

The Future of Transport

Introduction

Our exploration of future trends and their potential impact on passenger expectations of travel, and particularly public transport, remains dynamic and thinking continues to evolve.

The Go-Ahead Group, with Passenger Focus, carried out a study to explore potential social, economic and technological changes and how these might influence passenger use of, and relationship with, transport. Flamingo, a global people insight consultancy, was commissioned to establish how everyday patterns of living and working might change and what the consequences of those changes could be over the next ten to 15 years.

This document gives an overview of our research and thinking.

To gain greater depth, plus real life examples of how these trends are developing, please visit passengerfocus.org.uk/key-issues/future-of-transport.com/

Context

Essentially, the fundamentals of public transport haven't changed much over time: someone transported from the 1950s to now would still instantly recognise the physical features of bus and rail travel. Rail carriages are still being pulled along steel rails, while guards in uniforms blow whistles at stations; buses may have a much sleeker design but they still stop at the side of the road when someone holds out a hand. Our time traveller might also recognise their fellow passengers' needs and aspirations – was there ever a time when passengers didn't want a punctual service, a comfortable seat and an affordable ticket?

But what they wouldn't recognise is how passengers use public transport today and how this interaction has been shaped by technology. The internet has revolutionised the way in which passengers plan journeys, and smart tickets are far removed from the old paper versions. The pace of change continues – Twitter is now an important way of keeping passengers informed of delays. It enables passengers to communicate with rail and bus companies, and with each other.

The industry focus is largely on the short-term – for passengers, bus and rail services are often only as good as the last journey and managers' attention is invariably going to be drawn towards operating in the here and now. But there are decisions being made that will have an impact on the future: new trains ordered today will still be around in 30 years time, while schemes like Crossrail, Thameslink, HS2 and bus interchanges can have long lead times. So it pays to keep an eye on the future.

Passenger Focus and Go-Ahead wanted to get an idea of what the future might look like for passengers beyond the short-term. Will expectations have changed?; will the way passengers use public transport differ? In short, what would today's passenger transported some years into the future see and what would they expect of their journey?

The purpose of this report is to help planners, funders and transport providers take more control of the future, not to make predictions. Planning for the future is difficult and history is littered with failed predictions. We're in a world where change increasingly comes from all directions – from above and from below, from technological and social development, economic forces, and from environmental change. This makes change harder to anticipate and predict and puts a greater onus than ever on organisations to be nimble and flexible.

Therefore, the aim of this report is to provide an overview of the broad trends and narratives which will help organisations take the future into their own hands. The usefulness of the thinking will come less from a straightforward projection of change and a demand for grand plans to be set in stone to deliver against them. It will come more from outlining the direction and signs of significant change to provide good start-points for industry to be part of setting the future agenda.

Methodology

This work aims to look beyond what passengers need now and instead look at the longer term trends that the transport industry needs to prepare for.

The research had three core objectives:

- 1) To understand key future trends impacting on public transport in the UK.
- 2) To interpret how these trends might manifest themselves in evolving passenger mindsets, needs and behaviours
- 3) To identify implications for types of services and experiences (including technology) that passengers will expect.

This is not an attempt to predict the future: the purpose of this work is to share insights that allow opportunities to prepare for, and shape, potential futures.

Our approach:

The study worked with the following understanding

- We were putting people at the centre, rather than technology
- We sought to identify deep and long term trends
- We acknowledged different rates of changes for different regions and sections of society
- Unexpected 'Black Swan' events will happen
- Physical infrastructures (i.e. tracks and stations) are relatively immovable

The first two stages of the project were to identify the macro future landscape; the second two stages were to translate these into future passengers' needs and their implications. This report and web pages are the outcome. However, this remains a work in progress and we are keen to maintain a dialogue about how transport might evolve to meet the challenges and opportunities presented in the future.

The detailed stages of the work are set out below:

1 *Identifying drivers of change*

- a. Secondary research
- b. Expert roundtable
- c. Hypothesis forming
- d. Desk research by futures specialists, augmented by expert interviews from other fields and transport/mobility (including Passenger Focus and Go-Ahead), plus several reviews through the project team

2 *Scoping travel and mobility trends*

- a. Connecting trends to travel and transport issues
- b. Core team workshop

3 *Developing key ideas and themes*

- a. Expert interviews to broaden and deepen the thinking
- b. Distillation into working papers to share and workshop with core team

4 *Synthesis*

- a. Sense checking emergent thinking internally and externally
- b. Drafting documents and workshop materials to share as final outputs
- c. Presentation and discussion of the findings with an invited audience from a cross section of disciplines.

Analysis

There are two layers to the analysis of the trends shaping future transport and mobility – Macro and Micro trends. Macro trends shape the world we will live in. Micro trends are closer to the individual and daily life and shape the way we'll live in the future:

Macro Trends 'The World Around Me'

- A Growing, Older Population
- Splintering Social Structures
- Environmental Squeeze
- The End Of Assumed Affluence
- Blurred Boundaries Between Offline/Online Life
- Shifting Balances Of Power From Above To Below
- The Feminisation Of Society

Micro Trends 'My Future Life'

- My Future Self
- My Future Relationships
- My Future Work
- My Future Places
- My Future Things

More detail can be found on these trends, and how they relate to peoples' lives at passengerfocus.org.uk/key-issues/future-of-transport.com/

What did we find?

The main themes have been listed above. What follows are the highlights of what some of these themes might mean for today's bus and rail industry and the passengers who will travel.

A growing and older population



By 2035 the UK population is estimated to be 71-75 million – an increase of at least eight million from the current figure. Not only will there be more of us but we'll be a little older as well – over the next 25 years the number of people aged 65 and over is expected to rise by 65%, to 16.4 million.

Sheer numbers will inevitably put a strain on an already congested transport system and will need to be catered for in assessments of demand. However, perhaps the more pressing statistic concerns the increasing proportion of the population over 65.

Older passengers will invariably bring a different set of aspirations and expectations. This generation may well be more active than we've known in the past – working, travelling and participating across spheres of society and culture – but, as people get older, things like step-free access at stations, reducing the gap between train and platform and low-floor buses become more important. Journey planning assumes even more importance – will there be apps that can identify easy-access connections or book staff assistance?

The growth of the single-person lifestyle



Currently, 34% of all households are occupied by one person and the average size of a UK household is expected to decrease from 2.34 (2004) to 2.09 in 2029. There are many factors contributing to this decline in the traditional family unit: lower fertility rates, delayed marriage, increasing divorce rates, more women in the workforce and higher levels of education attainment.

There is a basic human need for contact. This won't disappear simply because people live alone – if anything one of the net effects of the rise of one-person households is likely to be a desire for more socialising and more frequent activities with others. Nights out at the cinema, pub or restaurant will continue – bus and rail will continue to have a role in enabling this, but only if timetables provide services at the time that people need them.

The pull of the city



In 2009, 62% of jobs in England were concentrated in cities, with 39% in London, Birmingham, Leeds, Manchester, Liverpool. It is predicted that this regional surge will continue as Birmingham, Manchester, Leeds and Newcastle's Knowledge Industry-clusters grow. This would lead to an increase in migration and immigration, and notable development of metropolitan areas.

In recent years we have also seen the flourishing of the city centre as a residential space. The rehabilitation of city centres is helping reverse the trend of people moving out of cities when they have children. It is likely that this, through the popularity of new-build city apartments, the desire to walk to work and leisure amenities, and to be close to train stations and amenities, will continue.

One final factor facilitating the pull towards the city is the growing focus on the suburban renaissance. 80% of Britons live in suburbs, and planners are getting behind the strategy of using suburbs to make towns and cities more resilient in coping with future congestion stresses. Suburbs are being talked about as the great untapped resource of a sustainable urban future. Their connection with, and integration into, city centres becomes of paramount importance.

Rail is ideally suited to moving high volumes of people in and out of city centres. Buses and trams are good at moving people around in cities. Changes in where people live and work are bound to have a huge impact on patterns of commuting which in turn will help drive decisions on timetables and capacity, the capability of which will determine the success of plans for each neighbourhood.

Whether in cities, or far beyond, it will continue to be vital that transport requirements are integrated into local plans. The need for joined-up strategies for all aspects of community life will be increasingly important.

How we work



The biggest question being asked is whether work is a place to go, or a thing you do. Whilst the dominant trend is towards a growing de-centralisation of working practices, the issue is not black and white.

Experts forecast that it is far more likely that companies will negotiate more flexible hours with their employees as well as switching between time in and out of the office rather than a wholesale move towards 'homeworking'.

There is a chance that flexible working will become common across many industries, leading to many people being able to choose their start and finish times for the working day, plus the days they spend at their company office.

It is almost certain that the proportion of Britain's labour force employed in knowledge work, which primarily involves work with information or the production of knowledge, will continue to rise. The Work Foundation forecasts a growth in knowledge work to 55% of all work by 2020.

It used to be thought that these jobs were ripe for teleworking. However, knowledge workers have historically coalesced around cities as hubs of information and exchange. So it is fair to argue that as knowledge work increases its share of UK industry, companies will still benefit from basing themselves in clusters: they can easily meet with other companies and share ideas, they are more attractive to prospective employees, they have good access to entertainment, public transport and much more. Where knowledge work cumulates, there is a knock-on associated need for workers performing service jobs in and around those areas. This situation will probably result in more and more people moving to cities, and an increased capacity-requirement on transport vehicles.

We are experiencing an ongoing increase in female participation in the workforce and in education, which has far-reaching, hard and soft, implications for our society and relationships. Women's greater 'presence' will continue to challenge working patterns, working styles, leisure patterns, family structure, parental roles, and much more. In addition, childcare routines will continue to be shaken up – driven by men and women dividing up childcare more equally but also by the rise of single parent households which put more pressure on women to go out to work while bringing up a family.

Technology can reduce the requirement for people to meet but it is unlikely to do away with the need completely. There will still be a basic human desire for physical, face to face contact, not least as a means of building a relationship and trust. What might change, though, is where this takes place. A third space of office 'hubs' emerging between the office and home is another trend set to develop. In many instances it is coffee shops which are filling this role, aided by their provision of Wi-Fi Internet access.

So what might this mean for travel? Flexible working could reduce (but not remove) some of the demand pressures based around the traditional peak hours which in turn could reduce the cost of expensive capacity enhancement schemes. But it will create the need to strengthen services at other times. As peak and off-peak blur there will be a need to look at the frequency of services and, of course, the structure of fares.

There is also scope for stations to take on some of the role currently being met by coffee shops – can they become the meeting place of the future?

24-7 world



We are becoming an increasingly 'always on' 24/7 society. The internet has fuelled the ability to work, shop and play at all times of the day to the extent that there has been a blurring of online and offline lives.

The overarching shift in the way we live our day-to-day lives will be one of ever greater seamlessness. Recognised patterns and routines will fragment and blur as we expect to be constantly connected to people, places and content. Our days will move from compartmentalised, traditional patterns to more free-flowing, flexible timeframes and increased integration of multiple activities.

Technology will be central to this – in order to lead lives without obstacles and obstructions, we'll need access to the Internet and our files anytime and anywhere – including when on the bus or the train. Being able to 'do something' when travelling by train is already recognised as one of the benefits of rail travel – it can be productive time rather than dead time. At the moment much of this surrounds work or reading but the internet opens many more opportunities: 30 minutes on the train could give you the opportunity to organise your weekend, update your facebook status, stream music or do your weekly shop.

For example, at Gatwick Airport an interactive billboard has been installed displaying images/prices of common products, each one with a QR code attached. Customers can scan the code of any product they wished to purchase – adding it to their online shopping cart. After shopping is completed, orders are delivered to the user's home on the same day.

However, the connectivity and efficiency benefits of transport are lost if the signal constantly drops out on your mobile or there isn't space to get out your laptop. New designs of trains will need to factor in these issues and the industry will need to work with service providers to ensure reliable communications.

Access is not only about a constantly online, connected world, it's about physical access too. Timetables need to continue to keep pace with changing cultural needs such as people's requirement to travel later at night or on a Sunday.

Information overload and participative consumers



In an age of information and data overload from media and the internet, there is an increasing desire for filtering and customisation and an expectation that the consumer can shape their own experience. Technologists talk about the 'Age of Personal Informed Reality' – the notion of the internet becoming a customised resource.

The mobile device and apps drive much of this notion of filtering and relevance, and Morgan Stanley estimate that by 2015 the mobile web will be bigger than the desktop internet. This, of course, has profound implications for relationships with brands and services. We are increasingly going to ask questions of them based only on our needs and we will only want to hear from them about matters relevant to us.

If transport continues to mimic trends seen across many other service industries, people will expect ever more individualised information. Passengers are already able to receive alerts specific to them if their train is delayed to their phone. In addition, much of this bespoke information will be displayed in increasingly visual, immersive, and

game-like ways – in realtime and with high levels of interactivity.

It might be envisaged that these flexible, personally-responsive developments will signal the "death of the timetable" – or at least how it is presented to people. Instead of being a written document it can respond to problems such as incidents and delays and people will be kept continually updated.

Whilst passengers are using transport, mobile devices may be keeping an eye on next steps, upon and after alighting. For example, if connecting onto another train, underground line or bus, any problems on these routes will be immediately reported with smart alternatives (both public and private). Technology enables passengers to stay one step ahead in the decision making process.

Passenger expectations of the qualitative aspects of service can also be expected to rise. Rapid and responsive information is already sought as a given but there will be increasing expectations that everyone involved in delivering passenger transport must demonstrate an appreciation of the consumer perspective. This has implications for the roles and requirements of staff. Customer service principles must be embedded across the entire operation, not just seen as the preserve of specific departments.

The search for value



The UK economy has a fundamental impact on consumer lifestyles and choices. It is generally agreed that we are entering a period that marks the end of assumptions that affluence will increase for each subsequent generation which have existed since the Second World War.

A recent poll by Ipsos Mori showed how people, for the first time, are generally acknowledging that their own children are likely to have a lower quality of life than they themselves do. Clearly this will not affect everyone but it will impact on a significant proportion of the population.

Assessments of cost and value are part of this scenario. People may increasingly be driven to live in rented accommodation due to the prohibitive cost of housing, which may mean moving more often. Financial stresses, due to rising costs of fuel and insurance, will put car ownership under pressure, and perhaps lessen its social appeal in the future. We've seen that the number of 17-20 year-olds attaining a driving licence has dropped in recent years, for the first time in history. The increase in prices of oil is likely to lead to more restricted travel.

Already this is having an impact: Which? offers a fuel calculator tool that allows the driver to calculate the financial cost of their car journey before they make it, and also examine the carbon emissions the journey will generate. This allows drivers to compare these costs against those of other transport modes, to work out the most economical way of making the journey. (See also Go-Ahead's Carbon Calculator tool at <http://www.go-ahead.com/sustainability>).

This is likely to cross-over into public transport. People may increasingly want to compare costs by different transport modes and look at what they are getting for their money. We may begin to see journeys judged on levels of 'necessity' with shorter, more frequent journeys amalgamated into a single bigger journey that's more productive in terms of cost and impact. At such times the value of travel time assumes even more significance – the ability to get more out of a journey may help to influence modal choice.

What next?

This research offers a glimpse of what the future may hold and how it may have an impact on rail and bus travel – but there can be no certainties. The report is designed to start a conversation rather than provide answers. Some of the themes raised will be more long-term but others such as rolling stock design, information Apps, smart-ticketing and customer service are relevant now.

Passenger Focus and Go-Ahead retain an ongoing interest in how the future will be manifest and the changing needs and behaviours of passengers.

Go-Ahead will use the insights from this research as it continues to innovate to meet customers changing requirements in its bus and rail operations.

Passenger Focus hopes to use the insights gained in its work with a wide variety of organisations and stakeholders, particularly, but not exclusively, those who set the strategic and policy context for transport and those whose responsibility is to then deliver this, in its many forms, across the UK and beyond. For Passenger Focus, "... the future is here now... just not evenly distributed."