

Case Study #16

HS2 INDEPENDENT
DESIGN PANEL

A central benefit from the significant public investment in HS2 is the project's ability to drive and deliver real innovation. This will include innovation in areas from the passenger experience to the structures, buildings and landscapes along the route. The development and delivery of new innovative solutions for HS2 will play a significant role in influencing public perception of value for money from the project. The HS2 Innovation Strategy (2016) aims to create value within the construction and operation of the railway, and to set a new benchmark for the delivery of other major construction and engineering projects in the UK. One example from the project is the investment HS2 Ltd has made in new ear defender technology, to ensure site workers are protected from potentially damaging noises whilst still being able to communicate with colleagues.

Process: The HS2 Independent Design Panel first reviewed the HS2 Innovation Strategy in October 2016. This was during the Parliamentary stage of the Phase One Hybrid Bill (granted Royal Assent on 23 February 2017). The panel gave its views on HS2 Ltd's focus and priorities, and offered suggestions to help ensure these objectives were achieved. The panel recently revisited this topic area in February 2020, discussing how the strategy is being implemented as well as evolving to respond to the company's focus on delivery.



Driving innovation on HS2

This is the sixteenth case study in a series about the work of the HS2 Independent Design Panel.

Project headlines

- The HS2 Innovation Strategy was first developed in 2016. HS2 Ltd is exploring how it can evolve to support and reflect the programme's new focus on delivery.
- Four priority areas have been identified for innovation: environment, construction and design, process and customer experience.
- Innovation will be achieved primarily using four techniques: challenges, competitions, idea banks, and research (e.g. Innovate UK).
- Examples of innovation projects include a new flood modelling tool, construction site ear defender technology, and a rail coating to reduce rail resonance.

Panel comments

The panel's comments on HS2 Ltd's approach to innovation included the following points.

1. Advocacy and ownership

Successful delivery of the HS2 Ltd Innovation Strategy depends on whether it is embraced across the organisation and by its supply chain. The panel has highlighted the need for innovation to become part of the culture and decision making at HS2 Ltd, with a sense of ownership at every level.

The panel is encouraged to hear that there is both support and advocacy available for innovation at a senior level within HS2 Ltd. However, it highlights the need for this to also cascade down throughout the organisation. The panel suggests developing a strategy to help challenge the existing culture, assumptions and processes within HS2 Ltd, scrutinising each level within the organisation to help ensure people are both compelled and empowered to drive and deliver innovation. The senior leadership team could make a valuable contribution, for example by attending events to communicate the importance of innovation to HS2, and discussing how people can and should contribute.

It is important that all parts of HS2 Ltd, including the supply chain, feel empowered

to drive innovation. As an essential process, innovation must be accessible to all and a diverse range of contributions and thinking encouraged. Crossrail developed an innovation portal to explore and capture pioneering ideas from across the project, which enabled it to embrace its responsibility; to share techniques, products and methods with the rest of the construction industry; and to raise the bar for other major projects.

The panel has also highlighted the need for HS2 Ltd to put processes in place which encourage the cross-pollination of ideas, and widen the challenge across departments and topic areas to encourage innovation on the boundaries between professions, and even organisations. For example, a 'coffee roulette' scheme could encourage individuals and groups of people to break out of work silos, exchange thoughts and ideas, and foster a culture of cross-cutting participation in the design of HS2.

2. HS2 Ltd assurance

The panel strongly supports the project's ambition to challenge the supply chain to reach "new heights of creativity and innovation in everything they design" (HS2 Design Vision). It encourages HS2 Ltd to explore how it can draw together and incentivise the supply chain to innovate in a positive and proactive way, including contractually. This could include raising the profile of value engineering and avoid potentially damaging value engineering

decisions. As well encouraging the supply chain to deliver innovation, the panel suggests HS2 Ltd explores how it provides robust leadership, de-incentivises failure to innovate, and holds the supply chain to account.

3. Celebrating and communicating

With such a huge public investment, HS2 has been under intense public scrutiny since its inception – particularly in recent months as the project's value was publicly questioned during the Oakervee Review.

The panel highlights that recent milestones, such the granting of 'Notice to Proceed', present exciting opportunities to deliver a more positive, compelling and open communications strategy for HS2. Innovation will provide a strong source of good news stories, and give exciting insight on how public value is being developed. Internal communications that highlight innovation could also contribute to reinvigorating the project, its staff and its supply chain, and boosting morale after a period of intense scrutiny.

While the panel understands the challenges involved, it nevertheless encourages HS2 Ltd to consider carefully how to open up its work, including innovation projects, to the public and to other organisations and groups beyond HS2 Ltd - providing a compelling insight into HS2 and its value to the nation.