Passenger information at railway stations

- passengers' experiences and expectations

July 2021

Foreword

The place to start when seeking to improve digital information at railway stations is with the passengers whose journeys that information is intended to make trouble-free.

As part of the cross-industry Smarter Information, Smarter Journeys programme (SISJ), the rail industry asked Transport Focus to research what passengers like currently and what they want improved when it comes to digital information at stations.

This is mostly about information screens, including those that are part of customer information systems (CIS) and the operational information system (OIS), but other digital information is included as well.

This report summarises the research and conclusions drawn from it. The findings will be used to guide the industry's next steps in ensuring that passengers receive the information they want, in the way they want it, when at a station.

Guy Dangerfield
Head of strategy
Transport Focus

Jo Shelley
Joint SISJ programme lead
Network Rail

Jason Webb
Joint SISJ programme lead
Rail Delivery Group

Background and introduction

Transport Focus previously looked at passengers' experiences and expectations of station information screens in 2014. That report is available on our website[1].

In 2020 the rail industry established a Task and Finish Group looking at improving digital information at railway stations as part of its Smarter Information, Smarter Journeys programme[2] with the aim of delivering a significant and sustained improvement in customer information. The Task and Finish Group brings together Network Rail, the Rail Delivery Group (RDG), the train operating companies (TOCs) and Transport Focus. The group identified a need for fresh insight on this subject.

In 2014 we focussed on larger, Network Rail managed stations. For 2021 the desire was to also include smaller stations managed by train operators and to cover various additional topics:

- 'new' technologies such as coloured displays
- so-called 'totems' (interactive display screens)
- the role of public address systems
- the interaction between station information and that information delivered to passengers' own smartphones.

Transport Focus, on behalf of Network Rail and the Task and Finish Group, engaged Illuminas, an independent market research agency, to deliver an appropriate programme of research.

The 2021 research was conducted during the spring coronavirus lockdown when relatively few passengers were using the railway. Our 2014 research included contextual interviewing where we spoke to passengers as they toured the station concourse while looking at and commenting on the information screens to be seen there. This was not feasible in 2021 because of Covid-19 and all discussions were conducted online as individual depth interviews or focus groups. The passengers we spoke to included both those who had not travelled since the beginning of the pandemic and those who were still making journeys by train. This latter group were asked to observe the information screens they encountered during their journey(s); all were shown video and photo examples of typical screens to aid the discussion.

This document is a summary of key findings and Transport Focus's conclusions from the research. The full deck of Illuminas' presentation slides is available on our website.

[1] https://www.transportfocus.org.uk/publication/passenger-information-screens-at-railway-stations/
[2] https://www.raildeliverygroup.com/about-us/publications/12744-customer-information-programme/file.html

Key findings

The role of station information screens

Station information screens play an essential role in guiding passengers on their journeys. For most passengers the 'main board' is a focal point and, if they already have a ticket, often their starting point while navigating the station.

Passengers appreciate the fact that whatever station they are using and whether or not they are familiar with it, information is generally presented in a consistent format across the network.

Regular passengers who know the station and often know which platform to go to will still use the main board or subsidiary screens first to confirm whether their train is running and if there is any delay, and then which platform it will depart from.

The main board can often communicate at a glance whether it is a 'good day' or whether disruption is affecting many services. For less frequent travellers or those unsure of which train to catch, the main board lets them identify their train, its calling points, the platform it will leave from and whether any delay is foreseen.

> "When I go to the station I want to know the platform, the time, and where to get a coffee and that's it. I'm not looking for advertisements or whether there's a delay in some other part of the country."
>
> Newcastle, Older, Leisure/Business

> "As soon as I get to the station the screen is what I look for first; it's not like the Underground where you know your platform in advance, so you have to check."
>
> Orpington, Older, Commuter

Subsidiary screens then serve to confirm that the passenger is heading for the right platform/train and if any delay has occurred since they last looked. This confirmation and reassurance is provided by smaller screens in various locations around the station:

- in bars, cafes and shops
- at the foot of stairs to bridges or subways
- at platform entrances or the gateline (seen as essential by some who tend to view this as a 'point of no return')
- on the platform itself (as further confirmation and also to monitor that the next train is the one they want and if any delay has occurred).

If a train is cancelled or delayed, and especially for more knowledgeable passengers, the main board is the primary source of information as to what their alternatives are. If the disruption is severe or the passenger less knowledgeable, then public address announcements, their own smartphone or the station staff may be consulted.

Otherwise, few (visually-impaired passengers aside) listen out for announcements.

Many find the audio quality poor, also noting that wearing headphones is commonplace, and say that announcements do not have a sufficiently attention-grabbing introductory 'bing bong'.

> "For the love of God, can we invest in decent microphones. You can't really hear, and you're willing, but you just can't."
>
> Orpington, Older, Commuter

While it is very much secondary to information regarding their current journey, passengers welcome news of anything that might affect possible future journeys. This may be planned engineering works, timetable changes, weather warnings or events such as football matches or concerts that may lead to crowding.

Interplay between station information and smartphones

Many passengers will use the internet for journey planning whether that is on a computer or a smartphone. They may also use their phone on their way to the station to keep up-to-date with the latest train running information and any likely delay to their journey.

However, passengers cannot envisage stations without information screens. Screens provide confirmation and reassurance and are particularly important when things go wrong and plans have to change. While most stations already have at least basic screens, it is expected that they will be provided and upgraded as stations are refurbished. And where a station is unstaffed, telephone help points provide reassurance if services are disrupted as well as with regard to personal safety.

There is a general assumption that stations will have the most up-to-date information and that online sources may be a little behind what staff know, even if that information is not immediately displayed on station screens. When passengers see staff consulting their phones or talking on their radios they tend to expect whatever source is being consulted to provide the most reliable version of 'the truth'. A few asked why staff do not have earpieces linking them to the station managers.

Customer Information System (CIS) screens

The conventional orange-on-black screens are generally seen as doing a good job and are instantly recognisable for what they are, whether it is the main board or platform displays. CIS screens are generally felt to be well placed. However, at smaller stations a single screen can seem inadequate if passengers are using the full length of a long platform before boarding their train. Disabled passengers sometimes find screens are at an inconvenient height or angle.

Passengers have few spontaneous complaints. However, when questioned, they do express a view that the orange-on-black 'dot matrix' CIS screens are looking a bit dated. Some make the comparison with their smartphone or computer screens and what those are able to display in terms of using colour, graphics and moving images.

Upgrading screen technologies is not seen as an immediate priority but there is a clear expectation that more modern technology could bring improvements and that it should be adopted when screens are due for replacement.

Once shown examples of new technologies and screens using white-on-black or colour displays, passengers agree these are desirable improvements which should be implemented as stations and systems are refurbished and updated.

"Orange is quite dull; it doesn't pop, doesn't stand out at all. It's dated. I'm used to receiving information in all these different colours and fonts and then you come to the station and it's like the difference between a 4K and an old analogue TV."

Leeds, Younger, Commuter

"That's very much an improvement, it looks great. It does the same thing but it's brighter, clearer. If we're going to have such expensive tickets then the screens should look the part."

Leeds, Younger, Commuter

There is almost universal agreement that white-on-black is clearer and easier to read. The use of colour is seen as useful, in particular for highlighting delays, cancellations, platform alterations and other relevant information.

However, the choice of colours can raise issues for some visually-impaired travellers. Passengers can also envisage the use of colour helping to differentiate services – different train operators, long distance versus local services, 'fast' as opposed to 'stopping' services, and the like.

> *"That white font is so much simpler; it's like Times New Roman on Word, straightforward and easy to read."*
>
> Newcastle, Older, Leisure/Business

The one main concern about colour displays is that they can 'disappear' into the background; they can look like advertising hoardings or electronic posters. While colour screens are not as instantly recognisable as the current orange-on-black main boards, it is probably only a matter of time before they become as familiar and easy to spot as the current screens.

The information displayed by CIS screens is generally seen as adequate, although there is room for improvement. Clear separation of departures from arrivals, 'next fastest train' screens or other screen-based information would be helpful. There is a dislike of information that scrolls across the display or across multiple 'pages'. It can be frustrating having to wait for the display to scroll to the page needed. It was suggested that screens using a 'portrait' rather than a 'landscape' orientation reduce the need for scrolling.

> *"It's actually annoying when you're trying to find your train and you have to read text about LNER or something about Covid or whatever. It's actively annoying waiting for the next page to come. Just show me my train!"*
>
> Newcastle, Older, Leisure/Business

The move to showing arrival times at intermediate stations is generally welcomed as is information on where to find first class seats, toilets, wheelchair/cycle spaces, and so on.

Some passengers struggle to understand graphics indicating train 'loading' (are they showing how full or how empty the carriages are?) but most see this as useful. And, as with the move to white-on-black displays, this may just take some getting used to.

> *"I love that one; I can see that that's how full the carriages are. Or does the green mean how empty they are? The capacity that's left?"*
>
> Manchester Piccadilly, Older, Leisure/Business

> *"The boards are helpful to direct me to the correct platform and making sure that I'm on the right train. I always find the screens on the train to be incredibly reassuring especially when I'm in a rush. But you run the risk of being left on the train as it sets off."*
>
> Birmingham New Street, Commuter, Younger

Operational Information System (OIS) screens

As in 2014, there is a lot of confusion around OIS screens and their purpose. Many passengers could not initially recall seeing such screens, and even those who were still using the railway had difficulty in spotting them on their journeys when asked to look out for them.

When shown examples of OIS screens displaying typical messages many passengers still did not recall seeing them at the stations they use, but they agree that much of the information is valuable.

> "It's just extra stuff that may impact your journey, I guess. The one that warns you about no trains is definitely useful because it's not something you'd see on your phone; if you saw it on a big board you'd plan ahead."
>
> Leeds, Younger, Commuter

The most valuable information is felt to be about current disruption and, at the time of the research, Covid-related travel advice. This is followed by advance warning of potential disruption due to planned engineering works, timetable changes, weather warnings, and sporting or other events that might lead to crowding.

Passengers see little or no value in 'public service' announcements about leaving baggage unattended, CCTV monitoring, leaves on the line, train doors closing and the like. Such messages are often seen as 'mere advertising' and these in particular create confusion as to the role of OIS screens.

More modern examples of these screens showing multi-coloured messages about forthcoming engineering works with some showing photos are well received. On the other hand, monochrome content with simple animations is not valued.

Passengers comment on the inconsistent use of colours, confusing icons and the lack of a clear brand identity. They also feel that many OIS screens are poorly placed – seemingly squeezed in where there was some free space rather than alongside passengers' walking routes.

While passengers may have been unaware of OIS screens before the research and struggle to understand their purpose and some of the messaging, they are not calling for their removal. They feel they have a role to play and that much of the messaging has value - if not for the current journey then for future ones. Their issue is with what they see as irrelevant information that they tend to dismiss as 'advertising'. Passengers think that the role of OIS screens needs to be clearly defined.

They are wary about the sort of information currently displayed by OIS being shown on CIS screens – they fear that could detract from the clear and specific purpose of CIS in showing current train information. That said, current disruption information is important to them and if we had been able to show examples of how more disruption information could be integrated into CIS (and that this would not include any 'public service' messaging) their view might have been different.

Some Londoners likened OIS screens to those used by Transport for London to display service status information. They agree that one would normally walk straight past a screen displaying 'Good service on all lines' without giving it a second glance, but if it shows that services are disrupted they say they would pay attention.

Passengers can see OIS screens being used in a similar fashion – disruption information for that day, or in the future, otherwise reassurance that all is well. As such, the screen has a clear purpose in communicating service status without confusing or irrelevant 'public service' messages detracting from this goal. Such screens should be positioned near to the station entrance so that passengers immediately know the status of their service.

Interactive digital 'totems'

As with OIS, few passengers had noticed electronic totems or recognised them for what they are (large touchscreen displays that passengers can interact with to obtain varied travel information). Many totems tend to suffer from the OIS problem of blending into their surroundings and being indistinguishable from advertising screens.

However, passengers do see totems as being innovative, although their interactive nature worried some passengers about cleanliness in relation to the safety of a touchscreen during the current pandemic.

> "The information screens at the larger station were interactive which was really interesting to see. I've never paid attention to these before but it's useful for less regular travellers."
>
> Birmingham New Street, Commuter, Younger

> "Information-wise I'm not sure what appetite there will be for touchscreen machines for obvious Covid reasons so bigger, clearer display boards that are both accurate and up to date will be needed."
>
> Birmingham New Street, Commuter, Older

One of our illustrations of a totem showed it being used in Journey Planner mode. This caused some confusion as passengers cannot envisage arriving at the station without knowing what train they are going to catch; journey planning is seen as something to be done before setting off to the station.

They can envisage a need for journey planning at the station only if services are disrupted – and in those circumstances they imagine that there would be long queues of people wanting to use the totem.

Credit: LB Foster
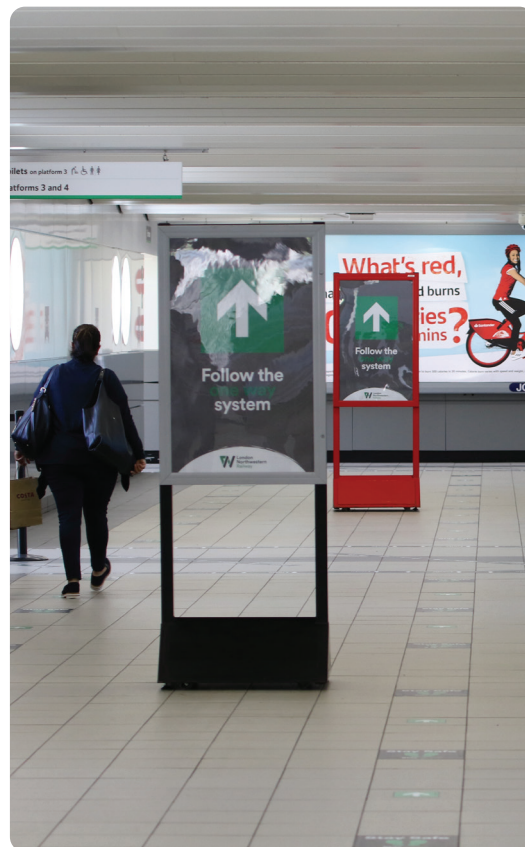
Totems are also seen as having value as free-standing information boards that can be positioned as required on passengers' walking routes to attract attention and convey timely information that is not normally required – much in the way that white boards or A-frames might have been used in the past.

Positioning them safely, but in a way that interrupts a passenger's normal route, is seen as a way to draw attention to their message.

Particular requirements of disabled passengers

The information needs of passengers with disabilities are essentially the same as for all passengers but with added importance of specifics such as the location of wheelchair spaces and accessible toilets. Those with visual impairments place heightened emphasis on screen clarity and the availability and clarity of public address announcements. The positioning of screens gains importance for passengers of short stature or seated in a wheelchair, including both the angling of displays and the proximity of screens to meeting points.

However, the biggest complaints from disabled and older passengers are not about the technology or content. Rather they are concerned at having to wait for someone to fetch a ramp or not having enough time to get to their platform in what can be a general rush to board as soon as a train's platform is shown on the screen.

"I need to know how far away the platform is from the station entrance. Specifically, when I travel to London you only get six minutes from when they announce the platform to when the trains leave and that can be quite short. I've nearly missed a few trains."

Leeds, Commuter, Younger (Mobility impairment)
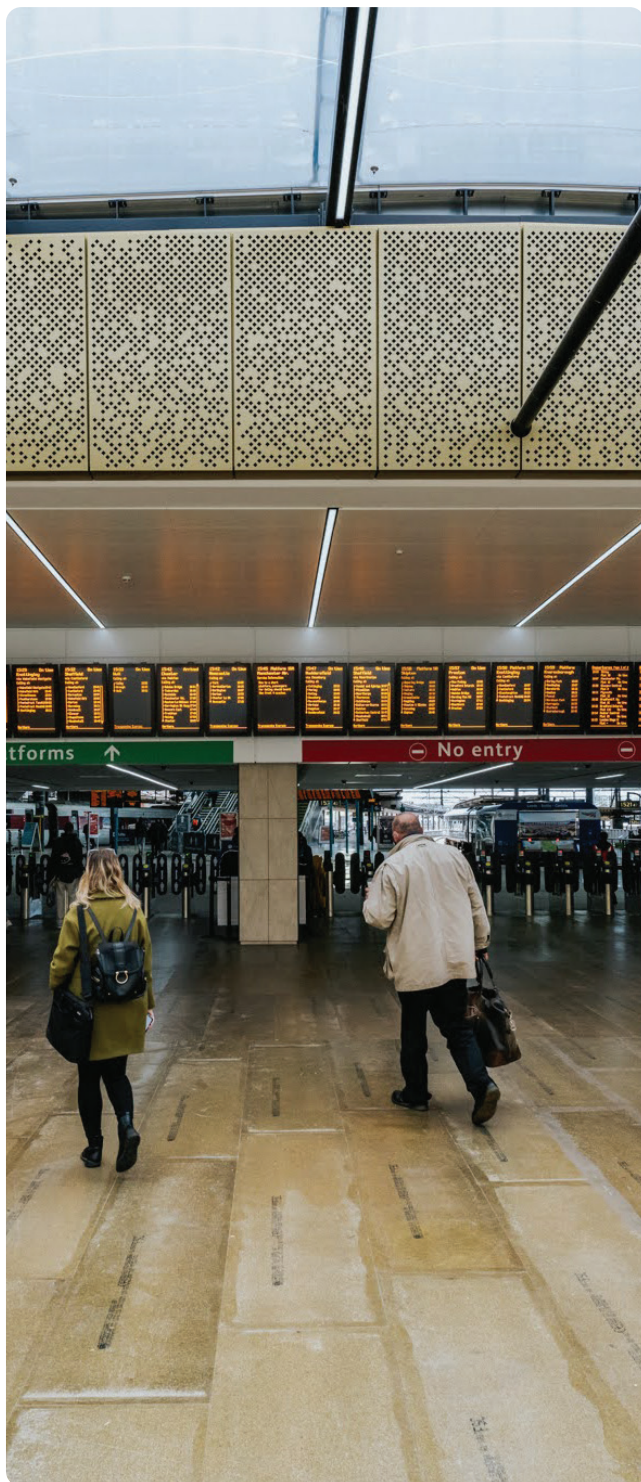
Conclusions and recommendations

- Information provision at stations generally meets passengers' expectations and requirements with no significant shortcomings.
- Customer Information System (CIS) screens, typically the 'main board', are generally passengers' first port of call on entering a station and deliver their basic requirements for information about their train departure time, calling points, platform number and any delays.
- Subsidiary CIS screens help passengers navigate their journey to the train while providing reassurance that they have found the right platform and that no delay has developed. As such they need to be positioned around the station, at the ticket barrier, on footbridges and in subways, on platforms, as well as in cafes, shops and bars.

✅ **The basic premise for CIS remains valid and passengers still need it.**

- While many passengers will use their own devices (tablets, smartphones) for journey planning purposes this does not reduce the need for digital information screens at stations.

✅ **CIS is complementary to digital sources; these should not be viewed as a substitute.**

- Passengers immediately recognise the orange-on-black dot matrix main boards and welcome the familiarity of these in the possible 'foreign' environment of a station they have not used before.
- That said, orange-on-black dot matrix screens are seen as dated. Passengers' reference points are their own electronic devices with high resolution colour displays incorporating graphics and video.
- White-on-black is well-liked and seen as more legible. However, in the short term, these screens do not stand out in the way that current orange-on-black main boards do and can tend to merge into a background of similar electronic displays around a station.

✅ **As current screens are replaced it should be with high resolution colour displays.**

- Passengers welcome the use of colour to highlight any variation from the norm in terms of cancellations, delays, platform alterations and so on. They expect colour to be used to differentiate types of information (such as arrivals, departures, 'next fastest train') or trains (which train operator, long distance/suburban, 'fast'/'slow').
- The provision of additional information such as arrival times at intermediate stations, train formation and passenger loadings is welcome. But this should not detract from the basic information and must be easily understood (some passengers were unclear whether the loading graphics indicated 'full' or 'empty' carriages).

✅ **Colour and graphics aid information understanding and give a 'modern look'.**

- Operational Information System (OIS) screens are frequently overlooked and are not seen as having a definitive purpose. Information about current and future disruption is welcomed. However, 'public service' announcements (such as not leaving luggage unattended, CCTV monitoring, leaves on the line, and so on) can be regarded as advertising and confuse passengers as to the purpose of the screens.
- Passengers see value in much of the information OIS screens deliver – in particular disruption messaging both 'on the day' and for future planned engineering work.
- However, at present OIS screens lack any clear purpose. This is in part because the screens have no unified identity or common branding but also because using OIS screens to display 'public service announcements' when there is nothing more urgent to communicate detracts from their primary function and can create the impression that this is 'just advertising'.
- Londoners comment on Transport for London's screens that show whether or not a 'good service' is operating. When there are no significant delays the screens' purpose is still clear with nothing to distract from their role as service status indicators.

✅ **OIS is no longer being used as originally conceived and the screens' role should be reassessed to give them a single-minded purpose and brand identity. It might usefully focus on service status, both for current and future journeys.**

- Passengers are wary that integrating the messages currently displayed by OIS into CIS screens would detract from CIS's focus on the journey in hand. This concern may be fuelled by the dislike of 'public service' messaging on OIS screens which is regarded by many as 'just advertising'.

✔ **Given the appetite for up-to-the-minute delay information, showing disruption messaging relevant to journeys shown on CIS screens may well be acceptable.**

- Interactive, electronic 'totems' are seen as innovative but few passengers have noticed or paid any great attention to them to date. Examples showing a journey planner application caused some confusion as most passengers would expect to have planned their journey before getting to the station.
- Some passengers suggested that movable totems that are positioned so as to force passengers to deviate from their normal walking routes would be a good way of drawing attention to important news items.

✔ **As with OIS screens, totems need a clear purpose(s). Journey planning is not seen as an obvious use but mobile totems might usefully draw attention to important news by disrupting traffic flows.**

- While passengers welcome improvements in the technology used to provide information at stations, current screens are viewed as 'adequate'. As a consequence, investment in new equipment is not seen as an immediate priority. That said, the expectation is that screens will be replaced as they reach the end of their lives or when a station is refurbished.
- Passengers expect smaller stations to have appropriate information provision, including 'help points', and to benefit from new technology just as much as major terminals.

✔ **Updating passenger information systems is expected but is not necessarily a high priority.**

Contact Transport Focus

For any questions regarding this research,
please contact:
Keith Bailey
Senior Insight Advisor
keith.bailey@transportfocus.org.uk

Transport Focus
Albany House
86 Petty France
London
SW1H 9EA

t 0300 123 2350
w www.transportfocus.org.uk
e info@transportfocus.org.uk

Transport Focus is the operating
name of the Passengers' Council