Sound demonstrations

Leveraging digital tools to improve communications during consultations

The need for better communication processes

Proposals to expand airports or change flight paths can generate significant community concern. If not handled well, this concern can rapidly translate into frustration and unease. As a result, there is a need to communicate effectively with local communities to explain proposed changes and any resulting noise impacts. Enabling communities and other stakeholders to easily understand the implications of changes to the sound environment in the vicinity of airports and aircraft routes is essential to robust and effective engagement.

Our approach

We believe in conveying aircraft noise changes in an accessible and intuitive way. By combining our expertise in auralisation and visualisation, we support airports and communities during planning and consultation processes with interactive and immersive visualisations and sound demonstrations. This allows airports to communicate transparently and objectively with people who might potentially be affected by aircraft noise changes, helping them to better understand technical aircraft noise information and changes in local sound environments.

About Arup

Arup is an independent firm of designers, planners, engineers, consultants and technical specialists, working across every aspect of the built environment. Together we help our clients solve their most complex challenges – turning exciting ideas into tangible reality as we strive to find a better way and shape a better world.

Our acoustics and virtual & visualisation teams have earned a global reputation for their technical excellence. Their ability to collaborate across sectors and apply innovative research and the latest digital technology allows them to tackle critical challenges faced by our infrastructure clients.

ARUP

Our work with Heathrow Airport

"This is the first time that virtual reality with accurate sound demonstrations has been used by an airport to help this many people understand the potential impact of changes to noise levels. The Arup Soundbooths demonstrate our ongoing commitment to combining digital technology and technical excellence to drive better results for our clients, passengers and the communities living around airports."

- Colin Cobbing, UK Acoustics Director, Arup

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Our acoustics, virtual and visualisation experts have developed custom-built Soundbooths to provide a fully immersive audio and visual demonstration for people living around airports, helping them to better understand the potential impacts of changes to noise levels.

The Soundbooths were deployed by our UK aviation client, Heathrow, during an eight-week consultation phase which focused on the airspace and future operations of the airport.

The calibrated VR demonstrations show what different planes would sound like at different heights and locations. This was achieved by combining detailed spatial audio recordings of aircraft and different background ambient sound recordings with a virtual user interface, 360 video footage and 3D planes.

The Soundbooths were developed to be fully mobile and support Heathrow with their series of 'consultation events'. They allowed the different communities to understand the implications of future noise in their area in an objective and accessible manner.

"I think the soundbooths have been a really popular addition to the consultations that have been ongoing now for about a year because they take a very complicated topic and give a real reference point for the conversations that we have with members of the public."

- Emma Gilthorpe, Executive Director for Expansion, Heathrow

To book a demonstration and for more information, please contact:

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