout Asia Pacific and to expand into more developed and emerging markets with new data centre builds."

Empyrion DC currently has an existing Uptime Tier III-certified data centre, SG1 Dodid Data Centre, located in one of Asia Pacific's top data centre markets – Singapore. The company is currently constructing its second project, KR1 Gangnam Data Centre, in the business district of

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– MARK FONG, CEO, EMPYRION DC

Gangnam in Seoul, South Korea, set to be ready for service in 2025.

"We are excited about our upcoming 40 MW KR1 project, which will welcome customers in 2025. It is the first new data centre project in the Gangnam district in the last decade and we are seeing strong demand. Its central location makes it an ideal place for hyperscale, enterprises, and network companies," expands Fong.

This nine-story, carrier-neutral data centre facility will install building integrated photovoltaic panels (BIPV) and will leverage in-house expertise in energy management to reduce its carbon footprint and attain world-class energy efficiency standards.

Empyrion DC's SG1 campus has already received the BCA-IMDA Green Mark (Platinum) Award for new data centres in recognition of its green efforts, and KR1 is being built with the same sustainability at the forefront to reduce its carbon footprint.

Looking ahead, Empyrion DC

intends to actively explore a strong pipeline of projects and plans to develop or acquire more data centre facilities over the next three to five years to strengthen its position as a future-looking customer-relevant APAC data centre platform.

With global management expertise spanning decades of experience in building, operating, and delivering to hyperscale and enterprise requirements, it's no wonder that Empyrion DC is leading the way in technological advancement and the future of sustainability in data centres across Asia Pacific.

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