

Transport Systems Catapult

Technology Strategy – Alfie Jackson

CATAPULT
Transport Systems

IM definition

Intelligent Mobility is
the smarter, greener,
safer and more efficient
movement of people, goods and
information
around the world.

“ Create an environment that will make the UK a world leader in transport systems innovation

Intelligent Mobility Goals



MAKE TRAVELLING AN END-TO-END USER-CENTRIC EXPERIENCE



GENERATE BILLIONS WHEN MOVING PEOPLE AND GOODS



IMPROVE ACCESSIBILITY FOR ALL SEGMENTS OF SOCIETY



MAKE OUR TRANSPORT SYSTEMS MORE SUSTAINABLE AND REDUCE ITS ENVIRONMENTAL IMPACT



MAKE OUR TRANSPORT SYSTEMS MORE RESILIENT



MAKE TRANSPORT OF PEOPLE AND GOODS QUICKER



SAVE MANY LIVES



MAKE OUR TRANSPORT ASSETS MORE PRODUCTIVE

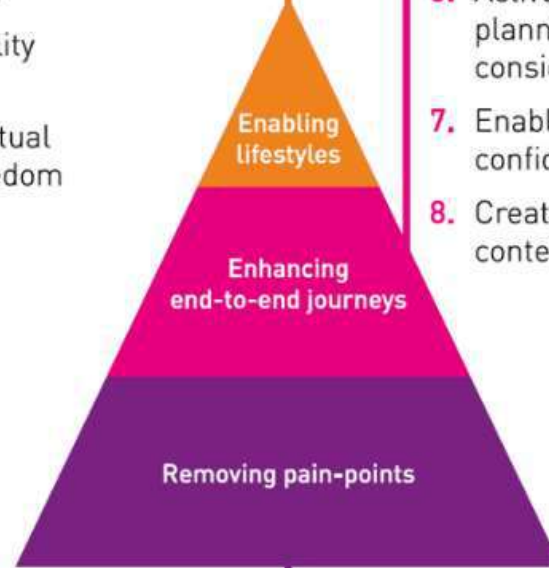
Traveller Needs Challenges

Key challenges

1. Help the urban population reduce their transport footprint and enable digital, asset-light lifestyles.
2. Reduce the burden on the car-dependent population.
3. Provide independent mobility for Car Passengers.
4. Push the boundaries of virtual mobility to provide the freedom to not travel.

Key challenges

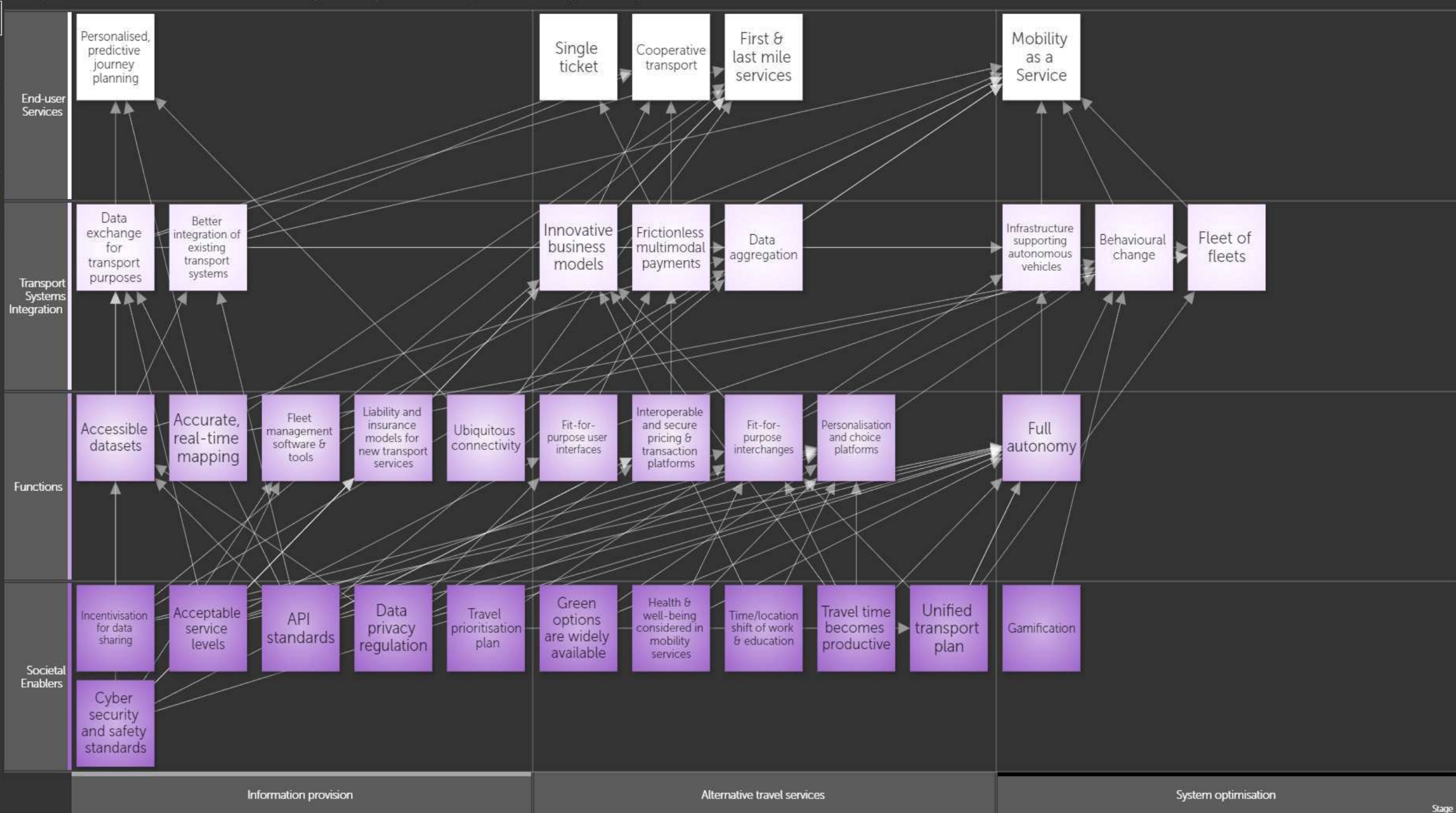
5. Aim for transport systems to offer the flexibility and convenience that the private car has traditionally offered.
6. Actively engage traveller in journey planning and transport modal consideration.
7. Enable faster journeys and increase confidence in arrival time.
8. Create relevant, personalised and context-aware information.



Key challenges

9. Solve the parking challenge.
10. Enable smoother drives.
11. Increase user experience and perceived value of public transport.
12. Improve and enable multi-modal journeys – reducing complexity, enhancing connectivity, and improving speed and reliability.

Improve and enable multimodal journeys roadmap - Critical pathways



Ecosystem

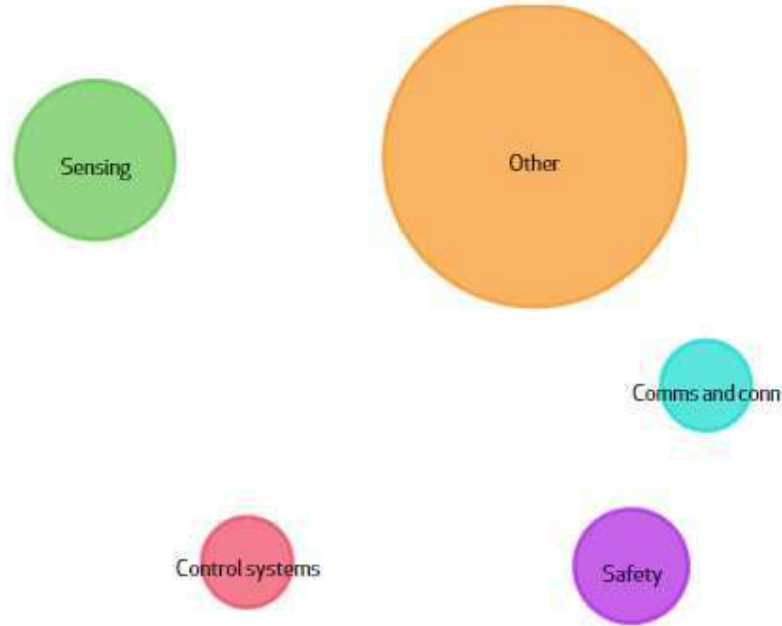
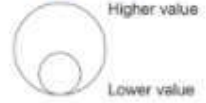
Pick a capability

Other	Comms and conn	Safety	Sensing	Control systems
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Legend

Radius represents

Number of firms



Case studies

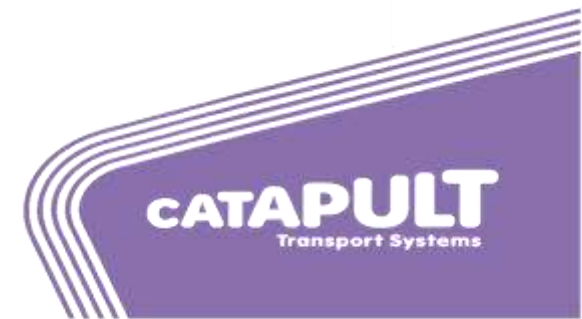


Project Two

Details about project two

Autonomous Vehicles

- AVs are more than just driverless cars
- Exist on air land and sea
- Among the fastest growing areas of IM



Gamification of travel

- Offering points for smarter travel, avoiding peak times or walking for example
- Points can be exchanged for rewards
- A pilot scheme in Japan achieved an 8% reduction in peak time travel.
- Such a success in London would result in a decrease in peak traffic of over 300,000 people a day



Virtual mobility

- The optimum mobility solution is often simply to not travel
- Increasingly possible owing to drastic improvements in communications technology
- More employers becoming flexible about home working



Foresighting / Horizon scanning is the ability to detect discontinuous change early.

The ability to fore sight is the only thing ensuring a firm's long term competitive advantage.

Future of Transport

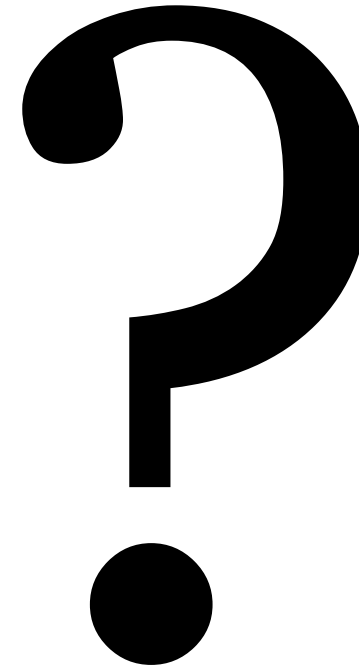
What will be the major challenges facing the future transport system?

How would the implementation of road user charging impact on the rail network?

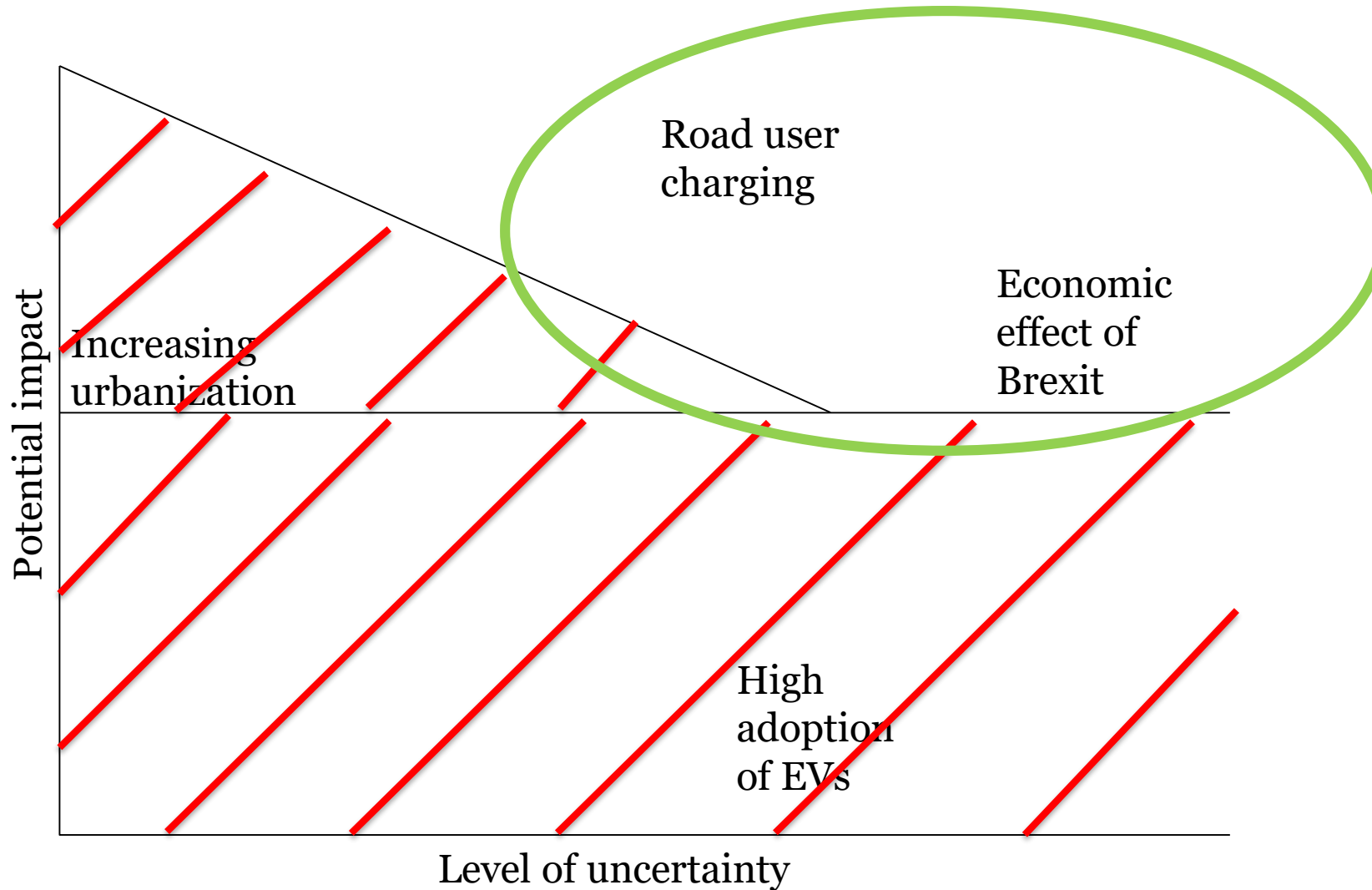
What could be the effect of Brexit on the transport network?

What role will environmental protection have in defining the transport system?

What else?



Potential drivers of change



Scenario planning

UK economy post-Brexit

Significant
decline

Significant
growth

1

2

3

4

Road user
charging

Yes

No

Existing trends

Relevant trends

- Ageing population
- Urbanisation
- Housing crisis
- Rising fuel costs
- Stagnation of disposable income

Areas to consider

- Shift between modes
- Government investment in infrastructure
- Workforce mobility
- Working conditions, zero hour contracts, flexible working from home etc.

Group presentations

1. Describe your team's version of the future
2. What are the major implications for the transport system?

Bonus questions

1. What could we do now to best prepare the transport system for your future?
2. What would be the early indicators that this future was likely to occur?

Alfie Jackson

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