



# Rail passengers and apps: what next?

## Summary report



### Foreword

from Anthony Smith  
chief executive

Apps in general are becoming increasingly loved and sophisticated. However, our previous work on apps in rail [<http://bit.ly/1vvys1u>] showed that commuters were often unaware that they could use apps to find out information about their journey or to buy tickets. When they saw what was already available, they were generally impressed by what was currently possible.

This new project aimed to explore future possibilities for apps in rail. We consulted some industry experts and some rail passengers who can be considered early adopters in technology and particularly in apps.

Both could identify improvements and innovations with train apps. The priority seems to be enhancing the customer experience for the user and creating more functions. The majority of the new ideas proposed exploited the key requirement for rail apps; providing functionality while 'on the go'.



Passengers were most interested in new features which would enhance their journey experience including end-to-end journey planning, an offline mode (as back-up when no network coverage)

and being able to use the smartphone as a ticket. However, a challenge for the industry is creating excitement around rail apps. This may be difficult due to the functional role that they play, but effectively communicating how they can make travelling easier or providing an incentive to download and try it would enhance take-up.

Apps will never appeal to all. Many passengers do not have smartphones or tablets and others who have them do not wish to use them for these kind of activities. So we must always remember that traditional forms of communication and support for passengers, including staff, are maintained alongside apps and other technological advances.

## Background

Previous research [<http://bit.ly/1vvys1u>] showed low awareness of rail apps but that passengers were positive about them when they used them. Typically passengers found it difficult to suggest improvements to rail apps so we wanted to hear the views of more engaged users of this technology.

## What we wanted to find out

The research explored how rail apps could be developed in the future. In more detail, its objectives were to:

- review what innovation is taking place in apps, including in other sectors
- assess whether the predictions for apps in general can be applied to travel apps
- understand how rail apps are being used by heavy users
- test new ideas for rail travel apps to identify which should be developed and how.

## How we did it

To achieve these objectives, a three-stage research approach was taken:

- in depth interviews with travel, rail and app experts over the phone and face-to-face
- accompanied 'surfs' during which the movements and navigation of twelve tech-savvy passengers were recorded as they completed a series of tasks on their mobile
- eight 90-minute focus groups across England with five people in each.

Participants for the surfs and focus groups were a mix of iOS and Android mobile-users, business, leisure and commuting travellers and a spread of gender and ages.

# Key findings

## Usage of apps in the passenger journey

Passengers used a limited number of rail apps – often only one or two each. This remained true for heavy app users and those who take the train on a regular basis. In many cases passengers used apps alongside other ‘shortcuts’ like email or screen-shot information to access train information. Many used ‘traditional’ techniques out of habit, for example station information screens or radio.

Even heavy app users used alternative methods to complete tasks achievable through apps. This stemmed from a lack of knowledge as to what rail apps could do, pre-existing habits, security concerns and simply convenience.

*"There's too many, I mean like the train ones, there's hundreds and hundreds of them isn't there. Every train line has got one. And then you've got the national ones haven't you, you've got Virgin, the O2 one which gives you all the information, but I think you can get overwhelmed with them."*

London, Commuter, Heavy user.

Figure 1 summarises the typical approaches used to complete rail travel tasks that could also be done via apps, and the rationale behind the choice that was made.

**Figure 1: Approaches used for completing travel tasks**

Task	Primary alternative method used	Reasoning
Pre-planning journey	Using an internet webpage	<ul style="list-style-type: none"> <li>• Perception that more information is provided on a webpage</li> <li>• Larger screen makes navigation less ‘fiddly’ than on phone</li> </ul>
Purchasing tickets	<p>Using ticket machine</p> <p>Using an internet webpage</p>	<ul style="list-style-type: none"> <li>• Prefer security of visiting machine</li> <li>• Required to pick-up ticket from machine anyway – not downloaded to phone</li> <li>• Fear of phone running out of battery</li> <li>• Security of entering credit card details into app</li> <li>• Get transferred to a webpage from an app anyway</li> </ul>
Checking departures	<p>Information boards at stations</p> <p>Email or print details from an internet webpage</p> <p>Collecting information prior to departure through an app and taking a screenshot</p>	<ul style="list-style-type: none"> <li>• Easily accessible</li> <li>• Station information trusted over app</li> <li>• Security in case of lack of internet</li> <li>• Security in case of lack of internet</li> <li>• Not required to go back into app and re-enter information</li> </ul>
Checking for disruption	Information boards or member of staff	<ul style="list-style-type: none"> <li>• Easily accessible</li> <li>• Station information trusted over app</li> </ul>
Checking platform numbers	Information boards at station	<ul style="list-style-type: none"> <li>• Easily accessible</li> <li>• Station information trusted over app</li> </ul>

"It's just habit, now I'm talking about it, it does seem quite strange. For years now, I've used Red Spotted Hanky or Virgin to check on train times, and only since I've been sort of living on a rail line close to me I have been checking National Rail. It's just a habit, but probably after speaking to you now, I will probably review that."

Surf, Commuter, Younger

Passengers felt that there were enough travel apps in the market, with some overwhelmed by the quantity. Many struggled to identify any key differences between apps, especially as they all use information from the same central databases. Any differences were largely about branding.

For commuters, use of rail app functions was mostly limited to checking departure times and information about disruption. As such, the speed of apps was critical. Business and leisure travellers used a different but still limited number of functions. Being less familiar with their journey than commuters, they used apps to research destinations and ticket prices, and to check for disruption. Some also bought tickets. Business and leisure travellers required much more information, including ticket prices for all trains and deals available, all route options, arrival and departure times, and the ability to search for travel weeks or months in the future.

Rail apps were seen as most useful when 'on the go'. Pre-planning tended to be done on a desktop computer or laptop. Travellers sourced 'live' information at the train station. As such, usage is only likely to increase if apps are easier to use than other options or offer more or unique information.



"I think that travel Apps should be right at the front of the queue in terms of technology development. Because it's actually pretty simple, I want to go from here to here. It's not like shopping or whatever, it's really simple, so you'd think that they would be able to get there first."

London, Commuter, Heavy user.

## The app market, current trends and future developments

Evidence from the interviews with experts suggested that key to the future development of apps will be customer experience rather than simply adding features. They predicted growing competition would lead to more professional apps with fewer 'bugs'. Apps will be designed specifically for Android, iOS and tablets, work offline and be more customisable. So-called 'intelligent apps' will draw information from other apps, creating a personal experience.

Consumers focused on the invention of new features when thinking about the future but current frustrations indicate the desire for a better user experience. As seen in figure 2, consumers base their expectations of travel apps on what they see in other areas.

Experts, however, warned that innovation was likely to be held back by the technological and organisational limitations of the rail industry, including:

- nearfield communication (NFC)/QR-code readers not prevalent on all ticket barriers
- railways introducing smart cards rather than mobile ticketing
- National Rail Enquiries, Network Rail or train companies withholding data

"It's the privacy. Yeah I don't like giving out information to help make things easier. I will go into the sites that I want to give my information to, to get the information that I want to come to me. I'm not prepared to have all my information out there."

London, Commuter, Non/light user

- London significantly ahead of the rest of the country for information available
- barriers to developing iOS apps are considerably higher than Android.

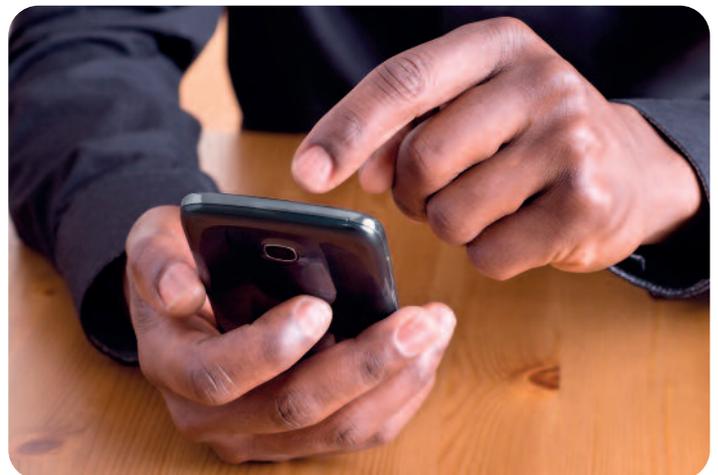
Experts said many 'ideas' were already developed but, until barriers outside developers' control were removed, they could not be launched.

Figure 2: Desired innovation in travel apps

Idea	Informed by
Offline functionality	Trip Advisor
Using the phone as a ticket	Other tickets used: cinema, gigs, football
End-to-end journey planning	Citymapper
Update of services through push notifications	ebay, amazon, BBC News, Dominoes Pizza
Voice recognition data entry	Siri, google Now
Live feeds of service status	BBC News scrolling feed

*Most desired* (at top of table)

*Nice to have* (at bottom of table)



## Reaction and preferences for tested app development ideas

Figure 3 shows participants' views on the concepts tested, ranging from the most exciting ideas, via useful functions, to active rejection. The ideas that most appealed were not always the most useful. This was largely because useful features, like push notifications for delays and faster ticket-buying, were considered 'coming up to standard' rather than revolutionary.

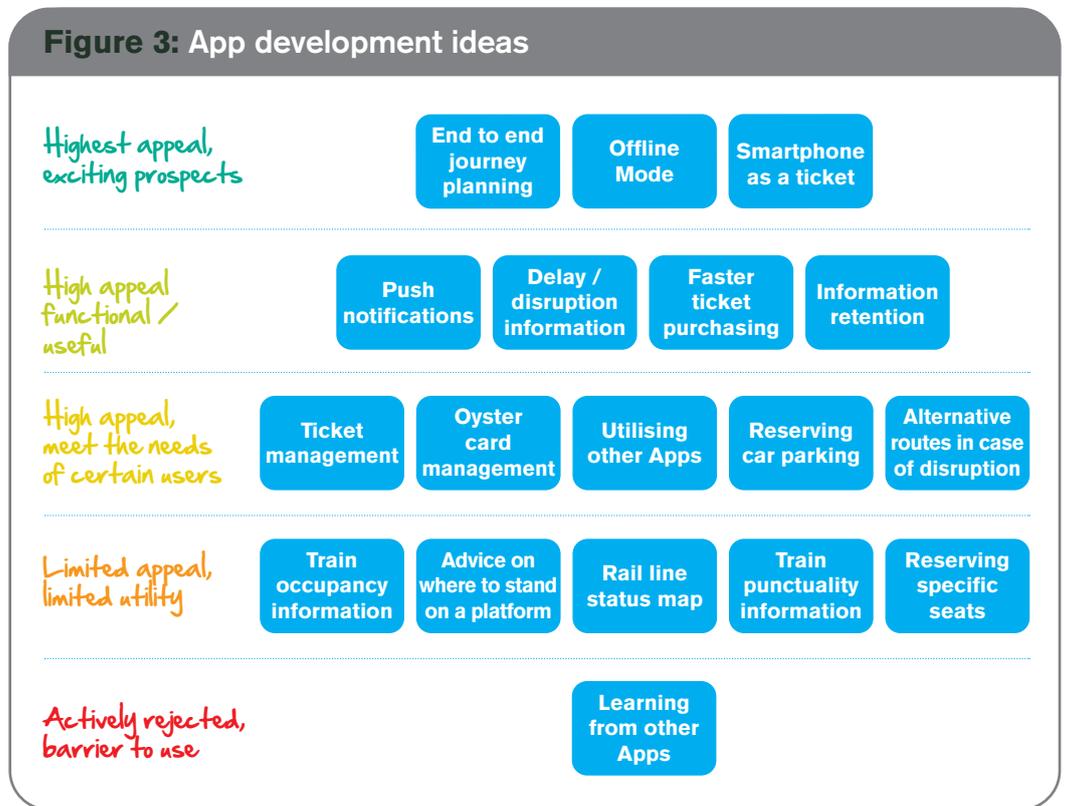
Participants liked features that pushed the boundaries of what was expected from a rail travel app or solved an existing problem. Using a smartphone as a ticket was particularly popular, although passengers were sceptical it could be done.

Some features suited certain types of travellers. Commuters, for example, valued ticket-management and car park reservation. The usefulness of finding different routes during disruption depended on whether there were realistic alternatives. Less-popular ideas were still seen as interesting extras.

Sharing information between apps was actively rejected. Data security and the extent to which companies would have access to private information was a very sensitive issue. Many dismissed the idea of any benefits to this feature and most said it would put them off the app.



Figure 3: App development ideas



## Summary and recommendations

Passengers were underwhelmed rather than unhappy with rail apps and felt they did not fulfil their potential for features and design. This caused some frustration. Passengers and experts identified improvements and innovations that could be made to train apps. The majority of these ideas were for functions and an enhanced customer experience centred on the unique selling point of rail apps: usage 'on the go'.

Passengers could see a use for most of the ideas proposed but few generated excitement. Creating a buzz about rail apps may be difficult given they are so functional.

This research is part of the joint Department for Transport/Passenger Focus smarter-travel research programme. It was undertaken by Illuminas.

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This is the latest project in our joint programme with the Department for Transport exploring passenger needs from smart ticketing.