

1851der Tent at the Great Exhibition Road Festival

Impact Report
Big Ideas | June 2026



BIG IDEAS

“I got experience in finding ways to connect small scale scientific demonstrations to current real-world events that people would be familiar with.”

1851 Fellow

“I loved the hands-on engagement. Great way for my kids to learn. Thank you!”

Festival Visitor

Big Picture: Developing Innovators, Inspiring Thousands

The 1851der Tent at the Great Exhibition Road Festival is the public outcome of a year-long development programme that supports Fellows at the Royal Commission for the Exhibition of 1851 to build the skills, confidence and experience needed to engage public audiences with their research.

Led by Big Ideas in partnership with the Royal Commission, the 2026 programme supported 22 Fellows and one alumnus, a doubling of participation from 2025. Rather than a standalone festival activity, the Tent is the culmination of sustained collaboration between Big Ideas and Fellows, where ideas are developed over time through workshops, mentoring, collaborative design and iterative testing. This enables Fellows to move from early concepts to fully tested, interactive experiences that are accessible to family audiences.

The programme culminated in the 1851der Tent at the Great Exhibition Road Festival on 6–7 June 2026, marking the 175th anniversary of the Great Exhibition of 1851, and welcoming around 8,000 visitors across the weekend. These visitors engaged with interactive exhibits connecting contemporary research with a long tradition of innovation.



Impact at a Glance

Fellow Engagement

- **22 Fellows and one alumnus** (2x increase from 2025)
- 100% reported **increased confidence** in public engagement
- 100% would **recommend participation to others**

Public Engagement

- **8,000 visitors** (approx. 14% of festival audience)
- Two major **interactive exhibits**
- Inventors' Lab
- Crystal Palace installation
- Family **activity booklet** and commemorative **Crystal Palace & Award Holder print**



“Working with the Big Ideas facilitators (who were mostly from acting backgrounds) was educational, to learn how they engage with the public.”

1851 Fellow

“The experts on the hydrogen exhibit were brilliant at explaining how hydrogen can be used as fuel.”

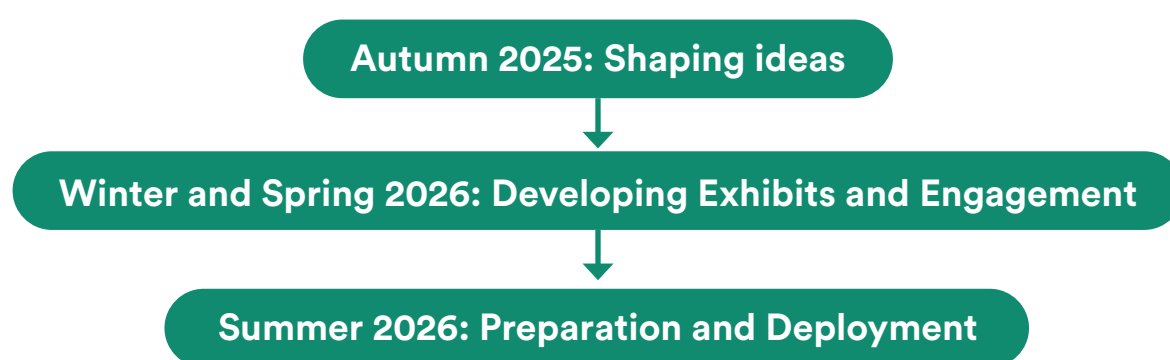
Tent Visitor

From Research to Public Engagement

Through sustained work with Big Ideas, Fellows move from early ideas to tested activities and refined approaches to communication, building the confidence and skills to share complex research in accessible ways.

By the time of the festival, this enables Fellows to engage directly with visitors through conversation, demonstration and hands-on activity, adapting their explanations in real time in response to curiosity, questions and participation.

This approach encourages exploration through doing rather than explanation alone, creating space for visitors to engage directly with scientific and engineering ideas.



Autumn 2025: Shaping Ideas

Planning for the 2026 programme began shortly after the previous festival. Working with the Royal Commission team, Big Ideas identified returning Fellows with strong public engagement experience to help shape the next cohort.

At the Big Ideas December workshop, held ahead of the Royal Commission's Christmas Drinks, returning Fellows Freya Johnson and Lucy Tam shared their experience of developing and delivering exhibits. Their input introduced new Fellows to the programme and encouraged early collaboration.

Big Ideas outlined the development process, introduced volunteering opportunities and began recruiting participants. Also at that session, Gareth and Zayna shared their exhibit plans and their positive experience volunteering the previous year, helping establish the foundation for the year ahead.

Winter and Spring 2026: Developing Exhibits and Engagement

Over several months, Big Ideas worked closely with Fellows through regular design meetings, practical sessions and iterative testing. Support was tailored to each team, ensuring ideas developed into clear, engaging and safe public experiences.

A central focus was translating specialist research into accessible interpretation. Working collaboratively with Fellows, Big Ideas supported the development of clear language, structured activities and consistent engagement approaches across all exhibits.



Collaboration across the cohort strengthened the programme. Returning Fellow Gareth Hart invited Industrial Fellow Charlie Hutchings to join Hydrogen Heroes. Returning Fellow Lucy Tam worked with Industrial Design Fellows on the Inventors' Lab, drawing on her 2025 experience to shape open-ended creative activity. Zayna Ahmed continued refining Visualising Sound through testing and feedback.

Former Fellow Douglas Brion returned with the Crystal Palace model originally created for the first 1851der Tent in 2019. Working with archivist Angela Kenny, Big Ideas developed new interpretations for the 175th anniversary, including illustrated banners, a commemorative Crystal Palace print featuring Fellow biographies, and a family activity booklet linking contemporary research with the history of the Great Exhibition.



Summer 2026: Final Preparation and Deployment

In the final weeks before the festival, Big Ideas led structured preparation sessions with Fellows, including briefings, exhibit refinement and targeted support on public engagement delivery.

Fellows completed final preparations, attended operational briefings covering logistics, safeguarding and visitor flow, and refined how they communicated their work to family audiences.



By the time the festival opened, Fellows were ready to focus on live engagement, adapting their explanations in response to visitors and working confidently within their exhibits.

“The most valuable aspect of this work was learning to communicate not only my work, but new work of peers and other Fellows, in an understanding but engaging manner to a variety of audiences.”

1851 Fellow

Exhibits

Visualising Sound

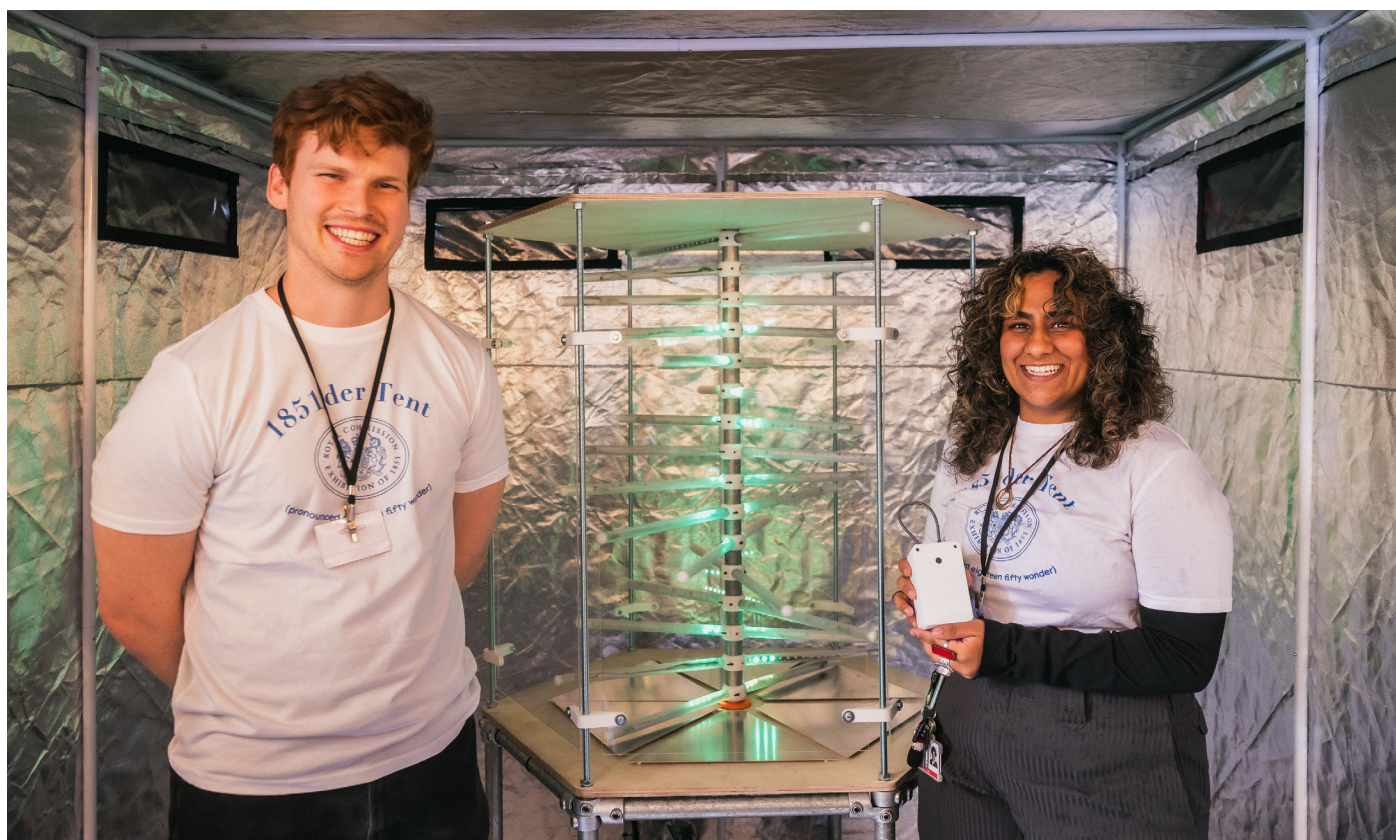
Developed by Industrial Design Studentship holder Zayna Ahmed, Visualising Sound invited visitors to explore sound through light, colour and movement.

Visitors used voice and rhythm to generate dynamic visual patterns inspired by spectrograms, exploring how sound can be experienced beyond hearing. Accessibility was central to the design, encouraging visitors to think differently about perception.

A highlight was the visit of two groups of deaf young people, who experienced sound through vibration and light responses within the installation. Zayna showed the two deaf groups visiting the exhibit how the bass from the soundstage made the table vibrate and caused the lights at the bottom of her machine to flash.

“The young people stood in a circle around the machine with their hands on the table. They could feel the vibrations from the music and see the lights activated. They loved it and wanted to spend a long time in the circle experiencing the music like this. It was a special moment and the young people really enjoyed it.”

Zayna Ahmed, Exhibitor



"I felt very welcome in the tent. This is exactly what children need to inspire them away from screens"

Tent Visitor

Hydrogen Heroes

Created by Fellows Gareth Hart and Charlie Hutchings, Hydrogen Heroes introduced visitors to hydrogen as a clean energy source through hands-on experimentation and challenges.

Developed over several months with Big Ideas, the exhibit explored how complex scientific ideas could be made engaging and safe for family audiences through structured, interactive design; a challenge when producing something potentially dangerous like Hydrogen gas. Scalability became a main challenge during preparation and testing meetings.

The final exhibit became a well balanced selection of fun and educational activities. Visitors generated hydrogen through electrolysis, observed reactions using a Hoffmann apparatus, built molecular models and tested their reflexes in a "Hydrogen Grab" wind tunnel challenge. The combination of experimentation and play supported discovery-based learning and sustained engagement.

"The hydrogen experiment was great. I didn't realise you can make hydrogen."

Tent Visitor



“I loved the carrot approach to learning – do an experiment first then you can come have fun in our game.”

Royal Commission Fellow

Inventors' Lab and Crystal Palace

The Inventors' Lab provided an open-ended making space where visitors designed and built inventions using a carefully selected set of materials, including wooden wheels, pipe cleaners and plasticine. These materials were developed through design sessions and testing with Big Ideas and Innovation Design students to support focused creativity and accessibility.

Visitors returned throughout the weekend to refine and expand their ideas before adding them to the 3D printed Crystal Palace model.

Originally created by former Fellow Douglas Brion for the first 1851der Tent in 2019, the Crystal Palace returned as a collaborative installation marking the 175th anniversary of the Great Exhibition. Visitors contributed their inventions to an evolving shared display connecting past and present.

The combined activity encouraged experimentation, problem solving and imaginative thinking, with Fellows supporting visitors to test and develop ideas.

“So great to have an exhibit where children can let their imagination run wild.”

Tent Visitor



“I’m an inventor. I loved all the different bits to make things with.”

Young Tent Visitor



Building Fellows' Confidence

The programme had a measurable impact on Fellows' confidence in public engagement.

- 92% reported feeling **confident or extremely confident explaining their work** to family audiences
- 100% said the experience **increased their confidence in public engagement**
- 100% would **recommend taking part**

Fellows also highlighted the value of the development process, including opportunities to test ideas, refine communication approaches and learn from facilitators and peers.

Several Fellows intend to reuse their exhibits in schools, festivals and community settings, extending the reach of the programme beyond the festival.



Six Years of Growth

Since 2019, a key strand of Big Ideas' work within the 1851der Tent has been to share the Royal Commission for the Exhibition of 1851's living legacy, the Fellows whose work has been supported from 1891 to the present day. The Tent brings this story and ongoing mission to life for public audiences. 1851der connects visitors to the Commission's role in supporting science, engineering and design, and translates that history of investment in innovation into something people can understand and experience today. This interpretive approach sits alongside a structured development programme that supports Fellows to communicate their own research to public audiences.

The 1851der Tent programme operates as a structured development pathway, supporting Fellows over several months as they build confidence in communicating research with public audiences. Returning Fellows now play an active role in mentoring new participants, sharing experience and strengthening a culture of public engagement across the cohort.

This pathway is reinforced through related programmes such as London Wonder, where Fellows develop engagement skills in school settings before applying them at the festival and beyond.



Conclusion

The 1851der Tent brought together months of development and collaboration, involving 22 Fellows and around 8,000 visitors across the festival weekend. Working in partnership with the Royal Commission for the Exhibition of 1851, Big Ideas supported Fellows from early ideas through to live public engagement at a major international festival.

The programme strengthened Fellows' ability to communicate their research and created engaging, hands-on experiences across science, engineering and design. As the Tent continues to grow, it demonstrates the value of sustained investment in developing researchers as confident public communicators, with each cohort building on the experience of the last.

Big Ideas extends deep thanks to the Royal Commission for the Exhibition of 1851, participating Fellows, volunteers, partners and visitors for their contribution to a wonderful 2026 programme.

“It was a lovely experience!”

1851 Fellow







Find out more www.big-ideas.org