Which groups might limit their mobility because of lack of confidence? Considering personal security and public transport.

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RGS-IBG Annual Conference , 27-29 August 2013, London, UK

UNIVERSITY OF ABERDEEN

Structure of Paper

- About the project
- Conceptualising personal security
- SWOT and STEEPL analysis
- Scenario framework
- The scenarios
- Conclusions



About the project

Aim

This project is focused on the role of technology and its interaction with user needs and perceptions in supporting personal security in travel on public transport, and as a consequence to enable transport technologies to better support personal security (both perceived and actual) in travel by public transport.

Overall Project Objectives

1. Assess the extent to which personal security issues are currently effectively addressed in a set of five specific application areas.
2. Identify potential future personal security issues and assess how they might be effectively addressed in a set of five specific application areas.
3. Examine how spatial, temporal and demographic factors influence the nature of both current and potential future personal security issues.
4. Develop policy recommendations to support decision makers regarding the application of transport technologies to support travel by public transport.

Five participatory workshops

1.Provision for public transport traveller information
2.Provision for contingency planning to support travel by public transport
3.Automated public transport services
4.Demand responsive transport services
5.Review of desirability/plausibility of the scenarios, recommendations for policy and research directions

Method

SWOT
STEEP(L)
Scenario visions
Post-workshop thematic analysis
Re-visioning
Participatory evaluation and discussion

How we define *personal* security



Vulnerable groups: the usual suspects

“Older people often perceive the risk of crime as being more significant than it is in reality, but it does impact on their confidence in using public transport”

“Older people, who have a bad experience on public transport, e.g. falling on a bus, will be much less likely to use it in the future. The consequences for them are more severe”

Personal perceptions of risk are affected by individual demographic factors – women and the elderly are likely to become more anxious if disruption changes what should have been a daylight journey into a night-time journey and arrival.

Disabled people are likely to find it more difficult to cope with disruption, as they may have particular accessibility needs in accessing or escaping from vehicles and infrastructure, or they may not be able to access information sources that could assist them to independently rearrange their journey.

Shifting vulnerabilities

Temporal and spatial factors

"Night services can be daunting to use in some areas"

"Don't forget multi-storey car parks. One of the worst I saw (several years ago) was that provided for Tyne and Wear metro users – dank, dark, graffiti and an appalling smell in the stairwells!"

"Unlit rural bus stops may feel extremely unsafe compared to more urban areas – particularly if no information provided"

Those who usually travel off peak are likely to find that peak hour travelling is disorienting because of the numbers travelling in the system at that time, the vast majority of whom will move at speed through interchanges, because they are habitual commuters.

Longer hours of darkness mean that the perception of when 'night' falls changes, and people feel more vulnerable at night.

Situational factors

"Encountering anti-social behaviour can be as bad as encountering crime"

"From non-users the perception is very negative, but regular PT users have a more realistic view of the situation"

"Too many announcements re safety issues and security can cause confidence issues."

"Will my bike be stolen if I leave it at that station?"

"If you don't know the area then you are unaware of where the boundaries are – so less likely to 'test the water'. "

"Must tackle maintenance and cleanliness – if poor creates atmosphere of lack of care where antisocial incident might happen"

Delay or disruption can rapidly cause anxiety or fear

Confidence and vulnerability

- All PT users can become vulnerable
- Non PT users suspect they could be vulnerable in PT environments
- Support Best achieved by improving overall standards and designing solutions which benefit everyone - analogous to the accessibility agenda
- By investing in environments, vehicles and services which generate confidence in travel, security is enhanced, and use by everyone is encouraged

Example issues from SWOTs

- Simplifying/decluttering complex interchanges
- Address the accessibility issues with Real Time Information for groups with physical and sensory impairments, for example, information in-vehicle can be sparse, poorly designed or inaudible
- Eliminate geographic variability in availability of RTI
- Improve communication during disruption – staff often ill-informed
- Address concerns about automation as a substitute for staff presence
- Build confidence in unfamiliar services (such as flexible transport)
- Evolve flexible transport services from primarily filling a social need to a commercial proposition

Summary STEEP(L)

Society	Technology	Environment
• Ageing population • Widening wealth gap • Cultural diversity • Increased flexible working and changing shopping & leisure patterns • Differences between rural and urban populations widen	• Bandwidth constraints • Energy supply constraints • Ubiquitous/ambient technologies • Hardware costs come down • Software OS agnostic • More video-analytics	• Impacts of climate change • Weather-related disruptions • Resource shortages • Air quality concerns
Economy	**Political**	**Legislative**
• High cost of infrastructure maintenance and upgrade • Drive for cost savings and economically sustainable services • Higher energy costs	• Unstable political structures • Silo-based thinking • Conflicts of interest between different scales of administration • Hacking and data ownership become political issues	• Direction dependent on balance between economic growth and low carbon agenda • Quality Contracts • Standards for reporting performance monitoring

Scenarios

Governance: interdependence

WORLD MARKETS

Keywords: Individualism, material wealth, mobility, global markets, international policy, privatisation, minimal government.



GLOBAL RESPONSIBILITY



Keywords: Community, environment, active public policy and international co-operation, highly regulated markets.

Individual values

Community values

NATIONAL ENTERPRISE



Keywords: Individualism, material wealth, national self-reliance and cultural identity, fragmented world.

LOCAL STEWARDSHIP

Keywords: Environment, localism, social regulation of markets, small-scale economies, participative governance.



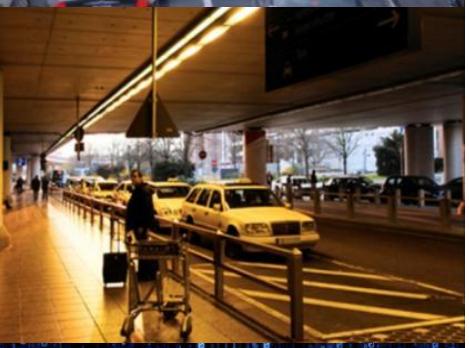
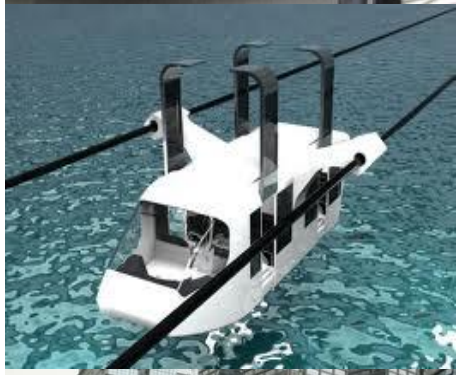
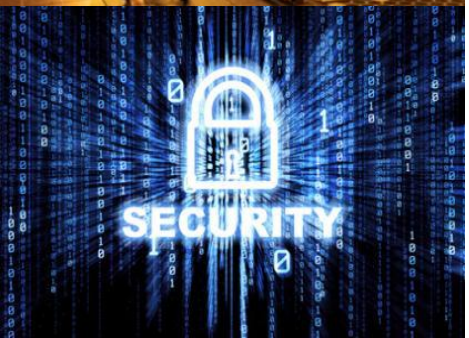
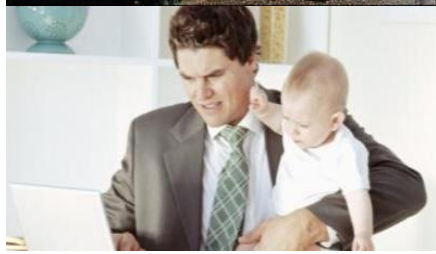
Governance: autonomy

Adapted from Berkhout and Hertin (2002), SPRU Foresight Futures Framework to 2020

Structure of scenario development

The scenario development exercises were structured by asking a set of questions along the following lines

- Under each scenario, what types of information/disruption/automation/flexibility will be most prevalent, and over what scale will they develop?
- From a passenger perspective – how comfortable will travellers be with these types of information/disruption/automation/flexibility, and what will be their expectations of support in terms of information and services?
- From the operator perspective – what kind of business models will operators of automated services develop (e.g. will there be system convergence or modal obsolescence?), and how will passenger confidence and customer service be prioritised?
- From the local/transport authority perspective – what role will authorities have in governance and resourcing of services in relation to information/disruption/automation/flexibility (e.g. data protection, infrastructure provision, social equity)?
- What will be the threats to personal security in relation to information/disruption/automation/flexible systems under this scenario?
- What will be the solutions to these threats generated under this scenario?

World Markets	Global Responsibility	National Enterprise	Local Stewardship
			
			
			
			
			

Backcasting: desirable, plausible, achievable?

- In general participants considered the scenarios to be quite plausible in many respects, though rather pessimistic
- The future for personal security in public transport in 2040 is likely to contain elements of all four scenarios, plus some new developments currently unknown
- They noted that some aspects of each scenario could be clearly identified as already existing somewhere in the world
- This gives us direction in identifying the social groups that are most impacted by particular types of development, but also suggests direction of some solutions

Policy recommendations

Enhancing technology to support personal security when using public transport needs some fundamental precursors to support a number of things, including:

- Transport authority/inter-organisational collaboration for the public good
- Resilience planning to prevent or mitigate disruption, which in itself undermines confidence amongst all groups. Those least confident or more vulnerable to begin with are disproportionately affected.
- Equip people with skills in managing and protecting electronic identities

Emergent Near-term Research Priorities

- From this process the second top research priority was "Understanding the customer and non-customer and their attitudes to personal security"
- More specifically
  - Segmenting people by their attitudes to personal security and how it affects travel behaviour
  - Understanding how issues of personal status and values are conveyed by the travel choices we make and the circumstances in which we adapt or adjust choices
  - Understanding whether personal security is a significant factor in cultural attitudes to PT use or non-use
  - Research into the impact on travel behaviour of free travel smartcards for 11-18 year olds in London
  - More use of panel data methods to identify factors behind behaviour change

THANK YOU



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