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Ultra at Heathrow & Beyond

Martin Lowson, President ,Ultra Global PRT



Outline



- Introduction
- Short Video
- Passenger Response
- Features
- Future Possibilities
- Conclusions



Heathrow pod

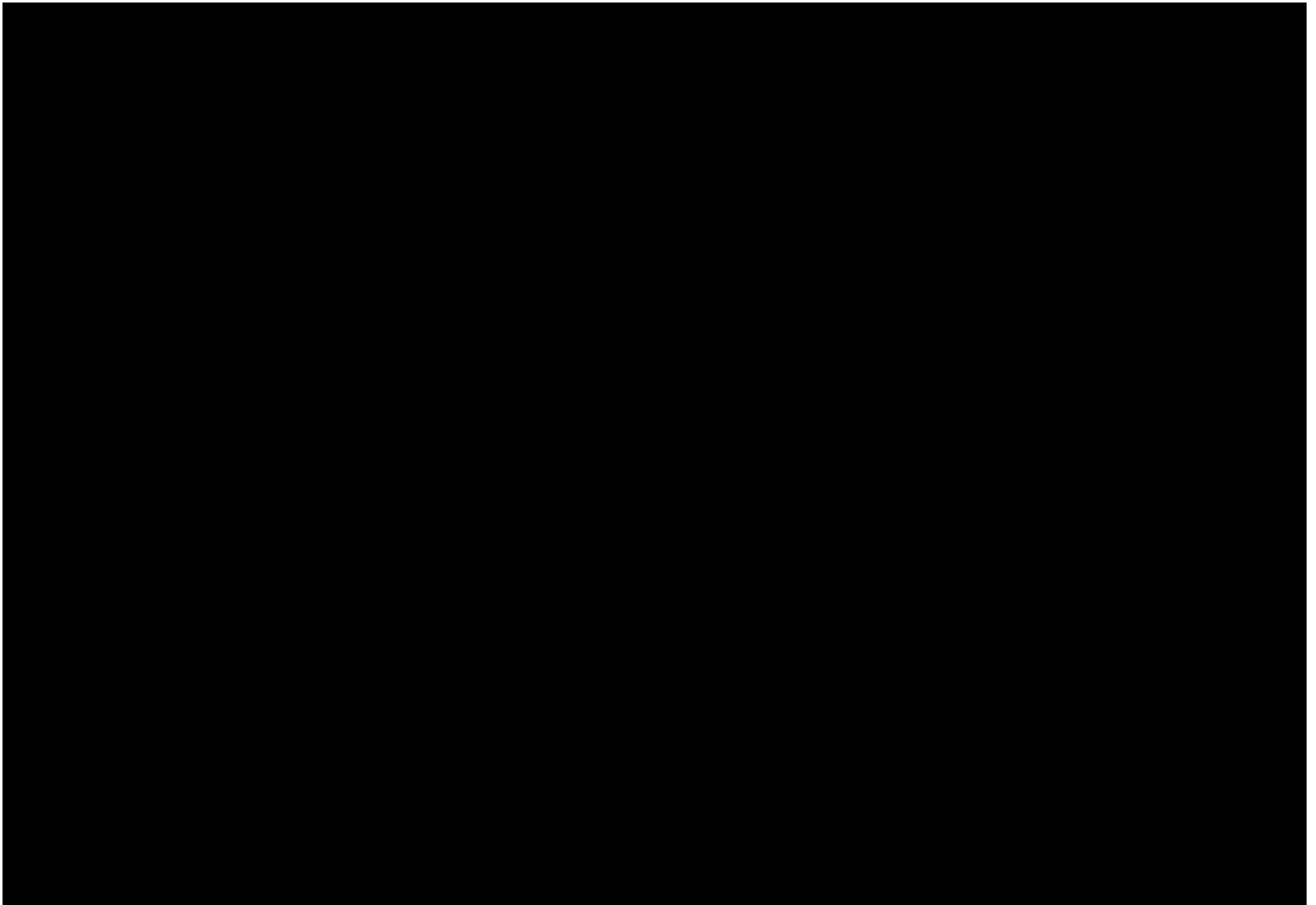


Heathrow pod is open for business

Heathrow pod

- The Heathrow pod is up, running and since opening on 18 April, has carried around 200,000 passengers
- Once full service was introduced on 7th May the Heathrow car park buses were removed from operation
- Currently runs:
 - 22 hours weekdays
 - 20 hours Saturday
 - 21 hours Sunday







Heathrow pod performance

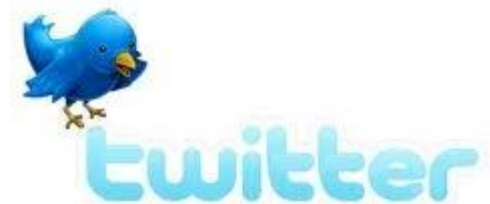
	Operated	Full System Availability	Journeys
May	614 hours	98.5%	16533
June	646 hours	97.3%	17861
July	667 hours	98.2%	17892
August	670 hours	99.0%	17148
Sept	646 hours	98.6%	21695
Oct	667 hours	99.8%	21527
Nov (to 13 th)	280 hours	99.8%	9316

Average time from journey request to start is only 35s, compared to a typical 5-10 minute wait for the shuttle bus

What do our passengers think?



- “Landed and used the very cool Heathrow pod – they’re even better to use – quicker, easier and greener than the buses to/from the car park”
- “I love these things. Best airport transfer devices ever”
- “Awesome sci-fi system”
- “Pass on my thanks to the team who designed this and also very importantly, the person(s) at BAA who approved this bold leap. It’s absolutely commendable to take charge and move forwards with a new transport system”

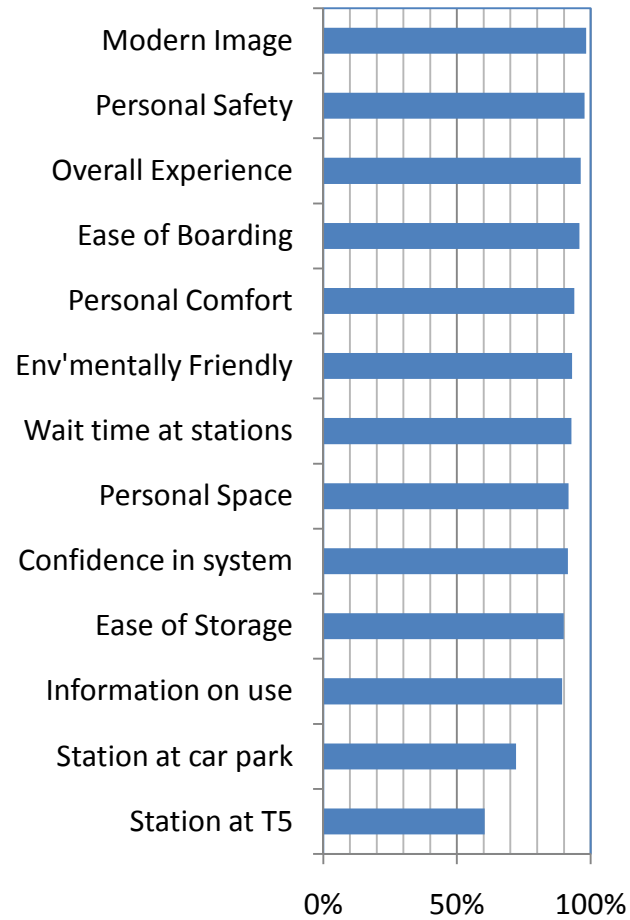


Passenger Ratings

Survey of 314 Heathrow Pod users conducted in May 2011 as part of the EU City Mobil Project.



% Users rating PRT as good or excellent



Proving the benefits of a PRT system



- Service
 - Predictability
 - No waiting
 - Reduced journey times
 - Experience
- Environment
 - Reduced emissions – NOX, CO2, PM10
 - 50,000 bus trips per year eliminated



Next steps for Heathrow

- Already much loved/established member of Heathrow transport offering
- Conducting detailed feasibility work for expansion to T1,2,& 3
- Tender process open for 7-figure, 3 year sponsorship package



Wide range of revenue streams

- Land-use savings, combined with increased land values and accessibility;
- No disruption of airport services during installation and testing;
- Increased office rents;
- Reduction in traffic congestion (emissions & road wear);
- Passenger travel-time savings & way finding benefits;
- Increased staff productivity;
- Sponsorship & advertising;
- Third party partnerships (e.g. hotel user access);
- Operational savings;
- Low CapEx (vs. APMs) – reduced interest payments.

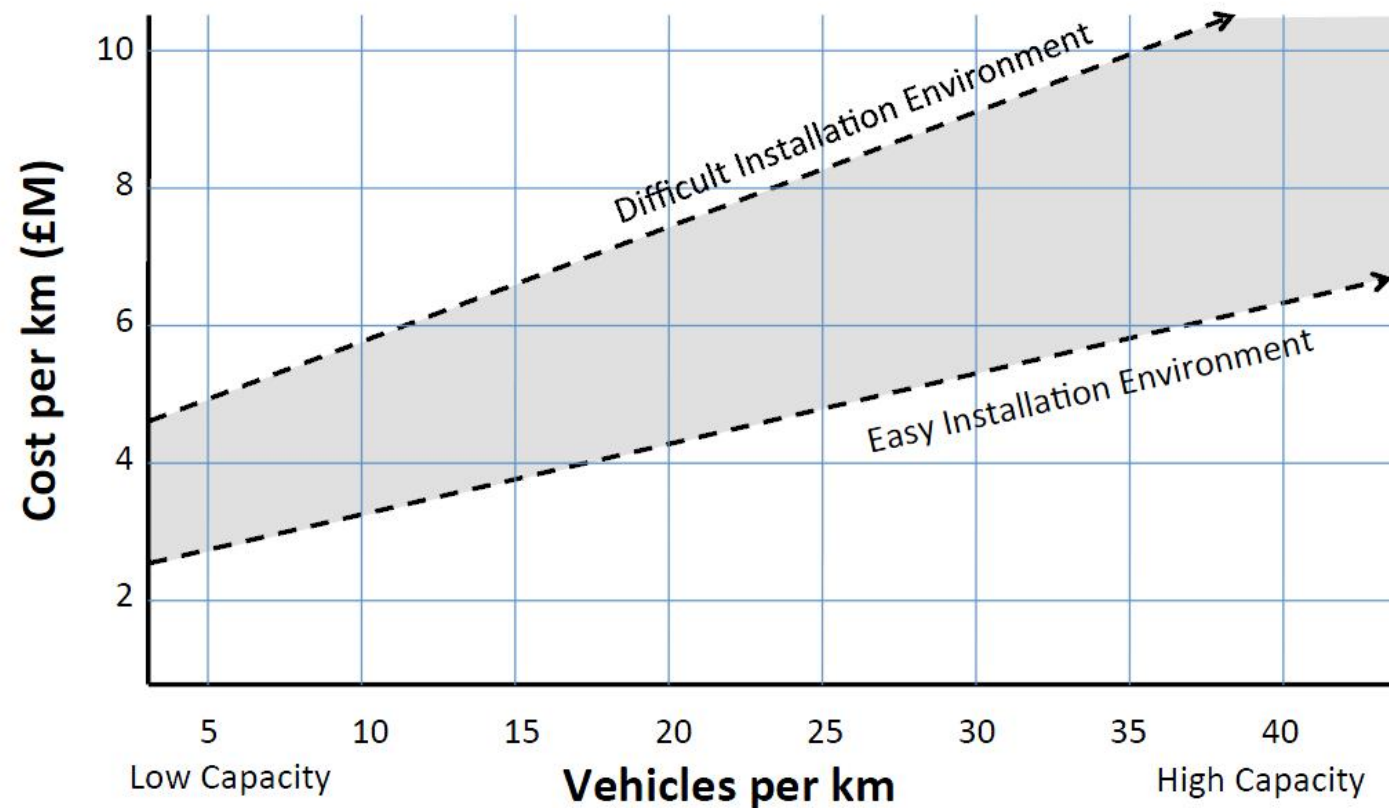


Understanding PRT capital cost

No single per-km cost is accurate representation

Cost depends on:

- 1) Site conditions
- 2) Demand to be served (capacity)
- 3) Location (e.g. India vs. UK vs. US, etc)



But...3-5 times cheaper than APM/Rail



- Light rail system at Toronto International Airport link cost nearly **£38m per km**
 - An Ultra system would have cost £9-10m per km (based on 2010 figures).
- The Birmingham AirRailLink cost over **£14m per km** to refurbish recently
 - To build a PRT from scratch for the same route would have cost under £10m per km and offered passengers their own door-to-door pod service.
- The light rail line in Montpellier cost **21.8m Euros per km**
 - A PRT system would have cost between 5.6m and 9m Euros per km (EDICT 2004 figures)
- The Oakland Airport Connector, in San Francisco, California, a transport system that's been proposed since the 1970's, and due to begin building soon, has been costed at **£32m per km**
 - Estimated cost of £6-8m per km if built as a PRT system.

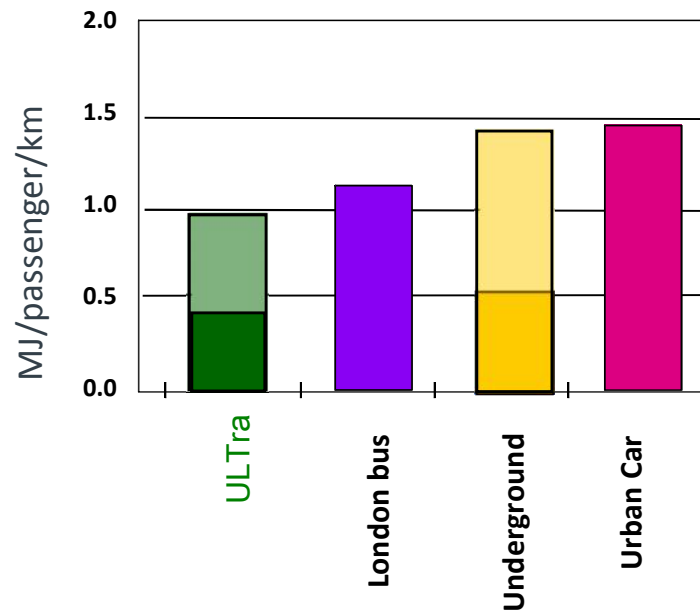


More reliable...

System	Availability
Heathrow Pod	99.0% (average July-present)
Heathrow Express	98.0% (2010/2011)
London Underground (LUL)	95.6% (2010/2011)
Docklands Light Rail (DLR)	97.4% (2010/2011)
Tramlink	98.6% (2010/2011)
Overground	94.8% (2010/2011)

The comprehensive development and testing programme has delivered exceptionally high levels of system performance at Heathrow Pod when compared to other transport systems

And More Sustainable



UK Data. Assumptions:

- Average passenger loads
- Well to wheel (darker shading - direct electricity use only)

- Light-weight electric vehicles
- Only move when there is user demand
- Avoid 'stop & go' waste
- No on-site emissions
- Low external noise
- Low embodied energy

Heathrow issues

- Congestion
- Space restrictions
- Pollution problems
- Capacity restrictions
- Passenger Service Issues

are the same as the issues faced by other airports, cities, business parks, college & university campuses, and residential areas – which is where our next opportunities lie.



Onwards and upwards for Ultra

- Reliability demonstrated – learning curve surmounted
- Exploring applications around the world with potential partners keen to deploy this innovative technology
- Ultra PRT's India partner: Ultra Fairwood
 - Developed unsolicited proposal for link to Amritsar Golden Temple. Government put out to “Swiss Challenge” → 0 competitors
 - Compared to Heathrow – lower cost per mile



Conclusions

- Heathrow pod: open since April, great performance & feedback to date.
- Demonstrates benefits and addresses issues common to many transport applications
- World wide opportunities in a wide range of applications, including airports, cities (especially feeder/distributor) & campuses.



Thank You



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