



At the station

Insights from HS2 online panel



Task:

- Think about any transport hub (airport, sea port, train, bus, metro or tram station). Tell us about one location that works and why. This could be due to:
 - Facilities: shops, cafes, restaurants, ticket points, ticket desks, information points.
 - Layout and design: look and feel, quality of information provision, ease of platform access.
 - Comfort: seating, space, light, décor.
 - Anything else. Feel free to take/find a picture or video of the station and upload it.
- Now think about one particular transport hub that you dislike, providing reasons for your answer. Again, this could be down to the following factors:
 - Facilities: shops, cafes, restaurants, ticket points, ticket desks, information points.
 - Layout and design: look and feel, quality of information provision, ease of access to platforms.
 - Comfort: seating, space, light, décor.
 - Anything else...

Task 1, posted 01/04/2014

Great architecture stands out

- Architecture was a key theme when describing great transport hubs.

SCHIPHOL AIRPORT



GRAND CENTRAL STATION



EAST MIDLANDS AIRPORT



ST PANCRAS



“Grand Central Station in New York, the beautiful architecture and the clean open space, with gold and marble everywhere. It’s a stunning place where you just want to while away the hours, journeys from there feel special and memorable rather than a chore.”

[Marylebone] “It’s rather like being in a giant sunlit Victorian conservatory.”

[St Pancras] “It’s busy but somehow the sense of space as well as a brilliant blend of beautiful old gothic with modern functionality really works - when thought goes into design, it transforms our experience.”

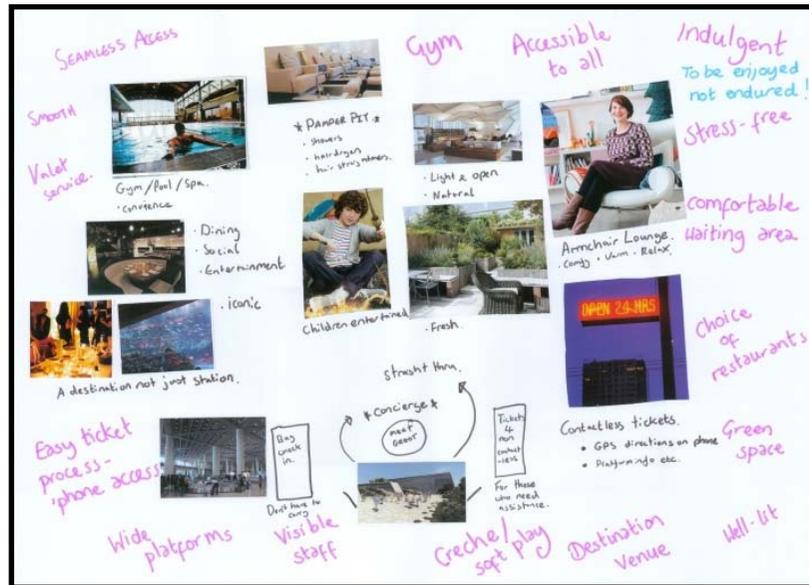
“Blackfriars really made me look forward to my daily commute to the City.”

Good design of hubs can take the stress out of travelling

[Singapore Airport] "We found a little oasis – literally - comfortable chairs by a window complete with a water feature and a butterfly house. It made us feel calm and refreshed. It was quite amazing and totally unexpected. The feeling is that the natural elements have come inside and there is a osmosis between technology and nature."

"As a major hub it is often busy and crowded, but from my experience it doesn't FEEL uncomfortable or over-crowded. The internal layout makes it easy to see a quieter place to wander to, whether this be one of the multitude of shops, the juice bar, the 'library', or one of the relaxation zones. The 'Kid's Forest' must be a blessed relief, to let them run off a little steam somewhere safe."

Example from the panel of an ideal station



"You don't feel like you are being 'herded' any where or that you are just a number on a ticket at Schiphol."

Music, art and culture lifted spirits

"There were a series of musical performances at Glasgow Central train station last year... commuters were all stopping to have a boogie and take pictures."

"I encountered a band playing boogie-woogie music and the joy was so infectious, the grey faced commuters and travellers were transformed into smiling at each other, tapping feet and dancing- it was wicked!"



[St. Pancras] "I passed an old slightly out of tune upright piano with some boogie-woogie being belted out by seemingly just a member of the public. A few yards later on there was another - a bit of Elgar this time. Beats bland lift music. And that soaring roof is just so good for the soul."

[St Pancras] "It's such a grand and magnificent place and buzzing with excitement. I particularly like the piano in the centre which invites anyone to go and play. Its spontaneous performance at its best and I often come back to the station early so I can stop for a few mins and listen to people play. I think having interactive, creative things to do in transitional spaces works really well."



"I like the way Liverpool Lime St station take part in the city's culture programme. A few years ago the station played host to a large mechanical spider 'La Machine' which started off on the side of the train station and then worked its way through the streets of Liverpool. It was amazing to watch!"

Bad design creates strong reactions

[Birmingham New Street] "It surely must qualify as one of Dante's nine circles of hell."

"Crowded with a horrible feeling of claustrophobia and overwhelming confusion."

"It feels subterranean to me, even though it obviously isn't."

[Birmingham Snow Hill] "The atmosphere conveyed is just 'get in and get out, we don't want you here! There is that feeling that something looms in the shadows!'"



"I felt like a rat caught in a maze."

"If they'd had railway stations during the Dark Ages, they probably would have looked - and smelt - something like New Street!"

"Wembley station on the line running out of Euston was obviously designed by someone who hates people."

Task:

- How can we tailor the HS2 stations to reflect regionality in your area?
- Are there any landmarks or anything for which your area is famous that you would like to see reflected in the station and how would you incorporate it?
- An example may be at East Midlands airport where they use the fields mural and red phone box.

Task 8, posted 06/06/2014

Views polarised on regional feel

- Passengers liked the idea of a regional feel to the stations to give an individual character but many worried it would be a gimmick and not in keeping with a modern image. Most wanted tasteful customisation and no over-used clichés.

Positive

"To have our stations looking generic, the same all over the world, not reflecting anything real would be a missed opportunity." (Business, Birmingham, 51-60)

"It's always nice to get some kind of regional feel to a station, especially when you haven't been there before and may not know what the area is famous for or its history." (Commuting, Birmingham, 31-40)

"A little nod to the local area whilst remaining classy is the way forward. Something local to Liverpool would be great." (Business, Liverpool, 31-40)

"A tribute piece to the local area would not be amiss." (Commuting, Nottingham, 18-30)

Negative

"I've had enough clichéd images i.e. Shakespeare County, Robin Hood Experience etc. Let's direct the energies of the HS2 architects and planners into creating stunning terminal buildings which fit their surroundings and enhance the travelling experience, pieces of architecture of which the 'regions' can be proud." (Business, Birmingham, 51-60)

"Better to have a modern station with art or sculptures. If HS2 was for the future then it would be 'cool' to have something modern and futuristic." (Business, Birmingham, 18-30)

"It's treading the line between representing an area for its achievements and individuality without being clichéd, patronising, cheesy or tasteless." (Business, London, 51-60)

Desire to show the best of their area

- People are proud of their local area and want to show it off but regionalisation should be subtle and focus on sources of pride not clichés, such as sport, architecture, scenery, local industry and famous people.



LOCAL INFORMATION

- Information on area history, important people, social history, local accents and attractions.
- Museums (potentially manned by volunteers).

ARTWORKS

- Statues, pictures and murals.
- Sources of local pride and fame.

“Maybe an open museum site at each station to pass away longer journeys and even to add to the local economy when customers buy the products. Neustadt Station is a superb example having made a massive porcelain wall plaque reflecting local history, industries, parks, monuments and churches that was hand made in the massive Meissen porcelain factory. We could do something like that for each station, symbolic of that city, county, village or town.” (Business, Nottingham, 61-70))

“I think that the idea of using pictures, murals, statues or whatever is about enabling those who might not know about what the town is famous for once they arrive.” (Business, Birmingham, 51-60)

Modern design inspired by heritage

- As HS2 is a futuristic project, passengers felt station design should be modern and forward-thinking but still able to reflect the area's heritage.

"As I live in Birmingham I think an effort should be made to reflect the rich industrial and commercial heritage of our second city which helped put the Great...in Britain. The original Birmingham Curzon Street railway station was seen as the jewel in the crown of the London and Birmingham Railway Company. Hopefully HS2 at this famous site will again bring together all the best we have to offer." (Business, Birmingham, 51-60)

"It might be nice to have a past element and then a new element showing all the regeneration that has, and will have, gone on recently." (Commuting, Birmingham, 31-40)

"We still have lots of interesting buildings. For example, Perrott's Folly & Edgbaston Waterworks, Fort Dunlop, the Botanical Gardens and Glasshouses, Victoria Square... All these along with the canals & Jewellery Quarter could be used as a point of reference to reflect the heritage of the city. Not saying this needs to be in your face but I'm sure subtle references to the City's past could be incorporated into a stunning modern design." (Commuting, Birmingham, 31-40)

Get local people involved with the station and its design

ARTISTS

- Open spaces in the station could feature regional artists and sculptors.
- Some wanted art about the area, others argued for modern, unique commissions.

*"I do, however, think that rail stations offer significant areas of public space that could be used for sculptures and artworks. Actually surprised that there is not more of this around now. So, maybe regional artists and sculptures rather than necessarily art about the local region."
(Business, Birmingham, 61-70)*

*"I like the idea of local artists creating (what could become) iconic art work for each station. Not necessarily work that reflects the area but something original that becomes associated with an area in time like the Angel of the North."
(Business, Leicester, 31-40)*

BUSINESS

- Pop up shops from local producers and designers.
- Spending would benefit local economy.



*"Pop up shops would be good. A local producer /designer (maybe new to their business to promote those who would benefit from publicity) could have a shop for a month to highlight a local trade or business."
(Commuting, Sheffield, 18-30)*

SCHOOLS

- Children involved with the design would give more ownership to the community

*"I think getting local schools involved in some form is a nice touch as that gives it a local feel and gives more ownership over the design to the local community!"
(Leisure, Newcastle, 18-30)*

Selling local food would be popular

- Current stations are seen as ‘homogenous’ and ‘soulless’, full of the same high street chains. Selling traditional, local food specialities within stations was very popular. Many passengers were passionate and excited about this idea, it would celebrate and showcase local culture in an enjoyable way.

“My dream idea would be to have traditional, local food specialities in every station. You could have a farmers’ market or incorporate it wherever possible in sandwiches, snacks, cakes and drinks. We have amazingly good local Stilton. This would celebrate and showcase local heritage in a useful and delicious manner.” (Leisure, Nottingham, 41-50)

“I love the regional food idea. It would go some way to ameliorating the effects of a homogenised M&S Simply food. I love M&S but if you were visiting somewhere and wanted to partake of locally sourced unique flavours - go regional.” (Business, London, 51-60)

“Showcasing regional foods is a great idea, We’re all a bit sick of soulless Burger Kings and Prets so why not give British food a bit of a boost, there’s loads of enthusiasm for street food at the moment. Me and my boyfriend went to Brixton market at the weekend and I was blown away by the choice of food, all influenced by the people who live in such a diverse area.”(Commuting, Manchester, 18-30)



Recommendations

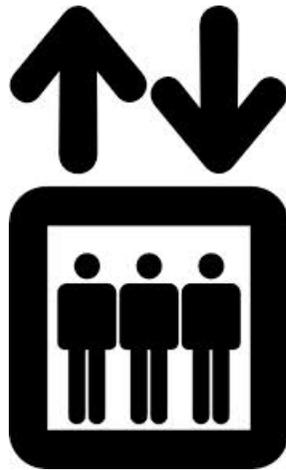
- Passengers have pride in their local area and want to show it off.
- Giving HS2 stations a 'regional twist' is likely to be popular and would help avoid the homogeneity of many current stations.
- Regional customisation needs to be subtle, modern and about aspects of the area that locals are proud of, rather than stereotypes or clichés.
- Stations could include local businesses (including regional food producers), artworks by local artists and a subtle nod to the area in the station design.

Task:

- What would encourage you to use a lift in a train station, over using the escalator or stairs?
- What do you prefer to use to travel around the station and are there any circumstances under which you would use one mode over another?

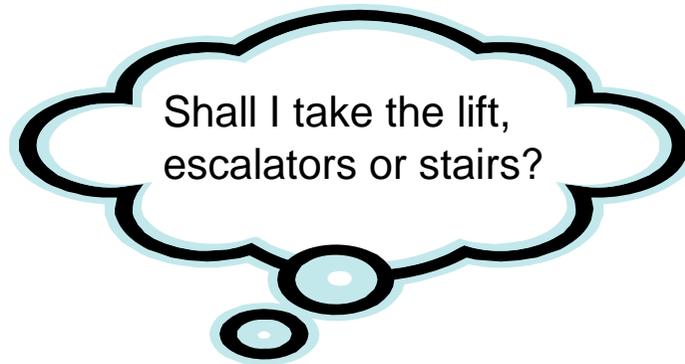
Task 10, posted 04/07/2014

Choosing the lift or escalator



LIFT

- Heavy or bulky luggage.
- Children and pushchairs.
- Disabled.
- No escalator or stairs available.
- Escalator looks unsafe (crowded with people and luggage).



ESCALATOR/STAIRS

- Any other situation!

Barriers to using lifts

INCONVENIENT TO FIND OR USE

- Not clearly signposted and difficult to find.
- Inconvenient locations.
- Too far from exits and entrances.
- Long walk can be required to reach them.
- Unsure where lift is going.

SLOW TO USE

- Too few or small lifts.
- Queues and long waits.
- Doors slow to close, especially if lift called.
- Feels slower than an escalator.
- Slow to exit if lift crowded.

DISLIKE OR FEAR OF LIFTS

- Small, crowded, lack of personal space.
- Claustrophobic, lack of view, safety concerns.
- Poor lighting or ventilation.
- Dirty or poor condition, bad smells.
- Control panels too high.

SOCIAL BARRIERS

- Widespread belief: a lift is for those who *need* it.
- Lifts are for disabled people, those with children.
- Lifts are for people with *large* luggage.
- Lifts seen as the 'lazy option'.
- Many feel they should use stairs for exercise.

Overcoming barriers to lifts

1

More, larger lifts

- Reduced need to queue/wait.
- Increased personal space.
- More room for luggage, pushchairs.
- Less claustrophobic.

"I agree large lifts that are not claustrophobic are the ideal. I like the idea of see through doors and perhaps elevators with a view, like they have at St Pancras. I guess there will be quite a few elevators to transfer passengers given forecast numbers." (Business, Birmingham, 51-60)

2

Multiple locations, clearly signposted

- Lifts easier to find.
- Reduced need to walk long distances.

"I'd prefer them to be easier to spot and access via clear sign-posting and sited in a convenient position." (Leisure, Nottingham, 41-50)

3

Glass lifts

- Lighter, more pleasant, less claustrophobic.
- Reduced safety concerns.
- Interesting view.
- Easier to see lift's destination.

"If lifts were clean, airy and easy to queue for without getting pushed and shoved by REALLY BUSY people then I would use them when I had a lot to carry." (Business, Nottingham, 31-40)

4

Clean and well maintained

- More enjoyable experience.
- Better upkeep to improve feeling of reliability.

"Glass lifts are much better for visibility, space and they feel safer." (Business, London, 51-60)

Need choice as social barriers mean some passengers will always prefer stairs or escalators.

Lift examples

- **Lifts done well** can be an enjoyable and impressive part of the passenger experience.



"I really like the lifts at Dubai airport! They're really quite impressive, I think maybe half a dozen lined up against a big glass window, they are big and airy, made of glass and both manned inside the lifts and there are members of staff outside them directing customers. The fact there are so many means you never wait for one and they are never full to the brim, it's very efficient. Conclusion... can we have lots and lots of glass elevators you never have to wait for and can they be manned?" (Commuting, Manchester, 18-30)

- **Lifts done badly** – there was discussion about voice activated lifts but the consensus was that such technology would cause more problems than it could solve.

[WATCH A VIDEO CLIP HERE](#)

Other ways to get around the station

- Passengers suggested more “futuristic” modes of transport, which were seen as more effective and enjoyable. These included:

Moving walkways: horizontal and between different levels



Diagonal bridges: as seen at Farringdon Station, London



Air rail link: as at Birmingham International Airport



Segways: futuristic and fun!



Buggies: for less mobile passengers



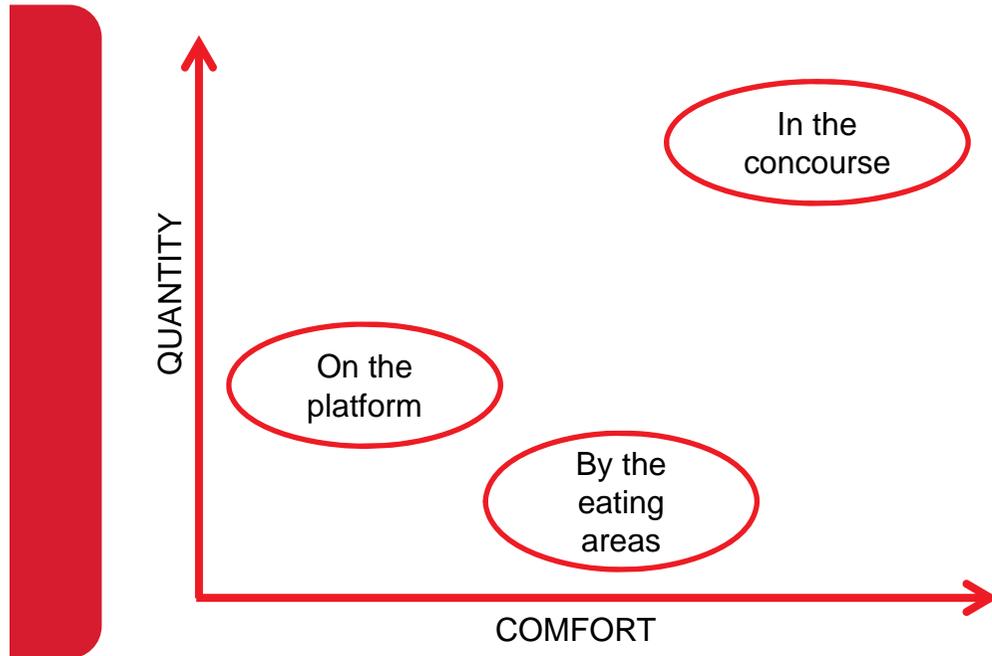
Task:

- What style of seating would you like to see at the station? Use examples from other transport hubs or public places that work well.
- Also, how much seating does there need to be and where should it be? For example, at platforms, in the station 'hub', near cafes and restaurants?

Task 11, posted 11/07/2014

Seating expectations

- Desired levels of comfort and amount of seating at the station depend on location.



- The importance passengers place on the comfort of seats at the station is not as significant as anticipated.
- Given that HS2 trains are scheduled to depart every 2-3 minutes, time waiting (and sitting) should be minimal.

*“As HS2 is expected to run every two minutes, seating can be basic as there should never be too much of a wait.”
(Commuting, Newcastle, 41-50)*

“There should be plenty of seats available although ultra luxury should not be necessary as the wait to board should be shorter than at an airport.” (Commuting, London, 61-70)

“I’m all about comfort but I’d hoped that I wouldn’t be waiting too long at a station when it comes to the HS2 so I suppose I wouldn’t necessarily sit down for too long.” (Business, Birmingham, 18-30)

Platform Seating: available, basic

- There is an expectation that seats will be present on the platform.
- However, comfort is not paramount if waiting time on the platform is minimal.
- Seats could be folded to allow more room during busy periods.

Key requirements

- Seats are covered.
- Seats have backs to them.
- Can be cleaned easily.
- Departure boards are visible.

“Another idea to add even more space in the platforms, seating could maybe be folded away (as they could be mounted on the wall of the platform, a bit like auditorium seating) if passengers needed more space etc. As I am not expecting to hang around on platforms for a long period you could compromise on more comfortable seating design for this idea.” (Commuting, Nottingham, 18-30)

“In Dresden, there are three or four bench style seats on the platform, whereas for better comfort, the passengers are seen at the main concourse at a lower level where there are a range of shops.” (Business, Birmingham, 61-70)



Concourse Seating: lots of it!

- Unanimous desire for seating within the concourse: “seating for everyone”.
- Expect to be the most comfortable seats as most passengers will wait here.
- Still, levels of comfort required range from basic to high tech luxury.
- As a minimum, passengers desire airport style seating but with extra features.

Extra features

- Plug sockets.
- Headrests and armrests (adjustable).
- Reclining.
- Receptacle beside the seat for bags.
- Sufficient space in between seats.
- Easily cleaned.
- Departure boards visible (or built in).

“There should be enough seating for everyone, as I have seen at certain times and places where passengers have been sat on the floor.” (Leisure, Nottingham, 31-40)

“There would be plenty of seating for those waiting to learn their relevant platform numbers.” (Leisure, Nottingham, 31-40)



Limit seating by shops and cafes

- Food and drink does not need to be consumed in or by shops and eateries.
- Passengers feel this could lead to congestion around these areas.
- Instead a 'hub' of seats close by for bought from shops or brought from home food.

*"I agree that siting seats near shops could well cause a congestion problem. It would be good to have them not far from food retail places, though, so that anyone wanting a quick sarnie or cake could do so in comfort."
(Leisure, Nottingham, 41-50)*



"Why not have mini stations along the length of the station, to rest your tea, coffee and croissant whilst standing. Mini stations are small circular tables mounted on a metal pole where you can rest your cups of coffee, food and it is big enough to accommodate four people." (Business, Birmingham, 61-70)

Task:

- Consider where you would choose to wait at the station if you arrived ahead of your departure time by 10 minutes, 20 minutes, 30 minutes or 45 minutes. Would it be:
 - Platform.
 - Concourse.
 - Lounge.
 - Waiting room.
 - Browsing shops, restaurants, etc.

Task 12, posted 18/07/2014

Long waits designed out of HS2

- Recalling the HS2 vision to operate with “clockwork” efficiency and trains every few minutes, several said there should not be a need to spend time waiting at the station and some queried the need for designated waiting areas.



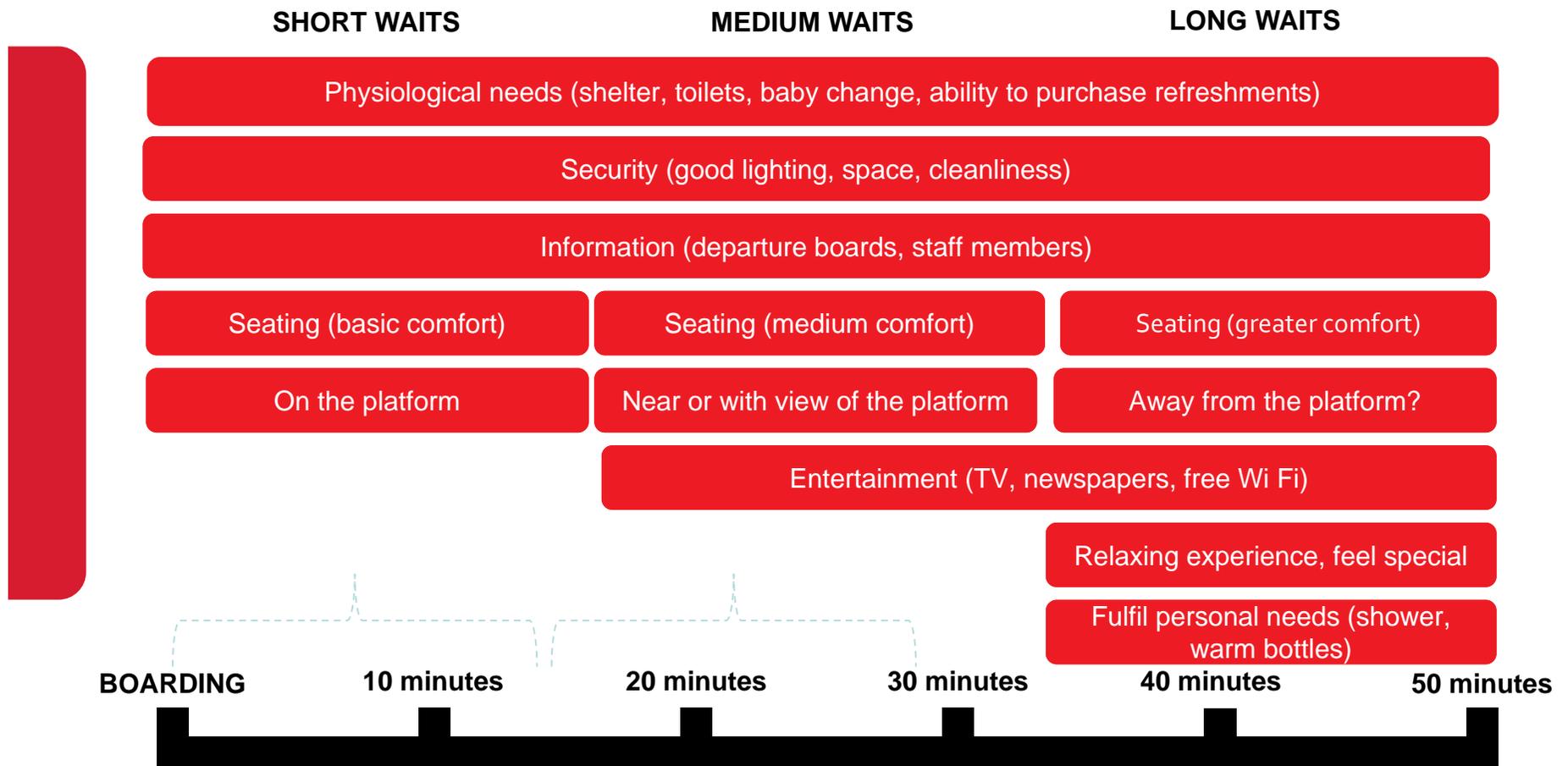
“My view on waiting is coloured by our original presentation. Think 15 years in the future and think anything is possible. I therefore assume that these trains will run on time and the “back office” will be sophisticated enough to ensure waiting is kept to a minimum.” (Business, London, 61-70)

“Hopefully I wouldn’t have to wait a long time in these lounges as trains will be punctual and there will be helpful prompts around to get me to my train within a few minutes.” (Commuting, Nottingham, 18-30)

“Ultimately given the aspirations of the team behind HS2 and its intended clockwork efficiency I would expect a significant number of passengers to arrive “just in time” and as a result not need lounges or waiting rooms.” (Business, Birmingham, 51-60)

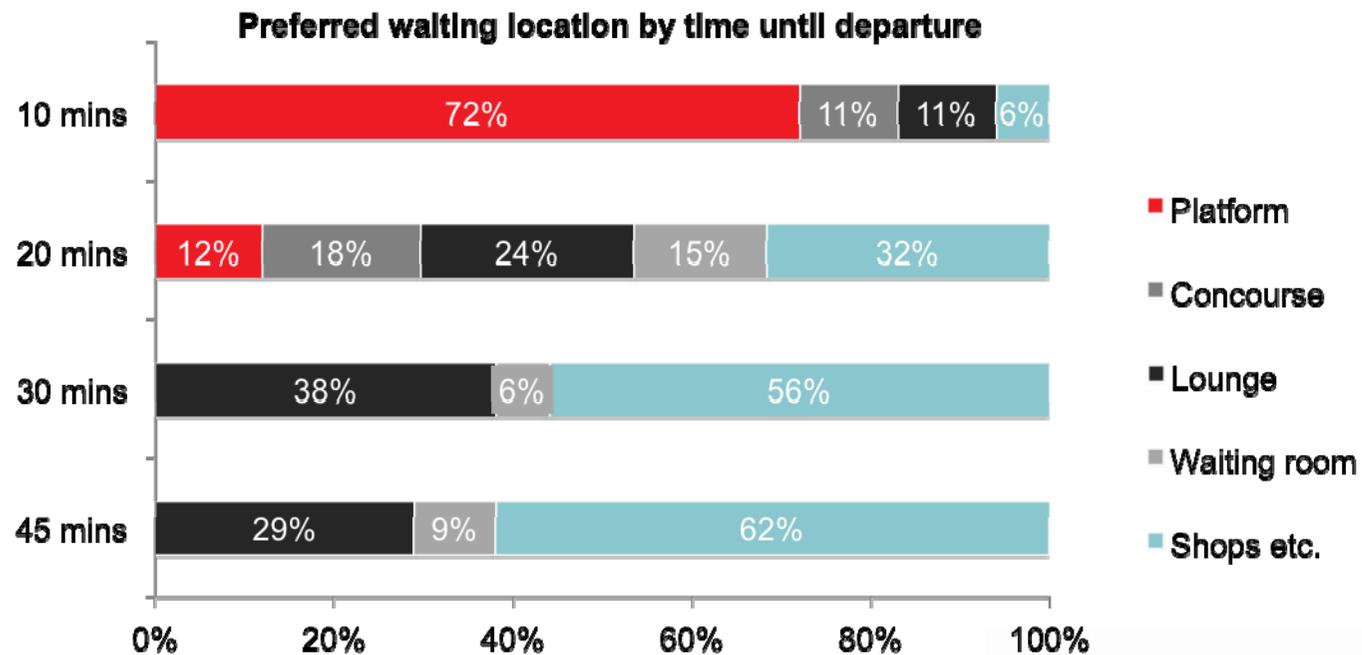
“If it was a commuting day, I’d turn up soon before departure as no need for me to wait that long.” (Commuting, Birmingham, 31-40)

Needs vary by wait times



Preferred waiting areas by time

- With 10 minutes until boarding, most people prefer to wait on the platform.
- If longer, passengers would wait in a lounge or browse shops and cafes.
- While a lounge was a popular option, very few would choose a waiting room.
- The concourse was less popular when other seating options were offered.



Waiting on the platform



- The platform should be a pleasant environment to wait in: well lit, spacious, and providing shelter from the elements. It should offer the following facilities:

- Toilet and baby changing facilities.
- Clear view of the departure boards throughout the platform.
- Refreshments for purchase.
- Chest high tables throughout for resting drinks, laptops.
- Staff to assist with queries.
- Seating (basic comfort).
- Bins.



Longer waits: people want choice

- How time is spent during medium and long waits is personal and varies by personality, mood on the day, the nature of the journey and the influence of any companions.
- For some only a long wait would prompt them to sit and relax, others would be happy to sit for a while but not a long wait.
- It will be important to offer passengers choice and flexibility, with different options available both near to and away from the platforms.



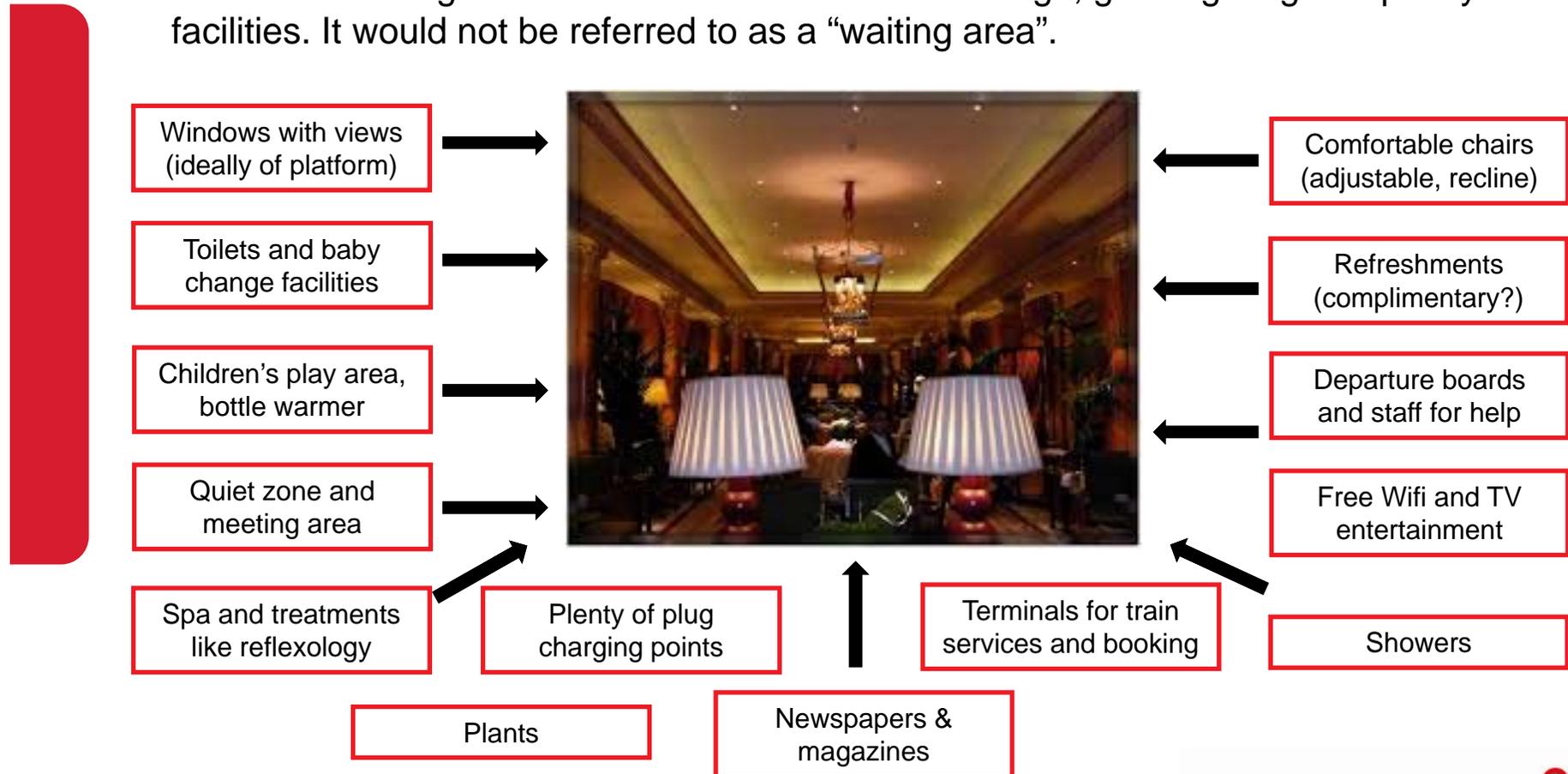
Task:

- Most of you said you would wait on the platform if you arrived 10 minutes before boarding but that you'd prefer to wait in a lounge or browsing shops and restaurants if you arrived half an hour or more before boarding.
- Waiting in a lounge was relatively popular but few people said they would choose a waiting room. Why is a lounge preferred over a waiting room? What would a waiting room need to be like to encourage you to wait there?
- What facilities would you like to be available in the:
 - Lounge
 - Waiting area
 - Platform

Task 12+, posted 21/07/2014

An appealing waiting room

- The ideal “waiting area” would have an attractive design, good lighting and plenty of facilities. It would not be referred to as a “waiting area”.



Waiting rooms: equal but different

- Many disliked the idea of two waiting areas and felt all facilities should be of an equal standard. However, there could be merit in dividing areas by wait time.

Medium wait

- Fewer facilities required but still want café-style facilities: entertainment, comfort, refreshments and info.
- Lots of open space for easy manoeuvring.
- Near by or in view of platform, for reassurance.
- Comfortable but not too comfortable (risk missing train!).

“A waiting room is adjacent to the platform where you can quickly hop onto your train when it arrives... a lounge is somewhere I'd go if I've got a bit of time to kill. The waiting room should have big windows looking onto the platform so you have the reassurance of seeing your train arrive. A lounge should be close but not adjacent to the platform, it needs to feel secure and cosy and away from the hustle and bustle.” (Commuting, Manchester, 18-30)

Long wait

- Lots of facilities to meet range of needs from showers to quiet zones and meeting rooms.
- Further away from the platform and ‘hustle and bustle’.
- Comfortable and relaxing.
- An experience that makes the passenger feel special.

“I agree with the others that a lounge tends to be posher, more luxurious and more likely to be used for a longer waiting period. I'd choose a lounge if I had to wait for a long time. Waiting areas should be nearer to the platforms. Seats could be less luxurious than in the lounge, but more comfortable than those on the platform, as this is likely to be more of an intermediate waiting time area.” (Leisure, Nottingham, 41-50)



Ideas for lounges

*“Separate children's play area, maybe a ball pool enclosed in Perspex so you could keep an eye on them. Separate quiet zone, far from the children. Drinks available (free and healthy!). Bottle warming. Breastfeeding friendly signs.”
(Commuting, Glasgow, 31-40)*

“If there is a distinct branding and design to HS2, some of the key design notes features on the train can be echoed in the station waiting room. You know where to wait because you recognise the brand, this would be particularly useful at the big stations.” (Business, Liverpool, 41-50)

“It would be good to be flexible/changeable depending on people's needs – high or low tables, adjustable seating? It would be good to have flexible arrangements so a family can sit together or more solitary spaces if people need to work.” (Leisure, Nottingham, 31-40)

*“The lounge does conjure images of luxury as it usually has connotations of business class passengers. Built in screens where people can watch TV, listen to music, browse the in-station shops or food and have it delivered to you or ordered for the train. I would go here to get away from the rush and relax before a journey so a spa would probably be appropriate.”
(Commuting, Manchester, 18-30)*

*“Adequate wheelie parking space is *never* factored in resulting in me blocking someone's path, having a job to manoeuvre in or out of provided seating arrangements. Maybe terminals to access journey information, or book food, or luggage check-in.”
(Leisure, Glasgow, 51-60)*

*“Very comfortable and relaxing seats – perhaps reclining with a foot rest at the bottom (rather like my beloved Stressless chair).”
(Leisure, Nottingham, 41-50)*

*“Somewhere where you can completely relax and for that I'd like comfy sofas, drinks available and soothing music.”
(Commuting, Birmingham, 31-40)*

*“I wouldn't want in any of the options would be soothing music. If people want music then headphones should be provided so others don't have to listen to it.”
(Commuting, Newcastle, 41-50)*

*“No music! Make headphones available for those who want it, but I prefer my own music choice, not lift muzak.”
(Leisure, Glasgow, 51-60)*



Ideas for platforms

*"Platform areas need not be so luxurious. I would prefer them to be sheltered from the rain and with some completely enclosed areas on the platform so that you can get out of the wind, rain or snow during particularly bad or cold weather. A decent quantity of seats - these could be much more utilitarian than those in the lounge, but still comfortable, and not the kind where you have to perch on the edge or have your legs dangling. Toilets should be nearby. Plenty of screens giving departure times along the length of the platform and be easy to view... good quality speakers so that announcements can be clearly heard, rather than the usual garbled nonsense."
(Leisure, Nottingham, 41-50)*

*"One thing I would like, given that I'm 6ft 4, is some sort of chest high laptop tables. Would be good to use to keep up with things while having the short wait for the train."
(Commuting, Birmingham, 31-40)*

*"Plenty of room, adequate seating and clear signage for boarding. Maybe a direct link from waiting area to platform, always with staff available for queries and assistance."
(Leisure, Glasgow, 51-60)*

*"Platforms would be spacious and designed to allow easy transit - information screens at eye level, perhaps with information relevant to the viewer - "near field" technology."
(Business, Birmingham, 51-60)*

*"The platform should be very functional providing plenty of space for disembarking and embarking without the usual crush. Clear signage to help find your carriage. Well lit and well staffed to help keep things moving. Good air-co and temperature control. Toilet facilities which are spic and span and maybe emergency call points for any more serious issues that may occur."
(Business, Birmingham, 51-60)*

*"The platform should be open and easy to get around, I'd like it if there was a temporary divider to allow customers to get off before the masses squeeze on, maybe people could exit one side of the train and once they are clear others could board on the opposite side?"
(Commuting, Manchester, 18-30)*

*"I would like to see the board from anywhere on the platform. Lots of seats would be appreciated. I think we should keep people away from the platforms such as at St Pancras where you can only go to the platform when your train arrive."
(Commuting, Sheffield, 18-30)*