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E-bikes fit the blueprint for a greener city, let's make them viable

Emphasis on education and green infrastructure is critical if we are to move towards sustainable modes of transport.

Erich Wolff

Singapore is already well primed for electric bikes due to its mostly flat landscape and excellent connectivity, so we should start considering making the city more conducive and safe for them, says the writer. ST PHOTO: KEVIN LIM

The ways in which we move and commute through Singapore are changing quickly.

Since they entered the scene, electric bikes – or power-assisted bicycles – have been rapidly growing in popularity. The number registered has more than doubled from 16,000 in 2020 to 37,320 as at end-June. But the spike has also brought problems – a rise in road accidents involving e-bikes.

There were 157 accidents involving e-bikes in 2022, a slight rise from 150 in 2021 but doubling from 78 in 2020. Eight were fatal, and in August 2023, a 64-year-old e-bike rider died after being hit by a minibus in Hougang.

Motorised devices have speed limit restrictions, are banned from footpaths, and theory tests are mandatory to ride them on roads. Notices were issued by the Land Transport Authority (LTA) to more than 5,000 e-bike users in 2022 for riding on footpaths.

Despite the regulations and active enforcement, e-bikes on roads still pose risks. Much of this stems from the tension between motorists and e-bike users.

In a report from The Straits Times that examined this, a seasoned e-bike user from Norway, who continued his practice in Singapore after he moved here, candidly said it was not for the faint of heart. He emphasised the need for drivers to treat bikers with more respect. Irate drivers have also expressed frustration at e-bike riders flouting traffic rules and norms, and riding dangerously.

The friction between the two modes of transport has been observed in other countries, even in contexts where traditional bicycles have long been part of daily life, such as in the Netherlands.

These experiences show that regulation, education and appropriate infrastructure are key to ensure that e-bikes can be well integrated to the fabric of cities as a sustainable mode of transportation.

This is important, as clearly e-bikes are here to stay: A large part of the rise of e-bikes has been their popularity with food delivery drivers, as they are cheaper to own and run than motorbikes. E-bikes are also popular with commuters who want to avoid crowded public transport or bridge the last-mile connection between transport hubs and home.

Singapore is already well primed for e-bikes due to its mostly flat landscape and excellent connectivity, so we should start considering making the city more conducive and safe for them. A bonus is that addressing these concerns can offer an opportunity to achieve other goals, as e-bikes can be part of a transition to a healthier and greener model of urbanisation.

Dedicated cycling lanes are necessary to keep both pedestrians and electric or pedal-powered riders safe. These could also provide alternative routes for riders who would otherwise travel on roads. They also take up far less space than multi-lane roads, freeing up much-needed land for green space.

HELPING E-BIKES HAVE THEIR RIGHTFUL PLACE

Behavioural change and careful planning are needed to safely integrate e-bikes into existing transport networks. If we can overcome these barriers, e-bikes can help us reduce our long-held dependence on cars and motorcycles, alongside expanding and improving the public transport system.

Promoting a culture of mutual respect between car drivers and e-bike riders necessitates a comprehensive approach focused on heightened awareness campaigns and educational initiatives. For car drivers, a deepened understanding of the presence and rights of e-bike riders is imperative, facilitating a significant enhancement in shared road safety. Concurrently, e-bike enthusiasts should be equipped with a solid grounding in road etiquette, adherence to traffic regulations and safety protocols to ensure a more harmonious coexistence with other motorists.

Beyond changing attitudes and enforcing laws, there's a need for infrastructure.

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It's worth noting that LTA is studying the feasibility of removing street-side parking to make way for cycling paths in some roads and has identified 60 sites to be converted into paths for pedestrians and cyclists. In its latest announcement in September on expanding Singapore's cycling connectivity, LTA called a tender to build 34.4km of new cycling paths in western and central Singapore.

But Singapore could take a stronger grip of the wheel in paving the path for green areas that are e-bike inclusive. In an earlier piece for ST in July that focused on nature-based solutions, I put stress on how Indonesia, Thailand, Vietnam and other Asean countries were struggling to find space for green infrastructure, including green roofs, parks and community gardens. Serving as an example to the region, Singapore can lead the way by making space for green areas integrated into cycling infrastructure.

Additionally, the potential benefits for our health are many, and it would help change mindsets to be more inclusive of e-bikes if people were more aware of this. Fewer cars and motorcycles on the road mean less air pollution. Expanding green spaces provides opportunities for recreation and physical activity, as well as having positive benefits for our mental health. Integrating green space across the city is also essential to conserve our precious biodiversity.

REDUCING DEPENDENCY ON CARS

In many ways, Singapore is the perfect city for e-bikes – compact, well-connected and mostly flat. But, like most cities around the world, the Republic has an in-built dependency on cars. According to LTA, Singapore has 9,500km of roads, taking up a whopping 12 per cent of the total land area.

As we reduce our dependence on cars as part of the vision for a car-lite city, the expansion of the cycling network to accommodate e-bikes could lead to a win-win situation. Along with reducing air and noise pollution, e-bikes can lead to a city with fewer cars, which could free up valuable space from unnecessary roads and carparks in the long term.

They also are cheaper and offer greater flexibility in getting around – especially with the expansion of cycling paths and park connectors.

GREEN BENEFITS OF ACCEPTING E-BIKES

Transitioning to new forms of transport, including e-bikes, is a key step to rethink how we use our city and build a greener future. Around the world, we are seeing cities move from traditional grey infrastructure to greener alternatives.

The city of Sheffield in Britain, for example, is converting redundant roads into green spaces to reduce flood risk. The project, known as "Grey to Green", has reimagined an inner-city highway – converting two lanes of the road into rain gardens and cycling lanes. The new green belt was integrated into the cycling network and also serves as a flood protection system by collecting excess rainwater.

Replacing roads and concrete carparks with cycling lanes and green spaces is also a key strategy to reduce the urban heat island effect. Due to their dark colour and impermeable surface, asphalt roads are good at holding heat. As Singapore feels the effects of a warming climate, reducing urban heat and providing cool spaces throughout the city will be essential to prevent heat stress.

Indeed, following Singapore's landmark vision of a City in Nature, the adoption of green cycling lanes could be the next step in a strategy to bring more green to the country.

It will take some careful urban planning, and a shift in the way we think, but e-bikes have the potential to play an important part in changing the way we use our city – for the better.

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