

# HS2 Rolling Stock Industry Event

Beth West  
Commercial Director, HS2 Ltd

27<sup>th</sup> March 2017

[www.gov.uk/hs2](http://www.gov.uk/hs2)

Good afternoon.

And welcome to the Institution of Engineering and Technology.

I'm really excited to be chairing today's Rolling Stock Industry Event.

# NEXT STOP:

**CURZON STREET**

★★★★ Royal Assent ★★★★★

With Royal Assent, HS2 now has the powers it needs to construct Phase One between London and Birmingham.

Because it's the first time we've been able to meet our future suppliers since we got planning permission to build our railway.

Last month we achieved something called "Royal Assent" - a landmark moment in the lifetime of our project;

Giving us the powers we need to build, operate and maintain the first phase of HS2.

And today is **yet another significant milestone for us.**

Because the rolling stock will be **the icon** of our new railway.

**Before we begin, I would like a show of hands in the auditorium...**

How many of you came to this event by train today?

**[About half? A majority? Almost everyone?]**

**Thank you**

OK - Now, I'd like all of you, **not just those of you who raised your hand,**

to take a moment to consider **how you chose** your mode of travel today:

- How did you book and pay for it?
- How easy was it to switch between modes of transport?
- How much of your customer experience was positive?
- Did it all work, was it integrated?
- And in particular, what was the train itself like?

**As we work through today's agenda, I want you to remember that HS2 wants to change all that –**

From 2026, we want HS2 to deliver the most seamless, passenger-focused, technology-literate travel experience that any domestic transport has ever offered...

Not only will we change domestic travel in the UK, we also want to change the rail industry for the better as we create our railway.

# Today's agenda

Welcome & introduction	<b>Beth West</b>
HS2 CEO	Mark Thurston
Secretary of State for Transport	Rt Hon Chris Grayling MP
HS2: the client	Beth West
Setting new standards in customer experience	Chris Rayner
Rolling stock scope	Iain Smith
Rolling stock technical specification	Tom Williamson
Rolling stock procurement	Andy Cross
Q&A	
Networking & Exhibition	Close 17.00

By the close of this session we want you to understand the vision for HS2 and why it's so important to the future of the UK;

We want you to start thinking about the people who will eventually be using and working on our trains

And we want you to go away with an idea of the scope, challenges and procurement strategy for our first rolling stock order.

After we wrap up in the auditorium, the HS2 **Health & Safety, BIM, Sustainability, Skills & Employment, EDI, Innovation and Supply Chain** Teams are here today;

As well as representatives from the National College for High Speed Rail.

They will all be happy and available to speak to you and follow up with answers to your questions after the event as well.

Finally, we want you to use the networking session today to meet and get to know each other... and think about how you can work with us, and together, to help achieve HS2's vision.

**We have a good diversity of organisations here today from a broad range of sectors – from design and manufacturing, to maintenance and technology.**

**There are some of you who have never worked in rail before, which is great. And over 60% of you are SMEs.**



Safe  
at heart

But before we get on with the show, I need to take you through the safety procedures.

No planned fire alarms today. Emergency exits are there and there. A member of staff will show you where to go.

Congregate outside, to the left as you leave, under Waterloo bridge.

While I've got you thinking about Safety, it's the perfect moment to remind you that **Safety is at the heart of HS2**

And this is why...

[Play video – person falling down the gap between the train and platform edge]

**The British railways are among the safest in Europe, however the platform edge still remains a place where around 1,500 incidents take place every year.**

We need you to think about how we can prevent this, as well as **all the other things** which could happen around a train,

Which you need to help us make sure **never happen on or near an HS2 train.**

Now, you may have read in the press that HS2 Ltd recently appointed a **new CEO, Mark Thurston.**

I'm delighted to say that Mark is with us today, to say a few words.

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Mark Thurston  
CEO, HS2 Ltd

27<sup>th</sup> March 2017

[www.gov.uk/hs2](http://www.gov.uk/hs2)

I'm delighted to be leading HS2, Europe's largest infrastructure project.

I'm pleased that over the last eight years we've earned significant cross party and government support. And it's great to have the Secretary of State here today.

When he asked me why I wanted to be CEO of HS2 Ltd, my answer was clear – why wouldn't I want to be part of the biggest and most exciting project in the industry right now.

And this is the opportunity that is being offered to you here today.

Our rolling stock supplier will be a key part of the team – a long-term partner – one who shares our values – one who shares our vision for what HS2 can achieve for Britain.

We want to deliver a train service which is envied around the world – dependable, accessible, a joy to use – meeting the needs of the diverse communities we will serve.

So our rolling stock partner will need to be ambitious, creative and innovative. Who will set new standards and push new boundaries. We also need a great range of suppliers who share the same ethos to support them, right through the supply chain.

But we will also need a partner who understands that the British taxpayer and the British people demand value for money.

So our rolling stock solution needs to be affordable in its concept and delivery. And affordable to operate and use.

This is a huge challenge – we need a diverse supply chain to help address the needs of a diverse population. It is an exciting opportunity to be part of something very special. Something that will provide the backbone of Britain's rail network for the next century.

So today is about how you can prepare your business to be part of this once in a lifetime opportunity.

So let me introduce our Secretary of State for Transport – Chris Grayling.

# HS2: a new backbone for Britain

Rt Hon Chris Grayling MP  
Secretary of State for Transport

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# HS2: the client

Beth West  
Commercial Director

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# HS2 vision: To be a catalyst for growth across Britain

As the Secretary of State has just been telling us...

**There's a lot more to HS2 than just building a new railway.**

**HS2's vision is to be a catalyst for growth across Britain**

But what does that really mean?

We aim to do **more than just build and operate** a rail network. HS2's ambition is to make the whole of **Britain more prosperous.**

We will better connect cities and towns,

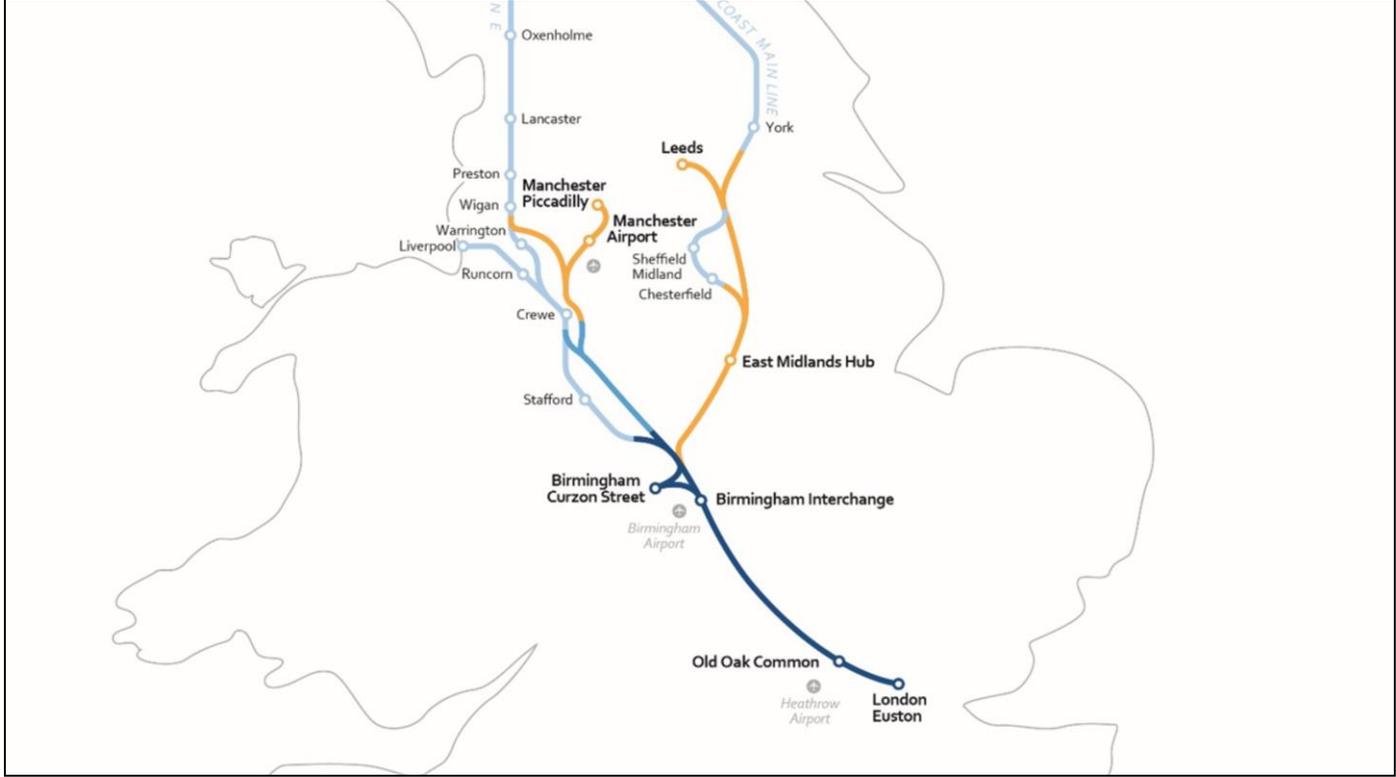
- bringing them closer together:
  - so they can **share ideas, trade and thrive**,
  - and give people more choices in work and life.
- We will help **regenerate** cities:
    - which will attract jobs and inward investment.
  - We will **create 25,000 jobs during construction**

**And the way we deliver** it is just as important as what we build. That's why we have **set ambitious targets:**

- for jobs, skills, diversity,
- health & safety, regeneration and the environment.

HS2 will be the biggest mega-project in Europe – it's a £55 billion, 20-year strategic investment.

So its scale and duration gives us the opportunity to make **deep, wide-spread and long-lasting** changes in our country.



Before we get into the details, I'd like to provide you with an update on the progress of HS2.

We've now had Royal Assent for Phase 1 (London – West Midlands, dark blue) and HS2 retains cross-party political support for Phases 2a (light blue) and 2b (yellow).

**This is when our “I” became a “Y”! For the avoidance of doubt, our I is the dark blue bit and the Y are the light blue and yellow bits.**

The people of northern England and beyond, now have certainty HS2 will definitely happen for them, and a better idea of where the route is going.

Whilst we're obviously pleased about achieving Royal Assent for Phase One, it doesn't mean our work is done.

It actually means that we have more work to do! We've now got to build this thing.

At the end of last year we awarded the enabling works contracts for Phase One and in the next month or so we'll be awarding £8.6 billion worth of major works civils contracts.

While for us at HS2 Ltd, just as the political process for Phase One comes to a close, work on the legislation for Phase Two is ramping up.

We expect the bill for Phase 2a – that's Birmingham to Crewe – to be laid in parliament this summer;

With the 2b bill following in 2019 – that's the one with Leeds, East Midlands and the two Manchester stations in it!

## What we're buying



DESIGN &  
SERVICES



TUNNELS



SURFACE  
ROUTE



STATIONS



RAILWAY  
SYSTEMS



ROLLING  
STOCK

To put into context how rolling stock procurement fits into the rest of our procurement activities, last autumn we awarded our enabling works contracts:

- These works prepare the ground for the start of major civil engineering,
- It's split into three geographical packages with a value of around £900m.
- These contractors will start on site in the next few months.

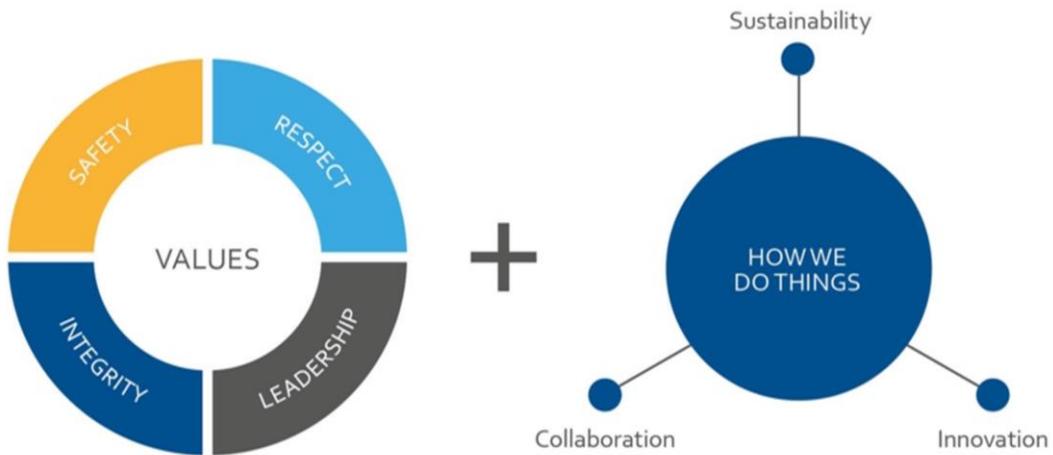
Last June we invited nine bidders to tender for £8.6bn of civil engineering contracts:

- This includes things like tunnels, structures and heavy earth moving.
- Once combined with Phase 2a, it's worth over £11 billion, making it the largest civil engineering procurement seen in the UK **ever**.
- The tier 1 contracts are due to be awarded in the next few months or so.

In December and January, we held events similar to this one, talking about our stations and railway systems procurements, so that we can take those activities forward later this year.

And now on rolling stock, we're speaking to you today and plan to launch the procurement soon with a Pre-Qualification Pack going out next month.

## Our Culture



Now, what do all these potential suppliers need to do to win work with HS2?

Firstly, you have to understand HS2, the organisation.

You wouldn't go into business with someone without researching them first, and making sure you were a good fit.

The same applies here.

Also, those who win contracts will be part of the wider HS2 family.

The high standards we set for ourselves, we'll expect of the supply chain.

So if you align yourself with our ways of working, you'll be more likely to win contracts.

Truly understanding HS2 as an organisation means you're better placed to deliver what we need.

HS2's culture is made up of our values; plus *how* we do things.

Our values of safety, integrity, respect and leadership describe the way we behave.

By safety:

- As we alluded to earlier, we mean creating an environment where no one gets hurt;
- And for our rolling stock, we want HS2 trains to be quiet, safe places that add to our personal wellbeing rather than take away from it.

By integrity:

- we mean acting fairly, transparently and consistently;

By respect:

- we mean understanding and appreciating others;

And for leadership:

- it's using innovation and challenge to lead by example.

*How* we do things is the way we think day-to-day.

It's not just *what* we do, but *how* we deliver that will define our success.

And at HS2, sustainability, collaboration and innovation drive the way we do things.

Sustainability is about more than our environmental impact and carbon footprint.

It's delivering social, environmental and economic benefits in both the short and long term.

It's about doing what's right and in the right way.

Equality, Diversity and Inclusion is an example;

- Research tells us the most efficient companies are the most diverse;
- and that the most innovative companies are the most diverse.
- We want to be both efficient and innovative;
- so we're committed to widening the workforce and providing new skills to new people.

Being sustainable also means being the best neighbour possible to the communities who host us.

Building HS2 will cause disruption;

- but we must limit that disruption and speak with those impacted in advance.
- And in operation too – we want our trains to be as quiet and environmentally friendly as they can be.

And where possible, we want communities to benefit directly from our presence.

- by leaving behind new facilities,
- or working with young people to help them develop new skills.

Importantly, at HS2 we work together. Collaboration is key. Collaboration internally and externally. And both across and down the supply chain.

To succeed in meeting all the expectations we're setting, **we're going to have to innovate.**

**You're going to have to innovate too!**

Innovation for us is challenging the status quo;

- It's pushing the boundaries of thinking;
- It's improving beyond current best practice
- and it's setting new industry standards for the rest of the world to follow.

## HS2 as a client



As the client, we will set the standards and behaviours for the supply chain because no HS2 Ltd employee will build anything:

It is our suppliers who will physically create the railway.

HS2 Ltd will need to behave differently as a relatively small client;

- We won't have loads of people to man mark.

So the only way to guarantee success is by working together;

- making sure we're all on the same page.

We will also limit the information needed for regular reporting;

- But we'll audit regularly, and require reporting systems to be aligned.

We will set the right climate for innovation from the supply chain;

- And not only set it, but actively seek it.

We will ensure consistency across contracts as much as possible;

- And where that's not possible, explain why.

We will assume positive intent and plan for success;

- But conscious that sometimes things go wrong – so we'll have a Plan B.

We will collaborate with our suppliers for the benefit of delivering the overall outcome.

## HS2's strategic goals



As a project, we have identified **seven strategic goals** which help us focus on the wider benefits we are promising to realise for the UK.

We will only work with **partners and suppliers who are committed** to helping us make these goals a reality.

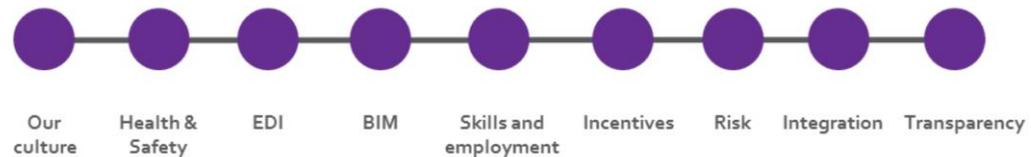
We are designing key performance indicators and other measures that our partners and suppliers will report on to demonstrate their contributions to being a:

- **Catalyst for growth** – which means, amongst other things, ensuring opportunities are available and advertised to small and medium sized enterprises
- **Capacity and connectivity** – which is **so important for our rolling stock suppliers in particular.**
- **Value for money** – which is about innovation and reducing the whole life cost of our assets.
- **Customer experience** – this is why I got you to put your hands up earlier – we're reinventing UK rail travel, by focusing on the whole journey, from doorstep to doorstep – **a big part of which is obviously the trains themselves.**
- **Skills and employment** – apprenticeships created, the diversity of the workforce, skills education and employment programmes – leaving a legacy of exportable skills and products for the UK.
- **World class standards** – setting new benchmarks in occupational health and wellbeing, as well as asset management and infrastructure maintenance
- **Environmentally sustainable solution** – various measures to minimise environmental impacts and create an exemplar sustainable solution, engaging route-side communities and be a good neighbour

## How we will assess suppliers



### Supplier scorecard



Our strategic goals combine: ● Environmental aims ● Economic aims ● Social aims

These strategic goals are reflected in our supplier scorecards.

We have been using it to evaluate

- tenders during procurement,
- and we'll use it to monitor performance in delivery.

Each contract has a scorecard which is appropriate to it, with the criteria weighted differently to reflect the specific contract requirements.

For example, one thing that's important to us is providing opportunities for skills and employment.

So we might ask the bidder how they will create sustainable job opportunities for local people, young people and those from diverse groups.

During contract delivery, we'll meet regularly to check how well they're performing against the criteria in the scorecard.

If not, we'll discuss how they can rectify that.



I just want to finish by reminding us all what a unique opportunity we have here.

To stamp our mark on British history.

By delivering not only the first intercity railway north of London for a century.

But by building something which we can all be proud of.

As engineers, as train travellers and as people.

And to paint the dream a little more for us,

I'm joined by our Managing director for Railway Operations, Chris Rayner

Who is going to talk to us about the new standards HS2 will set in customer experience.

# Setting new standards in customer experience

Chris Rayner  
Managing Director, Railway Operations

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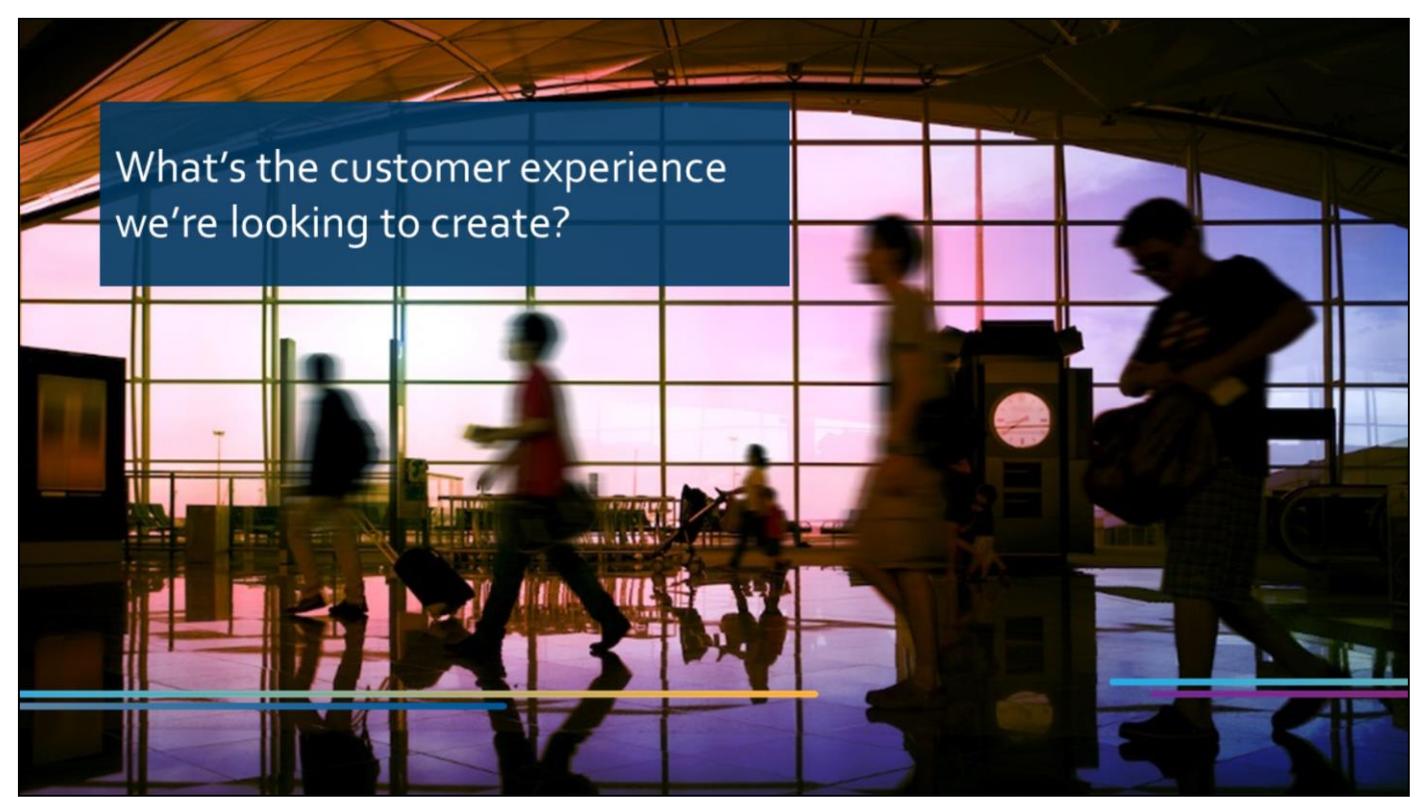
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A picture from my past

Any clues?

UK Rail speed record: 334 KPH, July 2003



What's the customer experience we're looking to create?

1. The interactions – touch point.
2. Not just when people are on our trains and stations.
3. It is totally people-focused – staff, customers, local business.
4. Drives development – guiding our designs, stations, trains and rail systems.
5. We will no doubt be the best construction programme in history but the public will measure our success by what the experience is like.
6. It's where great products, great services, brand and people come together.



...using purpose and empathy to  
create lasting, shared impressions

It's not just about the look and feel...

We want to create valuable and meaningful experiences. To build loyal and effective relationships.

More than half of those who recommend a company make this based on the customer experience rather than other factors such as price or product.

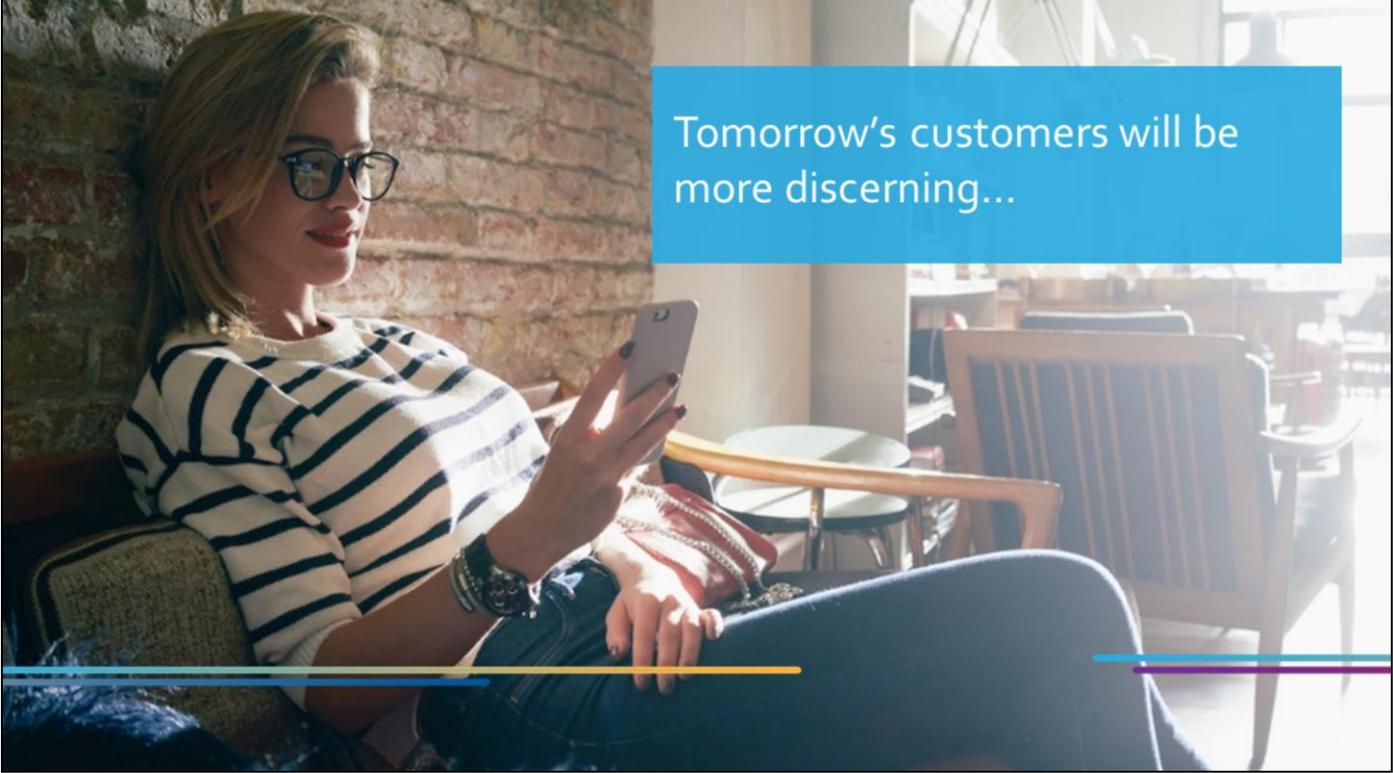
According to a Walker study, by the year 2020 customer experience will overtake price and product as the key brand differentiator.

### **How many of you choose your hotel using Trip Adviser?**

Why is customer experience important for HS2 now? Design and creative decisions are already needing to be made – this is urgent and important.

### **Summarising the what:**

- Our approach to customer experience (CX) is about putting people at the heart of our designs
- An experience that goes beyond rolling stock and stations
- Get it right we'll create something unique – and it starts now!



Tomorrow's customers will be more discerning...

## So why are we focussing on CX?

Let's start **with what we know about** tomorrow's customers. (By the way you are all likely to be customers...)

They will be **confident, wise and well-informed** of current trends, as well as being **highly attuned to good value and high quality**.

They share what they like and what they don't at lightning speed.

Customer expectations are being set by market-leaders in other industries.

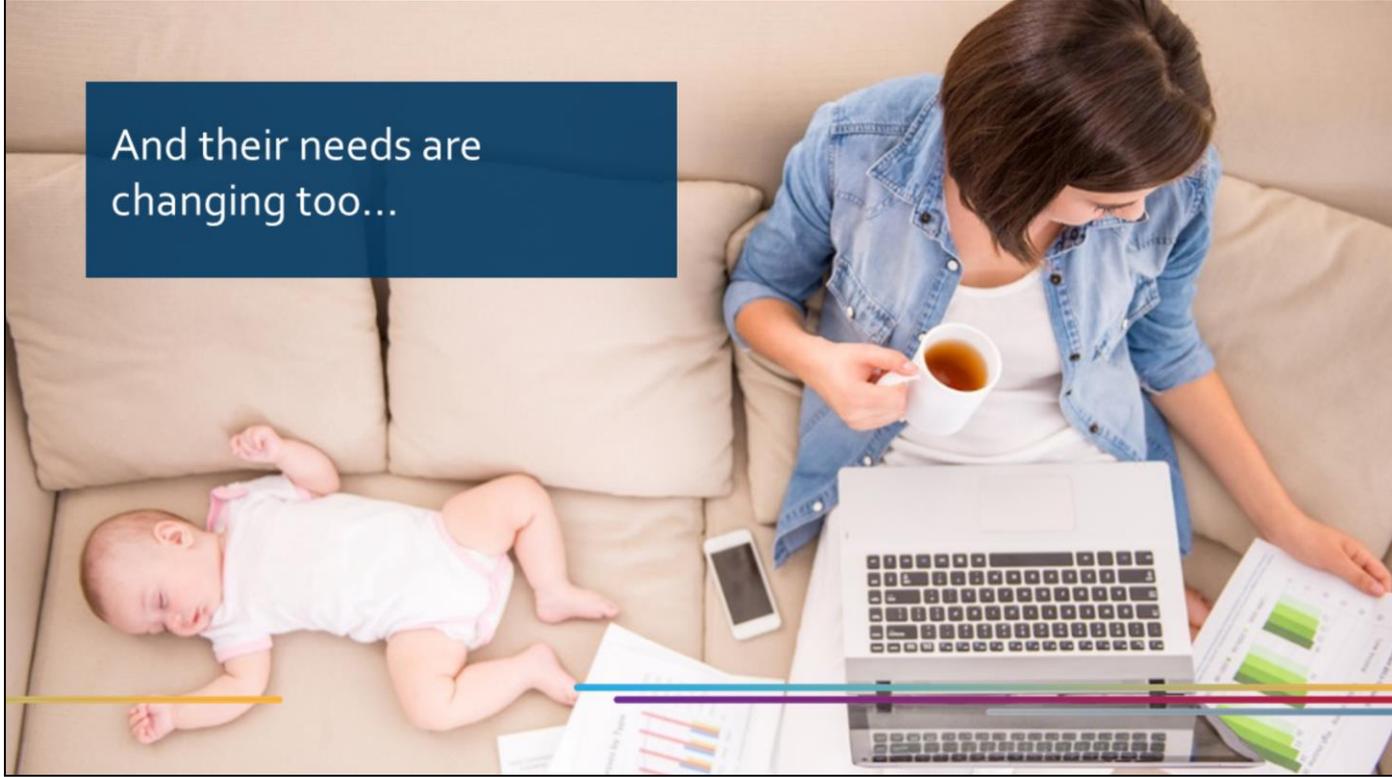
The likes of Starbucks, Amazon, Apple, Trip Advisor and Uber to name just a few...

These brands are **bringing new levels of convenience and control** to customers which is really **moving the goalposts for the rest of us**.

We must draw on the lessons learned and best practices from these other sectors

Their customers – our customers – have **expectations** of the services they choose that **have never been higher!**

And their needs are  
changing too...



Customer needs are changing too.

### **The lines between business, leisure and home time are blurring**

- We live in a **constantly connected, 24hr society** – our customers live **complex lives**
- There's an ever increasing **need for personalisation** (e.g. seat choice, meal preference, time of travel – or a just in time Caramel Latte!)

Our service will cater for a variety of market segments.

Business, Commuter and Leisure – all with different needs



Monitoring global trends  
in search of change

How are we going to deliver this exciting future for our customers?

Customers are changing...

Some examples of **the global trends we're monitoring** include things like:

- **We're living longer**, so we expect HS2 to have to cater for **five generations of traveller**, with **varying levels of mobility**.
- **We're getting bigger**, which means HS2 trains will need to offer space for **taller people**, and **much higher instances of obesity amongst passengers**; and
- In the western world we're expecting a much **more even split of male and female rail users**.



And we're also keeping an eye on 'goings on' outside the rail industry for inspiration.

People today **value “the moment”** and can be in a seemingly constant search for **new things to experience and share.**

These behavioural shifts and changes are already manifesting themselves in other sectors.

So beyond the brands I've already mentioned, we need to know what customer experience excellence looks like at:

- **Airlines**
- **Banks**
- **Retailers**
- **Hotels**
- And other **entertainment and leisure companies.**

#### **Summarising the why:**

- Expectations of great service are high and are growing.
- Their needs are changing as lives become increasingly complex.
- We need to look to the best across industries to learn, because they are setting trends.



Calling all CX innovators to enter the rail sector...

**A story about technology – my first office job in 1980...**

**What part does technology play?**

Well to start with... We need people who have likely never worked in the rail sector before...

True customer experience innovators who can bring ideas and experience to HS2.

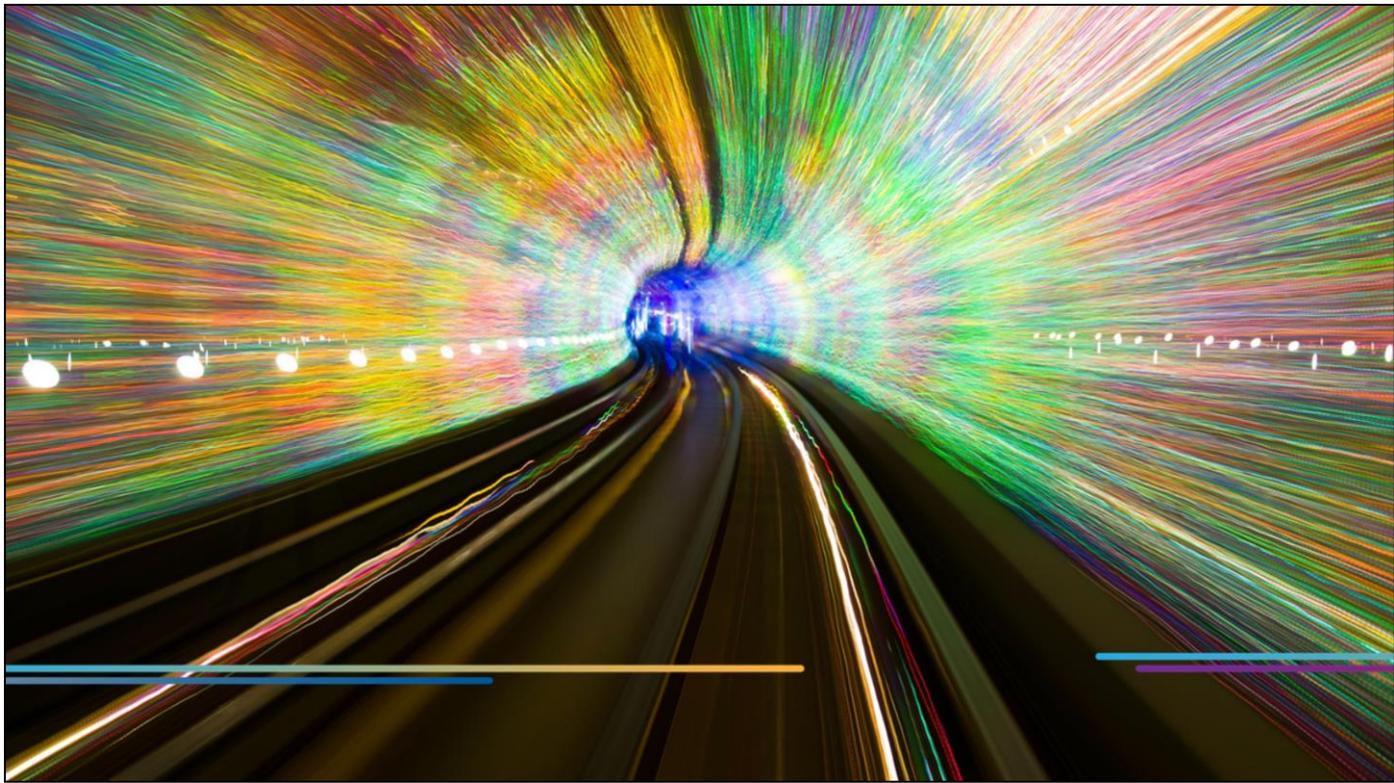
**Consider:**

- How Airbnb is the biggest hospitality company in the world yet they don't own any hotels.
- Or how Click and collect is revolutionising shopping

**For us...**

- Smart Travel wallets and apps
- Intelligent trains and stations
- Customer relationship and crew management systems

But, the whole point is **it's impossible for me to list them all now**, because **we're looking for new ideas we may not have thought of yet.**



For HS2 new technology needs to be an enabler for great Customer Experience and not just tech for tech's sake...

- Our railway will be 'Smart', but what will that mean in 9 years?
- A given – to be able carry out a telephone call .....
- Technology isn't just one of the answers - it's one of the things changing our needs as well
- Look at the smartphone and the pace of development .....

So working with Iain Roche (Head of Innovation) and his team, **we need to make sure we can flex as the rest of the world changes** over the next ten years before HS2 starts running.

View the world through  
the customer lens



To set new standards in customer experience, we must first identify our future customers' **wants and needs**.

- by **looking through the lens of our future customers**, using a variety of tools

## Our discovery methods



Creative market engagement



Our customer community



Ethnography



Future personas & segmentation



Futurology & global trends

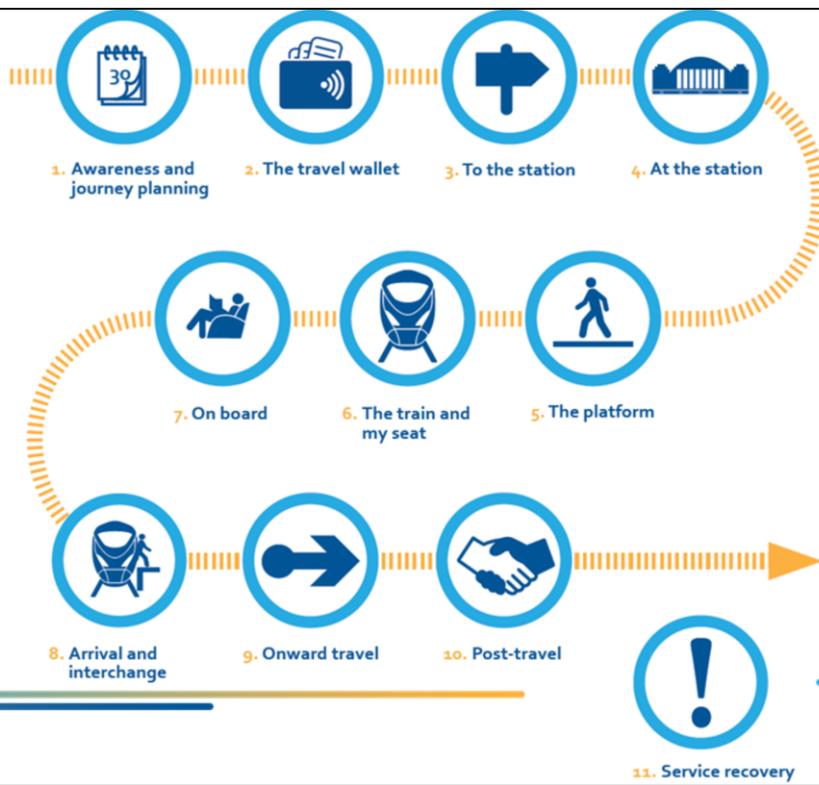


Rolling stock interiors

Looking at the world from the perspective of someone who isn't going to travel on our trains for almost another decade can be tricky.

So we're using a variety of tools to help us understand and develop concepts for the HS2 customer experience, while simultaneously helping forecast future rail demand to support the HS2 economic case.

Our discovery methods include the following (on screen).



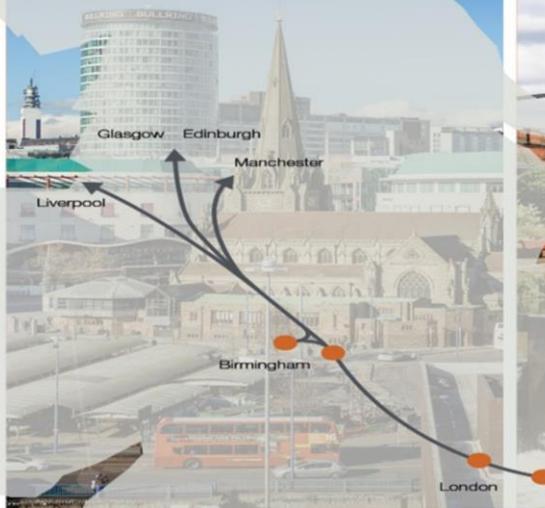
This is our end to end customer journey and the various touch points we have identified.

We've broken the journey down into ten main stages.

### Summarising the how:

- Technology will be key as a an enabler and not for its own sake.
- We are using a variety of methods to work out what our future customers will want...
- The design of the journey experience is developing.

# West Coast Partnership



WCP will be appointed in 2019.

Existing Intercity West Coast Mainline services, plus HS2 shadow operator.

Mobilisation for HS2 in approximately 2024.

WCP will merge operations and bring HS2 into use in 2026.

We are delighted to have an experienced operator on board early.

Our rolling stock manufacturer will work closely with us and our shadow operator.