

# Building Information Modelling

## HS2 Supply Chain Roadshow 2016

#hs2supplychain

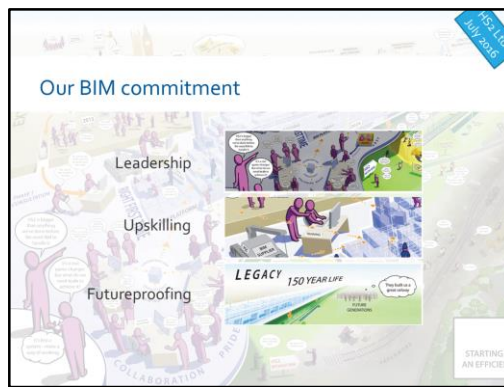
[www.gov.uk/hs2](http://www.gov.uk/hs2)



- HS2 is committed to harnessing the power of Building Information Modelling to design, build and operate our high speed railway.
- But there's more to our efforts, than just a railway.
- We're going to change the way infrastructure is built.
- BIM is one of the innovations that will help us do that.
- BIM is a collaborative set of policies and procedures around the generation and sharing of data on every asset we build.
- It will enable us to build a virtual railway before we start construction.

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- This picture articulates what BIM means to us.
- It illustrates how we want to change the way we, as a client, work with our supply chain and other stakeholders.
- It includes the promotion of collaboration to engender a greater level of trust; open communication; and a cultural shift from document-based drawings to data-driven information sharing.



- In fact, there's so much included in our rich picture that I want to focus on three of the most important areas that come out in our BIM Strategy.
- BIM is about leadership.
- Being proactive in the development of standards to drive HS2 and our industry forward.
- Working closely with professional institutions and thought leaders from different industries to ensure we adopt the latest best practices and continually improve upon them.

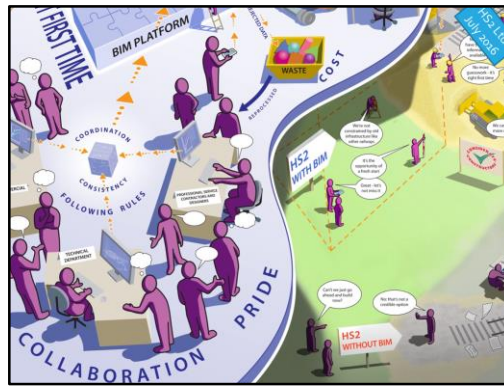
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- BIM is also about new skills.
- We're providing our supply chain with the educational materials to make sure everyone is at the required level of technological capability to deliver what we're asking for.
- I've already registered a few of you on our upskilling website and I'll show the rest of you how you sign up in a few moments.

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- And using BIM is also about future-proofing.
- To adopt a data-driven, software-agnostic approach – meaning you won't be limited to a particular device or software package to work with us or any of your other customers.

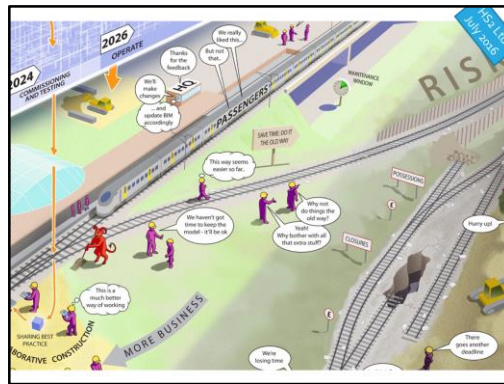
- We're also keeping an eye on future developments in related fields, like big data, smart cities, cognitive computing.



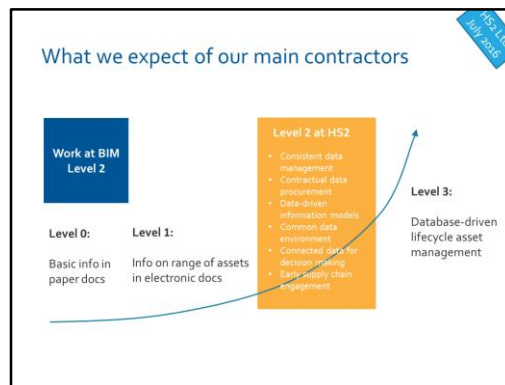
- For those of you who might not know too much about BIM yet, allow me to put it into context.
- From a technical perspective, for us, BIM comprises two key components.
  - Data Management – which is about structuring our data sets consistently and ensuring we capture and maintain the right information.
  - Data Modelling – which means using new tools and technology to exploit that information as a digital representation of our railway’s assets.

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- Those assets, could be anything; a bridge, an access shaft, or a tunnel, for example.
- BIM provides us all with a collaborative platform to share connected information about that tunnel.
- It removes the risk of duplication, or worse, misunderstanding.
- Through BIM we will be able to use our virtual railway to agree on how to build and operate that tunnel before we even start construction.
- And once we do, it means every member of the supply chain can generate, deliver, share and review data on that specific tunnel to inform better decision making.



- We need to ensure we not only implement BIM right from the outset, but also that we continue to embed, sustain and grow our capability during construction and into operations.
- This will bring us to a place where we're saying things like,
- *"We now have the best information available..." and "This is a much better way of working..."*.
- And if we are not relentless we run the risk of falling back into doing it the old way,
- *"I'll just get this drawing out quickly – someone else can check it"; "I've done this before – we don't need to keep to this design exactly"; "We haven't got time to keep to the model, it'll be OK....."; "How many more redesigns?"; "We're losing time..."*
- We can only do this if all our relevant suppliers embrace it as much as we have.



- It's important to emphasise at this point, that we have both short and long term plans for BIM.
- I want to focus on what's happening now.
- This journey of BIM adoption that we're on together, is going to mean we have to work more closely with each other.
- We appreciate everyone is not at the same stage of adoption.
- So our expectations differ depending on the size of your organisation.

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- We're expecting the most of our tier 1 suppliers, to whom we will be directly awarding contracts.
- As of April 2016, the government has required all construction suppliers of centrally-procured projects to be working at BIM Level 2.

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- This is what BIM maturity means to us at HS2.
- You're at Level 0 if you've only got basic asset information, mostly in hard copy.
- Level 1 means you've got information on a range of assets, including 2D and 3D images, in electronic documents.
- Here's the important one.

- At HS2, Level 2 means having:
  - a consistent approach to data management;
  - clear contractual requirements for data procurement;
  - Information Models which provide reliable data for decision making;
  - the exchange and management of multiple data sources in a Common Data Environment;
  - connected data, which is efficiently accessed and interpreted; and
  - importantly, we are changing what we buy, data over drawings, which is why this is so important to discuss today.

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- Finally, in the long term we're aspiring to BIM Level 3 which would see us all working together with data drawn from a single database.





- Our tier 1 suppliers are making commitments to us, which they're going to need you to support.
- They must have already embedded the processes and systems to generate and exchange data.
- They have to cascade the BIM requirements down the supply chain, to make sure their own suppliers are playing an active role in BIM.
- Then they need to spot any gaps and provide whatever training is necessary to fill them.



- What you'll need to do in order to win work through our tier 1 suppliers, is demonstrate the competency of your individuals.
- The first thing to say is please don't let the size of your organisation hold you back!
- We're implementing BIM because we think it's the most efficient way to run a 21st century construction project.
- We think BIM will make you a leaner and more profitable operation.

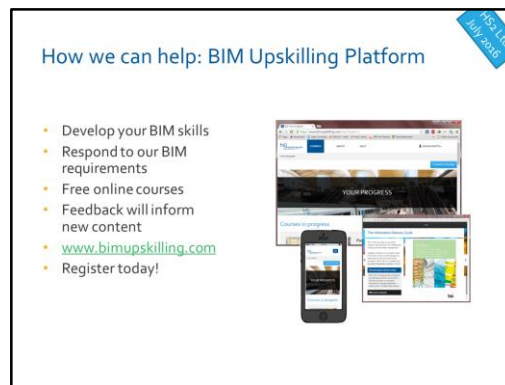
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- Here's what we do expect of you:
- Understand the implications for tier 1s that we've just outlined;
- Collaborate with the bigger firms you supply;
- And work with each other too – show us how you're planning to do that;
- Share the lessons you learn and the best practices you develop – not years down the line, but as you learn and as you develop; and
- Network with the wider industry, via regional BIM hubs and other BIM seminars.

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- In fact, start networking right now, today, by talking to the other

companies here in this room about what they're doing with BIM.



- We appreciate this adoption process is pretty new ground for all us.
- That's why we've launched a BIM upskilling platform to help you develop your skills, and to tell us what you do know and what you don't know.
- The platform will help you develop your own internal business cases for BIM and show you the steps you need to take.

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- Going through the courses on this website will help you respond to our BIM requirements, and become an active player in supporting this industry in its wider BIM implementation.
- Anyone can register for this series of free online courses.
- Content on the site will mature over time, with new courses added based on feedback from you, the users.
- Tell us what you need to know and when you need to know it.
- The first batch of content includes our BIM strategy and objectives; the benefits we get from BIM and how we can realise them together; as well as an overview of our own BIM processes.

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- So here's the Call to Action, go to [www.BIMUpskilling.com](http://www.BIMUpskilling.com) and register today.

- You can do it on your phones.
- Or we've got a couple of iPads on our BIM exhibition stand.
- I'm happy to go through the process with you and answer any questions you may have as we do so.
- So please do get on this new platform today.

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- If we succeed with BIM, and we must, we'll not only be building a high speed railway, but also a digital legacy that will make UK infrastructure the world-leading industry we know it can be.
- Thanks for your time.

