



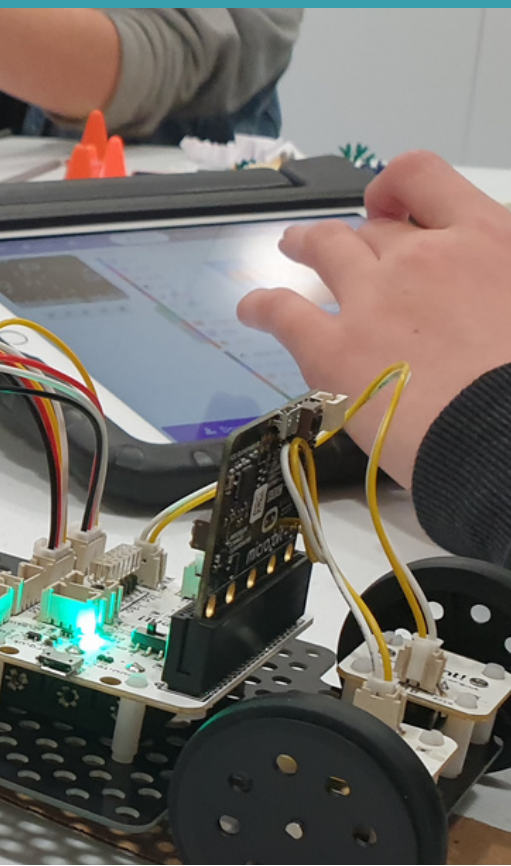
# IMPACT REPORT

## ACADEMIC YEAR 2022-23

INSPIRING LEARNING

RAISING ASPIRATIONS

ENGAGING EMPLOYERS



# A WORD FROM OUR NEW CHAIR OF TRUSTEES



## OUR MISSION

IS TO INSPIRE AND DEVELOP THE  
ASPIRATIONS OF YOUNG PEOPLE IN  
OUR REGION.

SUPPORTING THEM TO NURTURE  
THEIR PASSIONS AND EXPLORE  
PATHWAYS TO A SUCCESSFUL  
CAREER.

WE HAVE NO DOUBT THAT THEY  
WILL BENEFIT OUR REGIONAL  
ECONOMY, WIDER SOCIETY  
AND OUR FUTURES.

As we start a new School Year it's good to reflect on our achievements which are outlined in this report. Highlights include our Primary School Energy Saving Challenge, the ever-popular Problem Solving Challenge and re-vamped SATRO's STEMFest as well as a new event called ConstructionFest. In total, we delivered 29,500 unique experiences for students over the last academic year.

I'd also like to introduce myself to you as the new Chair of the SATRO Board of Trustees. I have enjoyed volunteering with SATRO in all its forms since February 2005. Working in the Engineering and Technology industry has personally been life-changing and has driven my desire to give back to my community in helping to promote STEM in education.

I'd like to thank Howard Railton, my predecessor as Chair, and Dr Janet Preston for their hard work and commitment to SATRO over the last 9 years, especially through the very difficult COVID period.

We would also like to welcome another new trustee: Scott Atkinson, STEM Education Programmes Manager at the Royal Academy of Engineering, Scott leads the National School Programme, and spearheads regional engineering projects that bridge the gap between education and industry, fostering collaboration between schools and engineering professionals.

SATRO would not be able to thrive and grow without your support, whether you are funders, volunteers, participating schools or SATRO staff and Trustees, I'd like to thank you all for your continuing support.

**SHASH PATEL**  
CHAIR OF TRUSTEES

Find out more about SATRO at:



[www.satro.org.uk](http://www.satro.org.uk)



[SATRO Education Charity](#)





CAREERS NETWORKING AT ASHLEY REES GIRLS INTO STEM EVENT

**10,880**

Students engaged this academic year

**29,500**

Unique experiences for students

**6,745**

Hours of activities delivered

**5,200**

Volunteer hours delivered in schools

PROUD MEMBER



ASSOCIATION OF EDUCATION BUSINESS PROFESSIONALS



Skills Builder  
PARTNERSHIP



SATRO VR HEADSET ACTIVITY AT THE SUNDIAL FESTIVAL, COINS FOUNDATION

# STEM

## INSPIRING LEARNING

We have extended our Primary School offer to provide a fun approach to learning around the curriculum, integrating real-world experience, early career thinking and ‘soft-skills’ learning.

We are pleased to be delivering multi-school Primary Science Fairs with both company stands and our own workshop activities. The aim is to inspire an interest in science, coding, design & technology, enterprise and sustainability.

**CASE STUDY:**  
*An Energy Saving Junior School presented at a community event for other local schools, youth groups and residents about how to save energy.*

Curriculum Links	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computing	Build & Code coding & materials			Mission 2 Mars coding & space		
Design & Technology	Shapes & Structures structures & materials		Building Bridges structures, forces & materials			
Science Living Things	Goldilocks CSI		Insects & Classification			
			Science of Health			
			Fossils			Evolution
Materials	Sustainable Materials		Plants			
			Properties & States of Matter			
Physical			Rocking Rocks			
			Fascinating Fossils			
					Space - new	
			Light - new			
Maths			Sound - new			
			Forces & Magnets			
			Electricity - new			
Business & Enterprise					Building Challenge Inter-School	
Sustainability - for our future					Business & Enterprise Game	
	Energy Saving Challenge Inter-School linked to school community					
			Sustainable Futures (climate change) Carbon Footprint, Energy, Transport			
Problem Solving - application of STEM					Eco Apps Creative Challenge	
					Problem Solving Challenge Inter-School	



In Secondary schools we are focussing our offers to support careers learning and nurture student aspirations. As the majority of our delivery is to full year groups we seek to engage every student with a cross-curricula approach to every event. Working with employers and stakeholders we are increasingly focusing on key work skills including scientific thinking, engineering design cycle, project working, digital and employability skills. We engage volunteers from industry to support careers learning, to challenge perceptions and widen horizons.

Now back to full strength post pandemic SATRO's 27th STEM Fest and our 36th Problem Solving challenge brought together teams of students to develop their knowledge and use of STEM skills.

This year saw the launch our new cross-curricula Planet Utopia workshop about a new sustainable future world, and the extension of our offer to SEN and Home Educated students.

**CASE STUDY: Students from our Problem Solving Challenge were asked what they learnt:**

*“How to work as a team to build each other’s confidence, to create a structure that will suit what we have been asked to create and to manoeuvre quickly as a team to complete the task in time.”*

*“ Collaborating and communicating ideas in order to maximise success and minimise margin for error.”*



83% OF STUDENTS AGREED THAT SATROFEST HAD INTRODUCED THEM TO STEM CAREERS THEY DIDN'T KNOW ABOUT.



76% OF STUDENTS AGREED THAT THEY MET SOMEONE OR TOOK PART IN AN ACTIVITY THAT CHANGED THEIR ATTITUDE TOWARDS STEM CAREERS



**SATRO CONSTRUCTION AT THE ACS PARTNERSHIP STEAM DAY AT THORPE PARK**

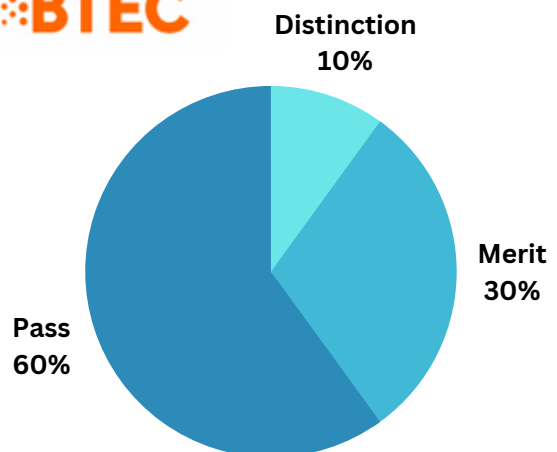
# CONSTRUCTION

## RAISING ASPIRATIONS

In its 16th year our mobile construction teaching service continues to expand to meet the need in schools for vocational training. In particular for those students who struggle with the academic nature of the curriculum, whose natural talent is in technical hands-on activities or who seek a future in the construction industry.

This unique service attracts the attention of the construction industry who continue to suffer recruitment skills gaps, and is used by schools seeking to re-engage students who are on the edges of the education system through absence or risk exclusion.

Students progress both to college and apprenticeships, developing life skills on the way.



We taught nearly 500 students, and were pleased that 142 students achieved their BTEC qualification. Our results were above the national average which is a significant success given our student cohort. A further 85 students continue into their 2nd year of study.

In addition, 267 students achieved our own SATRO Award for those whose attendance or complex needs made access to the qualification difficult.



SATRO Construction Festival was launched this year, aimed at students in their first year with us. It brought them together to learn about potential next steps in education, apprenticeships, or being work-ready for a career in the industry.

They were able to take part in activities with a range of companies from house building to planning, utilities to electricians, highways to safety equipment. With an opportunity to find out about the jobs available and take part in careers networking with employees from a diverse range of businesses. Above all they understood that the industry was seeking to employ young people like themselves and that there are many opportunities for a well paid career.

Representatives from the industry were keen to show that they are inclusive of all young learners, regardless of their academic ability and qualifications. They reported that the students aspired to pursue a career in construction but need the encouragement to build their confidence and self-esteem.

**CASE STUDY:**

*Parent of a BTEC student reported: “their son successfully gained an Electrical Apprenticeship to start in September. The company were particularly impressed when he shared his SATRO portfolio of work at interview particularly as they don't usually recruit to at his age.”*



75% OF STUDENTS AGREED THAT THEY MET SOMEONE OR TOOK PART IN AN ACTIVITY THAT CHANGED THEIR ATTITUDE TO CONSTRUCTION CAREERS.



94% OF TEACHERS AGREED THAT STUDENTS WERE SUPPORTED IN UNDERSTANDING THEIR CAREER CHOICES.

**MILESTONE  
INFRASTRUCTURE  
AT SATRO'S  
CONSTRUCTION FEST**





STUDENTS VISITING SYNAMEDIA AS PART OF THEIR RESEARCH PROJECT

## EMPLOYABILITY

### ENGAGING EMPLOYERS

Our **STEM A-Level Research Project Placement programme** has grown from strength to strength since the forced 2020 move online. We now offer both in-person and blended online projects from an ever greater range of STEM industries. The variety and range of professionals at all levels continues to grow, and again we were able to offer international engagement. This year saw:

- 19 project providers
- 24 different projects
- 66 students engaged

Projects covered topics ranging from energy transition, digital transformation, molecular farming, hybrid working, climate change, sustainable transport, satellite imagery for conservation, future of TV, visual perceptions, air quality to vitamin supplements.

### CASE STUDY:

*One of our students working on a project entitled **Life Cycle Analysis (LCA) of Conventional and Renewable Transportation Fuels** was working closely with business leaders and consultants at **KBC Global**, when her research and results she was producing raised some questions with the biogenic CO2 calculations in a published model. **KBC notified the National Laboratory**, it was acknowledged and a new updated version of the model should be produced in October 2023 that addresses these issues.*





Our **Mentoring programme** is 22 years young and continues to provide students across the region with a trusted adult with whom they can explore their own challenges in their approach to education. Our mentors, from industry, are trained by our team and supported throughout. The partnerships between mentor and mentee develop across the year and the impact is both immediate in their approach to their learning, and long-lasting in their impact.

The dedication of our employee mentees is exceptional, we thank them all.



SATRO are also working in partnership with corporates to develop **employability workshops**. These address the wish of businesses to encourage ‘work ready’ school leavers, and support young people appreciate the skills that employers are looking for, whilst facilitating them to recognise the abilities they already possess.

### CASE STUDY

*“One partner school reported that the cohort of mentored students had achieved above their expected grades at GCSE, with one student exceptionally achieving over 3 grades more than had been predicted.”*



**76**

**MENTORING PAIRS**

**480**

**STUDENTS ATTENDED CAREERS & EMPLOYABILITY EVENTS**

**1,789**

**STUDENTS ATTENDED BUSINESS & ENTERPRISE GAMES**

The team at SATRO, both staff and trustees, have worked hard to innovate and develop our offers to meet the changed needs of both schools and businesses as we look forward. The range of workshops and events we deliver to students throughout their education is as diverse as it has ever been, and continues to transform.

A growing focus for us are the transferable skills needed as the speed of evolution in the landscape of technology, energy transition, digital transformation and work practices fundamentally changes what careers of the future will look like for the students of today.

As a regional education charity we very much focus on the needs of our area. The recent work of Local Enterprise Partnerships and County Councils on Skills Plans are a fundamental part of informing our work with schools, industry partners and regional organisations.

None of this would be possible without the support we have from funders, volunteers and our partner organisations - thank you all.

**ANNE EDWARD**  
CHIEF EXECUTIVE

*THE SATRO TEAM AT A PARTNERSHIP EVENT*



*A TALK AT A SURREY CLIMATE CHANGE NETWALK*

# LOOKING FORWARD





# THANK YOU TO ALL OUR FUNDERS



CARVAL



Berkshire Branch



Funded by



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HEON  
HIGHER EDUCATION OUTREACH NETWORK



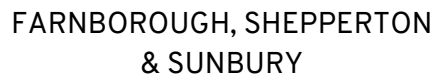
HOSTING US AS A CHARITY TENANT AT THE SURREY TECHNOLOGY CENTRE



A SPECIAL THANK YOU TO OUR INDIVIDUAL DONORS

# THANK YOU TO ALL OUR VOLUNTEERS

A SPECIAL MENTION TO ROGER HINDS WHO RETIRED THIS YEAR  
AS A SATRO VOLUNTEER AFTER 28 YEARS



STUDENTS FROM



A SPECIAL THANK YOU TO  
OUR INDIVIDUAL VOLUNTEERS  
AND TRUSTEES