

## CABOT INSTITUTE

Living with global uncertainty

## Sustainable Personal Transport

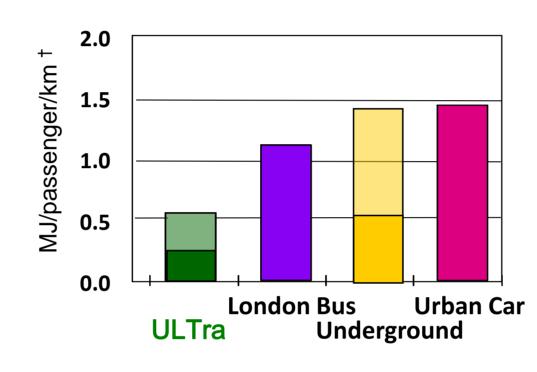
Designing and Operating Personal Rapid Transit (PRT) Systems

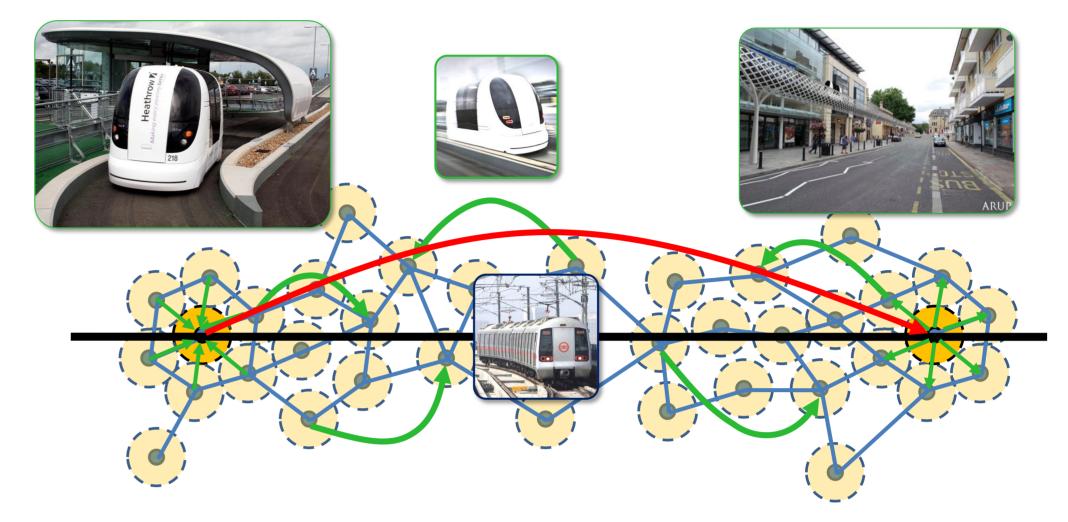
Personal Rapid Transit (PRT) is a new public transport mode that is more effective, more convenient and more sustainable than the car. It provides on-demand travel with compact, computer-guided vehicles on dedicated guideways. The University of Bristol is a world leader in PRT research, and Bristol spin-out *ULTra PRT* will open the world's first PRT system at London Heathrow this year.

## **Personal Rapid Transit**

- Compact, computer-guided, battery-electric vehicles carry individuals or small groups directly and ondemand between pairs of stations on a dedicated network of special-purpose guideways.
- Low energy use, low external noise, no on-site emissions, slim guideways with low visual intrusion.







Works with existing mass transit to increase ridership and efficiency of the whole system by connecting transit hubs into a network of PRT stations – short trips by PRT, long trips by mass transit.

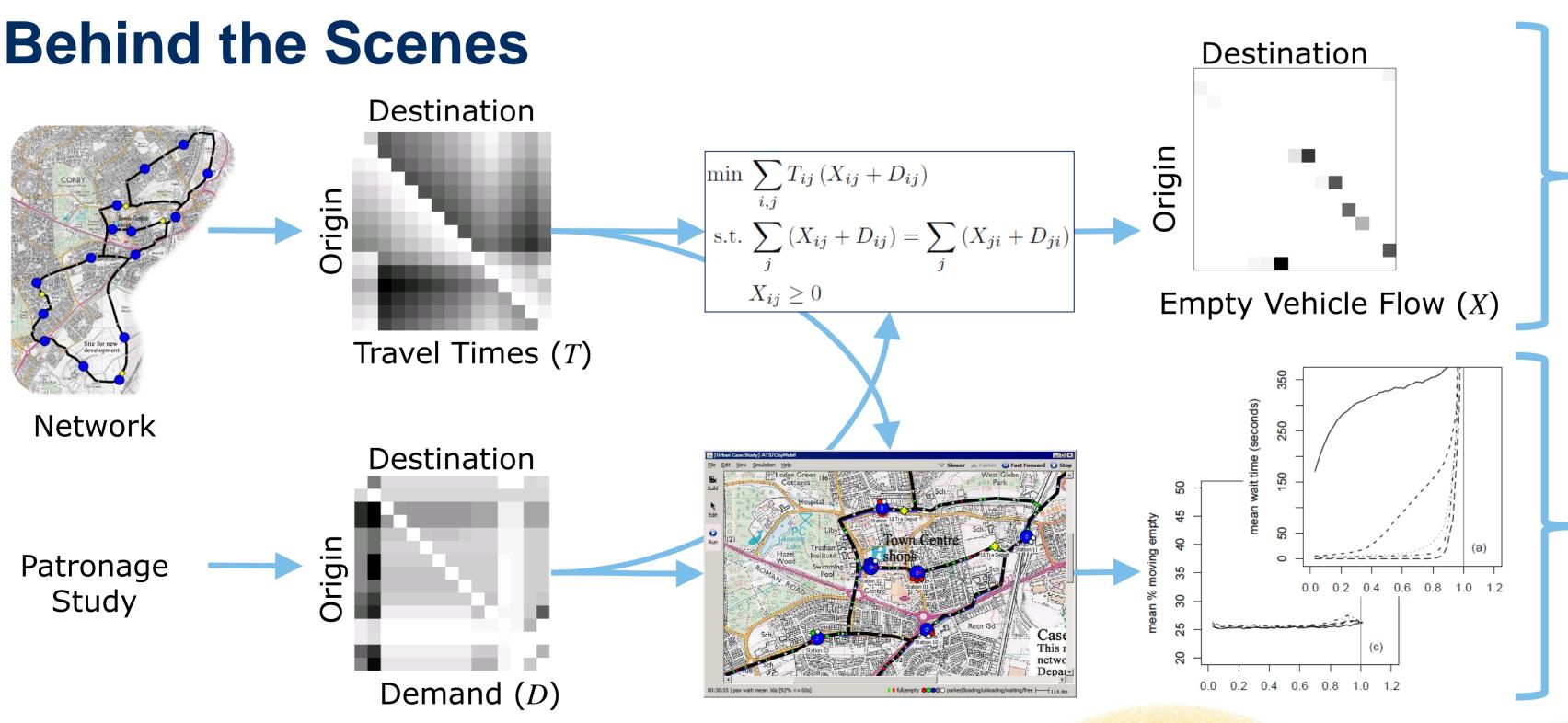
## **World's First at Heathrow Terminal 5**







- 3 stations, 21 driverless vehicles, 4km of guideway.
- Now in final test phase and carrying T5 staff daily.



- Network design
- Fleet sizing
- Capacity analysis in the fluid limit
- Online empty vehicle redistribution algorithms
- Service levels and operating costs

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† UK data; at average occupancy; well-to-wheel; dark shading shows direct electricity use







