

# BROOKLANDS INNOVATION ACADEMY



## IMPACT REPORT 2022 - 2025



**HALEON**

**BAE SYSTEMS**



**BROOKLANDS  
MUSEUM**





**Brooklands** has always had **innovation** at its heart...



From the early days of motor racing, to the design and development of Concorde, **it's in our DNA.**

Our incredible engineering legacy is a source of inspiration, providing relatable examples of successes and failures to young people on the site where it all happened.

BIA embodies the spirit of endeavour and we are proud that our learning and STEM engagement programmes reflect this and have real impact. Bringing our learning partners and businesses together, we can use our site, history and legacy of STEM to help inspire and support future innovators to greatness.

**Alex Patterson,**  
Director and CEO,  
Brooklands Museum



**53.5% of BIA Live attendees want to explore a career in STEM, against a national average of 39%**

**Brooklands Innovation Academy** began in 2022, and was the first Summer Science School event to be held in the south of the UK, and the first to be held in a Museum setting.

**Brooklands Innovation Academy (BIA) is Brooklands Museum's STEM (Science, Technology, Engineering and Mathematics) learning programme.**

BIA is the embodiment of our vision to inspire people to shape the future through Brooklands' history of innovation and endeavour. Against a historic backdrop renowned for world firsts in engineering and design, BIA creates inspirational STEM experiences for young people, from our family visitors; to over 300 school visits each year; to Uniformed Groups linking with the International Space Station; to our flagship summer school event, BIA Live which launched in 2022.

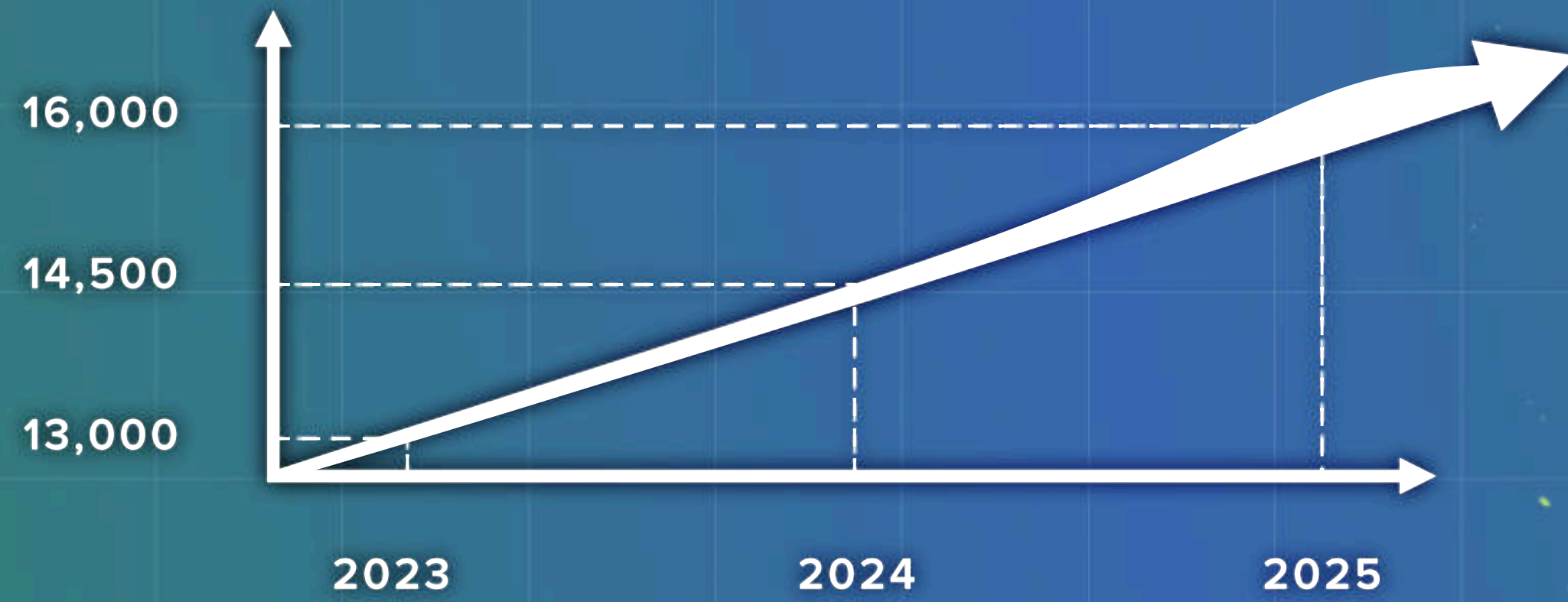
To date we have hosted four BIA Live events, and eleven smaller, satellite events. BIA Live is a thriving hub that connects over 400 young people aged 11-18 from over 30 schools with scientists, technologists, engineers and mathematicians from leading businesses. Our students meet directly with companies that are trying to solve the problems the world faces today — to show how they could be future

scientists engineers and mathematicians — though a multitude of hands-on workshops located throughout our historic site and inspirational presentations.

The BIA marque has also expanded, offering high-quality STEM learning from early years through to post-16. In 2025 we debuted our Science Summer Show, using playful performances to engage families in STEM, and welcomed 15,000 students on school visits. In 2023 BIA was recognised in the Museum + Heritage Awards, for its part in Brooklands's "Learning Without Borders" programme, in partnership with Bourne Education Trust, winning Learning Programme of the Year.

**"This was the best experience of STEM in my life. Thank you for showing me some skills early to help pick my future job"**

School children at Brooklands



In 2025:

**9** funding partners helped us inspire **480** students at BIA Live nearly 20% more than 2023

Schools attending BIA Live



Student satisfaction:



Teacher satisfaction:



We've worked with over **40** unique companies to provide workshops

# What our students think:





"It was fun and educational - I'm going to be a doctor. The NHS workshop gave me an idea of what I could do and how to get there."

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"Inspiring for young girls like me, who are looking to get into STEM, and it was exciting for us students to get to meet them and hear their stories and get us excited for the future while we are still only at school. It was a great opportunity"

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"Encouraged me to follow my dreams even though it is tough."

## School Testimonials

"Brilliant event, just goes from strength to strength with each year."

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"Thank you for setting up such a great event where we can take our disadvantaged year 8 students for free. These kinds of opportunities do not come around the corner very often (if at all) especially not on such a grand scale as you have put together. Very well organised and great staff throughout! Very impressed!"

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"As a careers lead I thought this was very interesting to make students think of the NHS in a different light and how stem can be suited to more jobs than just a doctor or a nurse"

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"I always look forward to this time of the year for this annual event at Brooklands Museum."



**"This is by far the best trip I take students on. We will definitely bring them again next year"**

## Our Partners



**Penny Alford,**  
Deputy CEO, Bourne Education Trust  
Education Sector Reference - Education Partner since 2022

**Penny has been working with Brooklands Museum on BIA since the beginning, and is a strong advocate for the programme. She works with schools to enable participation and identify those students who will benefit most from the experience. She has brought incredible energy and commitment to the project.**

BIA inspires students to explore careers and develop key skills like teamwork and problem-solving. By taking learning beyond the classroom, it prepares students for future challenges. Providing hands-on learning opportunities with real-world applications is essential for meaningful student engagement.

Every student who has attended, regardless of background or academic ability, has gained inspiration from expert led workshops and highly inspirational speakers. BIA draws a diverse group of students, including those with limited STEM access and those already interested in technology and engineering.

The programme has had a lasting impact, with many of our students pursuing STEM subjects at GCSE and expressing interest in continuing this onto further education. Early exposure to real-world applications and role models is helping lay a strong foundation for future opportunities in science and technology.

Our schools return each year because of the programme's proven value. Teachers appreciate how it enriches students' learning and enhances their own teaching approaches. It is unique and deserving of celebration for its commitment to inspire our students to value their education and think bigger about their futures.

**It is unique and deserving of celebration for its commitment to inspire our students...**

**Lord Andrew Mawson,**  
Chair, 360 Degree Society

In 2012 when Professor Brian Cox and I co-founded Science Summer School in east London, we had a clear vision to make the UK the best place to do science and engineering.

Here in Surrey, starting in 2022, some great learning-by-doing results have been achieved by linking our National Science School Programme with Brooklands Museum through a developing series of epic annual events linked to year-round STEM activities. We have been fortunate to meet like-minded colleagues here who understand the challenges of modern-day Britain. Alex Patterson

and his excellent team bring real passion, energy and experience to the programme and this has created a win-win for us all.

We are working to bring schools and business much closer together so there is a better mutual understanding of how best to respond to the rapidly changing needs of the world in which we all live. Drawing on the practical experience of the past four years will help us to make Surrey and the UK a better place for all partners to flourish.



## Our Sponsors

**Jadranka Masnec Nicholls,**  
**Business and Community Lead,**  
**Stanhope-Seta Ltd**  
Sponsor of BIA since 2025



**BIA represents a unique opportunity for employers to engage with young people in a friendly and interactive manner.**

STEM subjects are important to the foundation of the UK manufacturing, research and development economy. By investing in events such as BIA Live young people are provided with the encouragement, education and outlook needed to consider options for a STEM based career path.

For companies attending and participating in BIA the benefits are immeasurable, discussions with those attending the events allow companies to understand the decisions, gauge enthusiasm and skill sets and also understand more about the thought processes and needs of the younger generation. This allows each company to use the right message as part of the recruitment process to encourage young people to join their businesses.

Technology based companies have always found recruitment into the engineering and science sector a challenge and attracting young people at an early age brings more options. Events such as

BIA Live are invaluable in linking employers to young people with associated follow up via BIA to facilitate ongoing connection to the education system.

Stanhope-Seta, having participated for the last two years has found the investment and return from BIA to be exceptional, with students making contact for summer placements and also apprenticeship opportunities arising. Networking and contacts with schools career services have also resulted and through those interactions Seta has established long term and valuable relationships which will greatly assist future recruitment opportunities.



# HALÉON

Haleon has proudly partnered with BIA since its inception, delivering engaging workshops and motivating speakers. We are delighted to once again sponsor this impactful event in 2025 and remain committed to sparking curiosity, empowering students and supporting the development of future STEM talent.

# BAE SYSTEMS

BAE Systems sponsors Brooklands Innovation Academy – part of Science Summer School. On 1 October 2025, BAE Systems joined 25 employers in Science, Technology Engineering and Maths (STEM) in providing workshops, panels and talks at the Brooklands Museum, the home of motorsport and aviation.



## Our Most Popular Speakers



Kirsty Murphy MBE

### Kirsty Murphy

Kirsty made history as the first (and currently, only) female pilot in the Royal Air Force Aerobatic team, The Red Arrows. She has flown 39 operational missions over Iraq and instructed a lot of the current generation of frontline fast jet pilots. She subsequently spent 6 years as a civilian pilot with the world's only aerobatic airline, The Blades. She now works for Connected Places Catapult – where she is particularly interested in the future of aviation. In 2019, she was invited to become an Aviation Ambassador with the remit to inspire and make aviation diverse, inclusive, and accessible.

### Professor Brian Cox

Brian began his career in the music industry as keyboard player with rock band Dare and later with chart-toppers D:Ream. In 1995 he obtained a first class honours degree in physics from the University of Manchester and in 1998 a PhD in High Energy Particle Physics at the DESY laboratory in Hamburg. Brian is now Professor of Particle Physics at the University of Manchester, The Royal Society Professor for Public Engagement in Science and a Fellow of the Royal Society.

### Dr Simon Singh

Simon completed a degree in physics at Imperial College, London, and a PhD in particle physics at Cambridge University. He then spent two years working on the UA2 experiment at CERN in Geneva. Simon then decided to move into TV and journalism, so he joined the BBC science department. He worked on TV shows such as Tomorrow's World and Horizon, winning a BAFTA for his documentary about "Fermat's Last Theorem", the most notorious problem in the history of mathematics. Simon went on to write a book titled "Fermat's Last Theorem", followed by four more books, namely "The Code Book" (a history of cryptography), "Big Bang" (a history of cosmology), "Trick or Treatment" and "The Simpsons and Their Mathematical Secrets".

### Dr Nash Vracas

Dr Nash Vracas is an accomplished engineer at Aston Martin, specialising in high-performance automotive design. Holding Master's degrees in Experimental Physics and Aerospace Dynamics, as well as a PhD in Engineering, she has built extensive experience across both the automotive and elite sports sectors, including work with British Skeleton and Jaguar Land Rover. Nash is Chair of the Greenpower Education Trust, where she inspires young people to pursue careers in STEM through electric car racing. A recent recipient of the Autocar Great Women Award for Vehicle Development, she brings a passion for aerodynamic innovation, marginal gains and engineering excellence to her varied career.



Dr Simon Singh

## Legacy Building

We are tracking our earliest cohorts and asking where they are now. The early signs are very promising.

According to EngineeringUK (2023), only 39% of UK 14–16-year-olds express interest in STEM careers, compared to 53.5%+ among BIA attendees.

**This positions Brooklands Innovation Academy as a high-impact intervention relative to national averages.**



Of our attendees



**72% have gone on to study a STEM related GCSE subject, as an additional option (compared to ~ 20-30% nationally)**

51% said that **BIA directly influenced their gcse option decision making process**

**84%** report that **the BIA event has had a positive impact** in shaping their current interests and plans for the future.



**37% of attending students study Triple Science (compared to 25% nationally)**

**62%**  
of respondents  
are intending to  
**take up a STEM subject at Post-16**

**78%**  
of respondents  
reported an  
**increased interest in STEM**

## Spectacular Satellite Events

A chance to focus with a smaller school group, on a specialist subject, or Sponsor's area of interest



Each year we host a series of Satellite Events. We have hosted the following events:

Centenary of Speed	May 2022
Design the Future	October 2022
Solar Day	June 2023
Construction Day	June 2023
Cyber Day	March 2024
Construction and Structural Engineering Day	July 2024
Near Space and Beyond: ISS link up	October 2024
Haleon Day - Maths in the Real World	February 2025
SEND Day (Engineering focus)	May 2025
Women in STEM Day in partnership with Alan Baxter Foundation	June 2025
Kingston University x Coachmakers Life Skills	November 2025



## An experience truly out of this world!

We invited 500 Brownies, Guides, and Rangers to Brooklands, installed a huge radio transmitter aerial, and spoke to NASA astronaut Suni Williams who was on the International Space Station. In the presence of Sophie, the Duchess of Edinburgh, and hosted by British ESA reserve astronaut, Dr Meganne Christian, we provided a priceless opportunity to see and hear STEM in action.

ABOVE: Dr Meganne Christian FRAeS

## Summer Science Show – Forces at Play!

In 2025 we debuted our first Summer Science Show, introducing our youngest visitors to STEM in a fun, musical way! Showcasing figures from Brooklands’s history, our theatre experience told the story of Brooklands through the lens of “Forces”, tying in with Key Stage 1 and 2 curriculum themes. We welcomed over 5,000 people over five weeks of the summer school holidays.



October 2024

**Thank you to our sponsors  
who make BIA possible**

**HALEON**

**BAE SYSTEMS**



# Become a part of the story!

Help us attract and engage more young people into meaningful careers in STEM, by joining us as a Sponsor.

Email Fiona Smith on [fsmith@brooklandsmuseum.com](mailto:fsmith@brooklandsmuseum.com)

## **And our generous supporters:**

Walton Charity • State Street • Aviation Heritage UK  
Alan Baxter Foundation • Federation Skills Trust  
Worshipful Company of Coachmakers  
and Coach Harness Makers  
and our private donors.

## **Over the past four years we have also been grateful for the support of:**

McLaren • Surrey County Council • North West Surrey Alliance • Safran • Cargill  
Ringway • Community Foundation for Surrey • Enterprise M3 Careers Hub  
Surrey Educational Trust • Voyage • Surrey Business Awards • Subsea7

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