

# Metamorphosis: a design vision for future metro travel post-Covid

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International design company, tangerine, unveils a design concept for a new type of metro train that offers opportunities to increase capacity in the rail network and grow passenger numbers in a post Covid world, by improving confidence in the provision of hygienic and safe metro travel.

Metamorphosis is a metro concept designed to help operators better plan for future pandemics by enabling them to readily adapt the train interior to minimise the risk of germ transmission during periods of local disruption created by novel viruses.

Metamorphosis has an adaptable carriage interior with slidable screens that can be deployed during pandemics to divide the space into smaller zones or 'travel bubbles'. Flexible seating angles bodies away from one another to increase privacy and minimise the potential for cross-contamination, as passengers choose to either perch or stand. A HEPA filtered localised air filtration system provides a constant change of air, a touchless hand sanitation point in the vestibule aids cleanliness, while a QR code placed at strategic points in the carriage enables an effective Carriage Track and Trace system. A traffic light style illumination around the doors, supported by passenger information on screens and projected onto the platform, aid a safe, distanced boarding and alighting of the train.

The concept balances customer safety and user experience with the commercial imperatives to limit disruption and keep rail services running during pandemics. This ensures that operators remain profitable during times of both high and low demand on the rail network, helping to mitigate the need for fare rises, bailouts and Government subsidies.

tangerine, which is known around the world for designing game-changing products, services and experiences for leading companies including British Airways Heathrow Express and Toyota, has created Metamorphosis as a vision for the future of metro travel within cities to support the growth of passenger rail services at times of turbulent change.

Metamorphosis rethinks the design of a metro train to optimise the layout of the interior to cope with the peaks and troughs of passenger demand created during pandemics. Adopting readily available technologies and materials, the design is optimised for high passenger occupancy during low health risk 'normal times' when workers need to use a fast, reliable, high capacity tube network to commute to work. The train can then be rapidly adapted through a series of physical and digital changes during times of high health risk 'pandemic times' to introduce social distancing, behavioural prompts, and provide additional hygienic travel solutions. Sliding division walls can be deployed during pandemics to segregate the carriage space into smaller zones or "travel bubbles", which are supported by a QR code activated Carriage Track and Trace System that alerts passengers if they have shared the carriage zone with someone else who later becomes unwell.

Martin Darbyshire, founder and CEO of tangerine, said: "Metamorphosis is an inspiring and achievable vision of a new type of adaptable metro train that suits a wider range of user, operational, and service requirements for times of high and low demand on passenger rail services.

"This design goes beyond quick fixes in response to COVID-19 that would be unsuitable once the risk of the virus subsides, to instead use the opportunity to propose a better metro train that can increase capacity as well as minimise the future risk of disruption due to new novel viruses."

*Photo credit: tangerine*

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