DATA: FUELLING THE TRANSPORT REVOLUTION

Thursday 5th of December
Oracle Campus
Blackness Road
Linlithgow

On Thursday 5th of December, Technology Scotland and ScotlandIS ran an interactive workshop exploring the role of data in supporting future transport solutions. The workshop was delivered through the organisations' clusters in Mobility as a Service, Data and Cyber Security and brought together stakeholders from within the transport, communications and data communities.

INTRODUCTION

Technology is set to have a significant impact on the future of transport. The emergence of data led service models (Mobility as a Service) and connected and autonomous vehicles will transform the transport landscape, creating new business models that will revolutionise the way we engage with our transport services.

Data will be a key enabler of this transformation. From fares to scheduling, traffic management to vehicle positioning, air quality to weather information, data will support more informed travel choices and allow more efficient use of our transport assets.

With data at the core of future mobility, questions must be asked about how it can best be used to support a more efficient and attractive transport network.

- How do we best use data to support transport services?
- How do we unlock the true value of data?
- Who owns the data and who can access it?
- Should it be standardised?
- What changes to legislation or regulation may be required?
- How do we keep it secure?

This workshop aimed to explore these issues and others though discussions with a diverse range of stakeholders from within the transport, communications and data communities.

AGENDA

0955	Welcome
1005	Ron Oren, Strategic Initiative Lead, Open Transport Data, Connected Places Catapult
1020	Richard Bradley, Chief Information Officer, qWallets
1035	Panel Discussion
1120	Coffee
1145	Roundtable discussions
1245	Summary and Close
1250	Networking lunch
1330	IdealInterface workshop - Open standard for mobility accounts
1500	Close

PRESENTATIONS

The workshop began with two 'scene setting' presentations discussing the impact and value of data and considerations around data security:

Realising the potential of data in transport
Ron Oren, Strategic Initiative Lead, Open Transport Data, Connected Places Catapult

Security – Designed in from the outset
Richard Bradley, Chief Information Officer, Qwallets

MaaS Scotland members can access the presentations through the Members Area of the MaaS Scotland website - https://maas-scotland.com/member-area/

PANEL SESSION

Following the initial presentations, the presenters were asked to join an extended panel to explore some of the issues around the role of data in future mobility. Panellists were selected in order to give multiple perspectives on the topic and included representation from transport operators, regional authorities and data specialists.

Panel participants:

Richard Bradley	Chief Information Officer, qWallets
Robin Knight	Partnerships Director, Stagecoach
Peter Jackson	Active Travel Officer, SESran
Dave McConnachie	Chief Commercial Officer, Eyecademy
Ron Oren	Open Transport Data, Connected Places Catapult
Hayden Sutherland	Director, IdealInterface

After a brief introduction, each panellist discussed their organisations' primary use of data and their views on the biggest challenges/opportunities that data could bring. This was followed by a 30 min interactive audience question and answer session.

ROUNDTABLE DISCUSSIONS – IDENTIFYING OPPORTUNITIES AND BARRIERS

Attendees were split into four groups to discuss the opportunities and barriers associated with the increased use of data in the provision of future mobility solutions. Each group was asked to approach the discussion from the perspective of one of four personas:

- Transport Operator
- Local Authority
- Technology Provider
- Passenger

Roundtable Output

Perspective	Opportunities	Barriers
Transport Operator	• Support new service design through improved understanding of customer • Increase efficiency/profitability through improved asset management • Increase patronage through accessing additional customers • Reduce downtime through improved scheduling and maintenance • Exploit opportunities to add value through data provision/analysis • Deliver positive customer engagement through improved information/services • Better understand customer journey purpose	• Ensuring data security and privacy to gain customer/stakeholder trust • High cost/resource allocation associated with data management • Ensuring relevant skills are in place • Essential to have internal strategic direction • Managing stakeholder engagement • Ensuring robust methodology for data gathering • Reacting quickly to a potentially dynamic legislative environment
Local Authority	• Support and strengthen local policy targets through integrated data • Support provision of new services and solutions through integrated data • Provide opportunity to link services • Improve understanding of travel patterns and needs • Support long term planning through improved understanding of demand	• Achieving buy-in from multiple stakeholders • Ensuring commercial confidentiality • Integrating data from multiple providers/agencies • Developing evidence base to support future mobility decisions
Technology Provider	• The rise in IoT networks and 5G providing lower latency and increased data • The use of transport data to drive value in different sectors – *e.g.* tourism planning • Predictive analytics of passenger need based on search terms etc. Improving and creating services based on demand. • Opportunity for synergies between a number of SMEs that have partial solutions • Access to Google GPS data would offer huge opportunities (and ethical considerations)	• Currently undergoing disruptive system change analogous to *e.g.* banking sector • Disparate nature of the market – too many different solutions. • Lack of data standardisation • Ensuring relevant skills in place • Poor visibility of skill sets and expertise available locally

Passenger	• Single point of access for multi-modal services • Adding value through personalisation of journeys and incentivisation of modal choice • Illustrate value and benefit of sharing personal data – points system etc. • Enrich data to improve journey choice e.g. buggy access, specific requirements. • Create a strong brand around trust and ethics in terms of data capture and use	• Privacy – lack of trust/understanding. Data capture needs to be relevant and appropriate. • Data – who will govern/access it? Need clear approach to the capture, storage and administration of data • Alienation of the non-tech i.e. people without smart phones or even bank accounts/debit cards. (increasing inequality among potential passengers/ general public)

ROUNDTABLE DISCUSSIONS – INTERVENTIONS AND SOLUTIONS

Following on from the discussions detailed above, each group was then asked to consider at least one of the identified barriers and suggest some proposed solutions.

Roundtable Output

TRANSPORT OPERATORS

Barrier:
Ensure that the necessary strategic direction is in place to implement internal change towards a more open data policy

Proposed solutions:
- Operators should ensure that the right skill sets are present at a strategic decision making level. Increasingly this will require someone with data experience to evangelise at senior management level.
- Operators must embrace opportunities to demonstrate the value of data integration/sharing. Collaboration is essential to build case studies and demonstrator projects.
- Operators should utilise the experience of those who have operated in adjacent sectors where open data is commonplace e.g. banking, communications.
- Government and local authorities should look to policy and regulatory levers to encourage data sharing e.g. mandating data sharing during tendering process.

Barrier:
Ensuring that customers are engaged with data led solutions and generating and maintaining their trust.

Proposed solutions:
- Customers are swayed by evidence and proof of improved services. It is therefore essential that an evidence pool is created that supports the use of data to provide improved, personalised services.
- The launch of such services must be combined with a strong marketing and communications strategy. Many successful pilots and demonstrators have failed to take off simply because the customer was not engaged/aware.

LOCAL AUTHORITIES

Barrier:
Integrating and aggregating data from multiple different sources and agencies.

Proposed solutions:
- Integration and aggregation of data is made easier where sources are providing data in a standardised format. Open data standards and policies must be pursued to support this.
- The ownership and maintenance of aggregated data is critical and a neutral 'trusted broker' is essential. Public bodies such as local authorities or transport authorities are best placed to provide this.

TECHNOLOGY PROVIDERS

Barrier:
Lack of data standardisation makes development of products and/or services difficult and time consuming.

Proposed solution:
- Adoption of standards would improve integration of transport data. An agreed set of mandatory standards would be hugely beneficial, perhaps linked to licensing conditions of local authorities.

Barrier:
Poor visibility of skills sets and expertise available at a local level could stifle collaboration.

Proposed solution:
- Increased role for organisations like MaaS Scotland to improve visibility of the travel tech ecosystem e.g. mapping of national capabilities and identification of gaps.

PASSENGERS

Barrier:
Complete replacement of existing solutions with newer tech focussed solutions could result in 'technology gap', with some cost saving benefits not being realised.

Proposed solutions:
- Introduction of state supported public transport or national travel cards.
  - Users who do not want to pay using smart phone or debit card could take an option of buying a monthly ticket that covers all transport.
  - Consider move towards pay monthly service for all transport i.e. like mobile phone, energy or broadband. Encourages everyone to use it more as already paying for it.
- Multiple access and payment options need to always be available – cash, card, phone.

OPEN TRANSPORT INITIATIVE

The afternoon session was an opportunity for attendees to hear more about the Open Transport Initiative. The session was led by one of the initiative's leads, Hayden Sutherland, Director at IdealInterface, who outlined the purpose, methodology and current status of the project. Further information can be found here.

https://opentransport.co.uk/
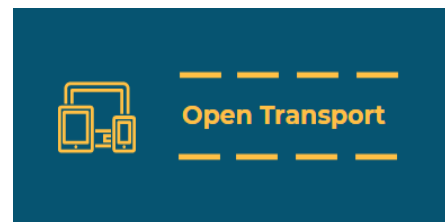
NEXT STEPS

- MaaS Scotland sit on a Working Group led by Transport Scotland that, in addition to supporting the Scottish Government's MaaS Investment Fund, is also exploring considerations for the broader implementation and upscale of MaaS in Scotland. Output from this workshop will be shared with this group.

- MaaS Scotland is exploring the possibility of a Data Working Group. This group would meet regularly to discuss challenges in transport data and to share knowledge and experience with like-minded individuals. If you are interested in participating in this group please contact Ally McInroy – alastair.mcinroy@technologyscotland.scot

CONTACT DETAILS

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