

# Assessing Cycling Experience Using Digital Twin Video Scenarios

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## Background

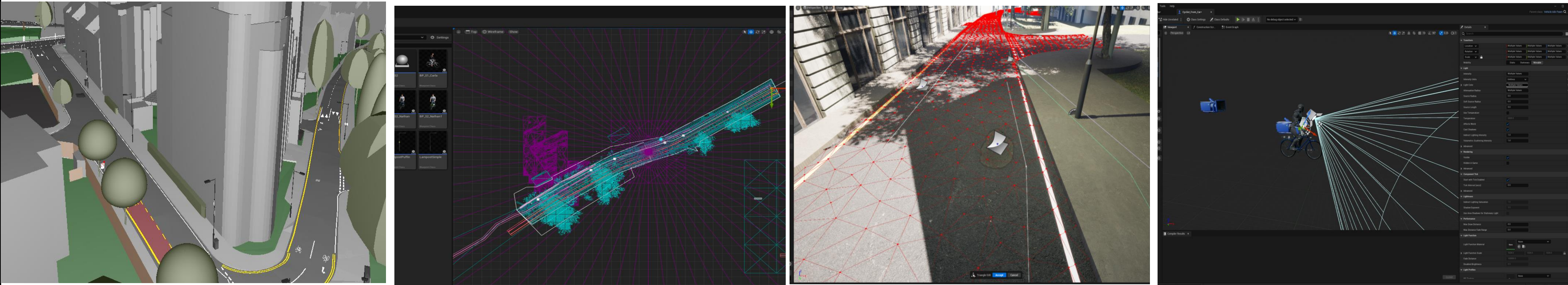
- Mode share of cycling in England is very low (2.1%)<sup>1</sup>
- Men are twice as likely as women to cycle to work <sup>2</sup>
- Low-quality infrastructure discourages women, children, and older adults from cycling <sup>2</sup>
- There is limited understanding of how to improve infrastructure to make it more inclusive for cyclists

## Objectives

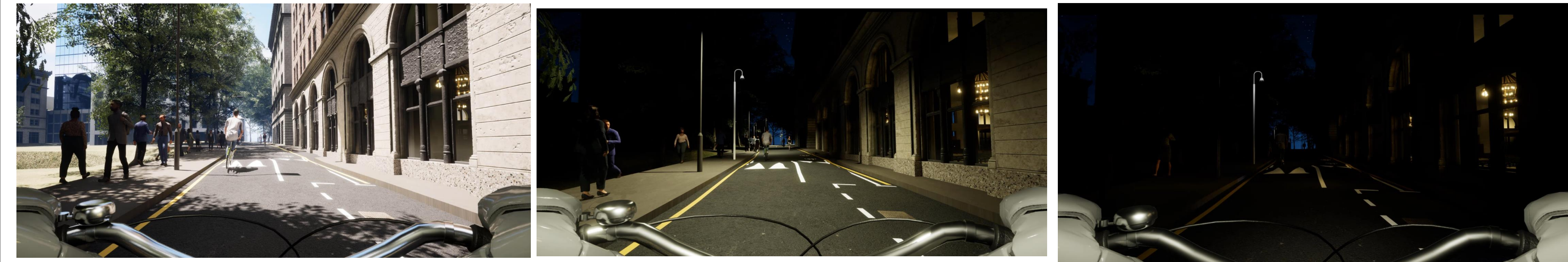
- Identify discomfort factors for different cyclist groups based on demographics
- Model the impact of these factors on various cycling infrastructures
- Develop a cycling level of service index to help planners prioritise infrastructure enhancements

## Study Protocol

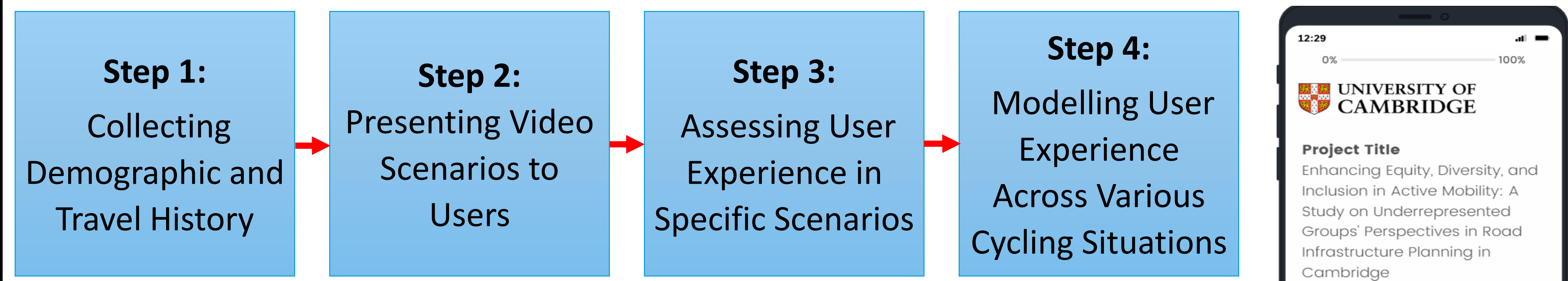
Digital Twin Model of London



Real-Life Scenario Development



Video Experiments



## What next?

- Conduct the video experiment survey in London and Cambridge
- Analyse the data and model cyclist behaviour
- Prepare a VR experiment to compare user perceptions with the video experiment

## Acknowledgements

We thank TRL for providing the digital twin model used to develop the scenarios in this study.

## References

- <sup>1</sup> Goel, Rahul, et al. Cycling behaviour in 17 countries across 6 continents: levels of cycling, who cycles, for what purpose, and how far?. *Transport reviews* 42.1 (2022): 58-81.
- <sup>2</sup> Aldred, R , et al. Does more cycling mean more diversity in cycling?. *Transport reviews*, 36(1) (2016), 28-44.