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Green journey

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A logistics provider is utilising LRT services to transport packages, with electric motorcycles making the last-mile delivery. It says this is the way forward to mitigate the effects of burgeoning e-commerce.

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Night-time operation: Staff of a logistics company loading trolleys filled with packages onto a train at Putra Heights LRT station in Subang Jaya. — GLENN GUAN/The Star



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Transporting packages via LRT in Klang Valley

By LEW GUAN XI

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THE rise of e-commerce has led to a sizeable number of parcels being delivered across the country using various modes of land transport, contributing to a large amount of carbon emissions.

In 2023, Malaysia's transport sector contributed 66.348 million tonnes of carbon dioxide emissions, 23% of the total emissions in the country, according to Asian Transport Observatory.

With that in mind, a local logistics company in collaboration with Prasarana Malaysia Bhd hopes to reshape the parcel delivery industry, reduce traffic congestion and reduce greenhouse gas emissions.

Diolko Logistics Malaysia Sdn Bhd, based in Cheras, Selangor, is offering a parcel delivery service that uses the light rail transit (LRT) network and a fleet of electric vehicles in the Klang Valley.

Diolko co-founder and chief executive officer Yoann Gueguen said since the launch of its pilot project in July last year, the company delivered more than 6,000 parcels through this eco-friendly mode, thereby reducing carbon emissions by 70%.

How it works

The project involves three LRT stations – Awan Besar, Ara Damansara and Putra Heights – with the last station serving as its main hub.

Gueguen said electric vans pick up parcels from clients and take them to Putra Heights LRT station for sorting.

"The parcels are placed into different boxes based on destination, before being loaded into trolleys that are specially designed and certified by Land Public Transport Agency (APAD)."

"The trolleys can be locked into place in the LRT train so that they do not move around."

"Our staff are also on hand to monitor the trolleys on board," he added.

Gueguen said a maximum of six trolleys are placed in each train and passengers are not allowed in the same space during delivery.

Diolko co-founder and chief operating officer Onno Pfeiffer said after sorting at the Putra Heights LRT station, the parcels are sent to Awan Besar and Ara Damansara stations.

"Delivery riders pick up the parcels from these stations and deliver them to their final destination," he said.

The company currently has two electric vans and eight electric motorcycles to cover last-mile delivery.

"These vehicles, supplied by our partners, are placed at each station we operate in and the number of vehicles is expected to grow over the next few months."

Pfeiffer said parcels are transported after 11pm to avoid disrupting the passenger service.

Stating that the company might request for special cargo trains to

Green parcel delivery collaboration aims to reduce carbon emissions, traffic congestion



Above: Diolko trolleys designed to lock into position seen during a delivery utilising LRT services.

Right: Pfeiffer (left) and Gueguen at Diolko's hub at Putra Heights LRT station. — Photos: GLENN GUAN/The Star

meet increased volume, he said Diolko was currently focused on maximising the capacity of existing infrastructure.

"We believe this model presents a win-win situation."

"The LRT operator does not need to put on extra trains for us and we enjoy lower maintenance costs," he said.

Pfeiffer said there are plans to expand its delivery network, with Phase 1 involving expansion to more stations along the Kelana Jaya and Ampang/Sri Petaling LRT lines.

"We plan to open up hubs in Gombak LRT and Ampang LRT stations by the end of this year."

"We would like to maximise our coverage on one line first, before moving on to the next."

For Phase 2, Pfeiffer said the company was planning to expand to existing mass rapid transit (MRT) lines, starting with terminal stations such as Kwasa Damansara, Putrajaya and Kajang.

"We will also set up operations in Cheras and Kota Damansara in this phase," he said.

The third phase, he said, would see the network extended to the LRT3 line which is scheduled to start operating on Sept 30.

"This line will provide us with direct access to the west of Klang Valley, including Shah Alam and Klang," he said.

Pfeiffer added that Diolko also plans to expand to 15 transit stations across the Klang Valley by 2027.



Limited scalability

Logistics experts have, however, raised concerns over the scalability of such a business model, given the commuter-centric design of the LRT service.

They said there was still a long way to go before such a delivery mode could become mainstream in the Klang Valley.

UCSI University Business and Information Science Faculty assistant professor Dr Dazmin Daud said providers would need their own vehicles if the service were to be scaled up.

"Delivery with trains would not be workable if the number of parcels increases too much, as LRT trains are designed for passengers, not freight services."

"Speed of delivery would also be an issue as service providers could only operate during off-peak hours," said Dazmin, a lecturer in the Logistics Department and member of The Chartered Institute of Logistics and Transport education committee.

When asked whether it was feasible to provide separate trains and tracks for service providers, Dazmin said he did not see the possibility of developing separate tracks for cargo trains.

"However, there is still potential for more companies to adopt a similar business model."

"This delivery mode could save

companies a lot in maintenance cost, since the trains and tracks are maintained by Prasarana."

"Nevertheless, the government should carefully select companies taking part in the initiative and choose those with vast experience in the fields of logistics and shipment," he said.

Dazmin said although the upcoming LRT3 and MRT3 lines could offer more opportunities, it would also stretch delivery time.

"If you are operating in five stations, your delivery train only needs to travel to five stations."

"When it becomes 20 stations, the delivery time would take longer," he said.

Kuagan Thangarajoo, a logistics hub manager of a regional company, said there would be a limit to the volume of parcels that could be handled daily because of the fixed number of coaches and trips.

"This can be improved by increasing the number of train coaches or having special parcel trips during the day."

"However, this would disrupt the frequency of LRT trains for passengers."

"Another challenge is the lack of connectivity of the current LRT lines to areas such as Rawang."

"Self-collection points could be introduced at train stations, for the convenience of those using the train," he added.



(Above) Parcels being sorted at Putra Heights LRT station. (Below) Electric motorcycles used for last-mile delivery at Ara Damansara LRT station.



Pfeiffer said every train station need not have a hub, as not every station was suitable for cargo. "Suitable stations must also be accessible to delivery riders. "Space is also an important factor as some stations in the Klang Valley are too small for cargo," he said.

Pfeiffer added that with 15 stations, the company would be able to optimise operations across the Klang Valley.

"In some places like Bukit Bintang, there are four to five stations close to each other. "As such, we only need to set up operations in one station and it would be enough to cover the whole area," he said.

Gueguen said passenger safety and comfort remained the top priority.

"We would never use stations like KLCC where the volume of commuters is very high. "We also make sure to load our trolleys onto the trains within 30 seconds.

"If we cannot do so, we wait for the next train so that the service is not delayed and passengers are not affected."

There are at least four handling areas in train stations for the par-

cels, situated away from passengers, he added.

Multifunctional hubs

Prasarana in a statement said rail-based parcel delivery could be a game changer for the logistics industry in the Klang Valley.

"By shifting a portion of cargo transport to our rail system, we envision significant benefits such as reduced emissions and traffic congestion, and enhanced efficiency and reliability.

"Moreover, this approach may also drive further innovation, paving the way for integrated multi-modal logistics solutions."

The public transport operator said it was actively transforming key LRT stations into multifunctional hubs.

"Our strategy is to optimise strategic locations such as Putra Heights, Ara Damansara and Awan Besar by integrating advanced digital platforms, dedicated cargo handling areas and parcel locker installations into our station designs.

"By leveraging innovative technologies, including deployment of electric vehicles and virtual hub systems, we are creating seamless cargo transfer processes.

"These enhancements are designed to maximise efficiency, reduce delays in last-mile delivery and support Malaysia's broader environmental objectives, notably by cutting carbon emissions and alleviating urban traffic congestion," said Prasarana.

It added that it was open to expanding its network of partners in sustainable logistics as part of its broader move towards greener and more efficient urban transit systems.