Tomorrow's workforce starts with today's children

CAMBRIDGE SCIENCE CENTRE



The UK is investing in the industries and technologies that will shape its future. But building these industries' workforces must begin before young people reach qualifications, training or recruitment.

Children start forming ideas about science, what it means and whether it is "for them" from an early age. If we want young people to imagine themselves as part of the industries shaping our future, they need meaningful opportunities to encounter them throughout their lives.

At Cambridge Science Centre, we are developing a model for making those connections.

Working within one of the world's greatest science and technology ecosystems, we are bringing whole sectors together around a shared purpose: giving children a rich, rounded introduction to the science, technology, challenges and opportunities that will shape their future.

We turn that ambition into sustained experiences that children can encounter again and again, in different parts of their lives. We call them, simply, Programmes. Here's what that looks like in practice.

Cambridge Science Centre

Connecting children with the science, technology and industries shaping their future.

A different model fo STEM engagement

Cambridge Science Centre creates the point where industry, science and children meet.

PARTNER

Rather than beginning with an individual company, a piece of content or a one-off activity, **our Programmes begin with a sector.**

We **bring together** businesses, researchers and other experts from across a sector. Through roundtables and deep-dive conversations, organisations, including those that might ordinarily be competitors, work together around a **shared purpose**.

TRANSLATE

From this collective insight, our team creates a **rich, rounded introduction to the sector for children.**

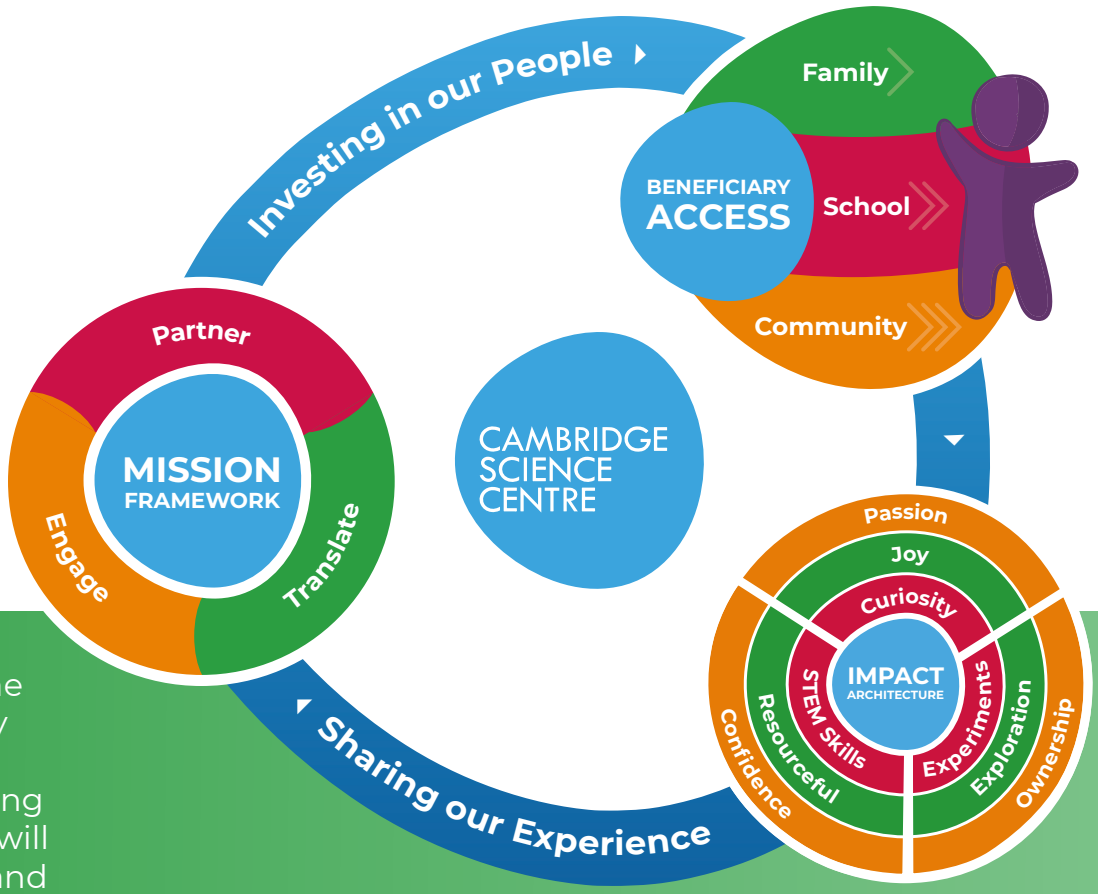
We map the Programme, identifying the important stories, concepts and questions within it, and design **interlocking experiences** that complement and build on one another over time. The result is not a collection of activities on a theme. It is a **sustained engagement**,

ENGAGE

Our Programmes are already **bringing this model to life.**

Building a Better Future is connecting young people with the built environment, **Your Smart World** is bringing organisations together to shape a rich introduction to technology, AI and DeepTech, and **Life Sciences** will follow next. The Cambridge Science

or



Together, we explore the science and technology driving their sector, the challenges they are trying to solve, the shifts that will shape how they work, and what the next generation will need to understand about the world they are inheriting.

designed to help children encounter the same world in different ways and in different parts of their lives. A child might encounter a Programme through a school workshop, explore another part of it through an exhibit or science show, meet it again in their community, and continue exploring it with their family. Each experience has its own purpose, but together they build familiarity, confidence and understanding.



Centre model underpins every Programme we create: **Partner → Translate → Engage** supported by Beneficiary Access, our Impact Architecture (Theory of Change), investment in our people and a commitment to sharing our experience.







How do you translate the complexity of an entire sector for a nine-year-old?



WHAT WE DO

We partner with the people who know the sector best, bringing organisations and perspectives together to look beyond a single technology or viewpoint. By exploring the connections between them, we build a much richer picture of its science, challenges and possibilities.

Cambridge Science Centre's role is then to **translate that world meaningfully for children**.

We turn our partners' collective expertise into hands-on experiences that invite children to experiment, ask questions, make decisions and discover how science and technology connect with their own lives.

EXAMPLES

Clean Energy Networks, co-developed with The Crown Estate as part of Building a Better Future, challenges children to design a renewable energy system while considering geography, cost and climate.

AI Explorer, co-developed with Cambridge Consultants, allows children to explore how machine learning and image recognition work, testing both their capabilities and limitations.





REACHING
WHERE T

Access is at the heart of every Programme we design. A Programme is created to reach children through the different spaces in their lives, from schools and community settings to science centres and family experiences.

The same Programme can take different forms in each setting, while remaining part of one connected experience.

And it does not have to stay in one place. Programmes can be delivered through other science centres and community partners, taking the expertise we bring together in Cambridge into communities much further afield.



How do we make sure these opportunities reach beyond the children who already have access to them?

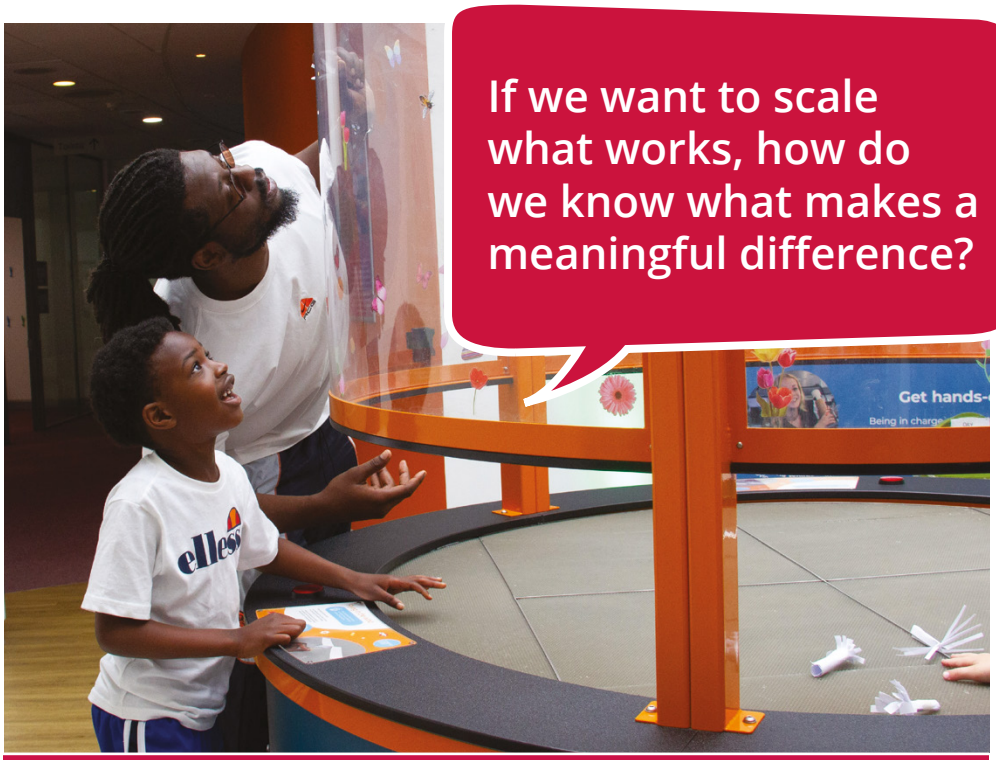


CHILDREN THEY ARE

EXAMPLES

Epidemic Crisis Response, co-developed with Roche, and *Future Fens*, co-developed with the University of Cambridge's Centre for Landscape Regeneration, demonstrate how these experiences can travel. Young people reason with data, weigh competing priorities, collaborate and make decisions about complex real-world challenges.

Our work in rural Fenland demonstrates why this matters. The extraordinary expertise we can access through Cambridge's innovation ecosystem does not have to stay in Cambridge. It can be translated into experiences that reach children in communities where opportunities to encounter emerging industries, technologies and the people behind them may be far fewer.



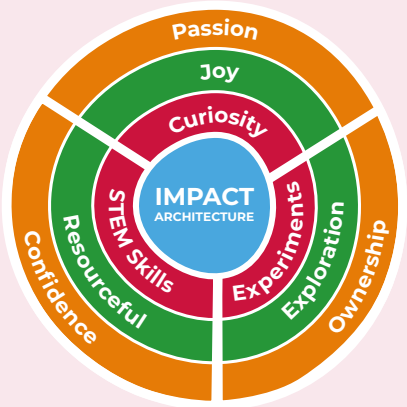
If we want to scale what works, how do we know what makes a meaningful difference?

MAKING SURE IT WORKS

Research and evaluation are built into our Programmes from the beginning.

Our **Impact Architecture** helps us understand the experiences that build curiosity, confidence and skills, help children see science as relevant to their lives, and create greater receptiveness to new ideas and information.

What we learn shapes what we create. We use evidence to strengthen and refine our Programmes, designing experiences that work for different children, audiences and settings. Just as importantly, we identify the approaches, content and learning that can be useful beyond Cambridge Science Centre, so that others can learn from what works too.



EXAMPLES

Vertical Wind Tunnel demonstrates the role of **awe and "wow"** moments within our Impact Architecture. Creating moments of wonder can make children more receptive to new ideas and information, which is why large-scale, awe-inspiring exhibits are a deliberate part of the experiences we create. The portable version uses a single fan; our Cambridge Science Centre installation uses seven.

Cracking the Code demonstrates a different kind of experience, challenging children to think critically as they identify the interlocking structure of DNA. With a Science Communicator, the activity can be extended to explore DNA replication, building greater depth and understanding.

From Cambridge to a national conversation



Cambridge has always been a testbed for new ideas.

Cambridge Science Centre sits within one of the world's most concentrated science and technology ecosystems, where businesses, universities and researchers develop ideas that travel far beyond the city.

We think our approach to engaging the next generation should be just as ambitious.

An extraordinary ecosystem, needs an extraordinary model of STEM engagement.

At Cambridge Science Centre, **we are bringing together organisations across a sector**, translating their collective expertise into sustained experiences for children. Our programmes are designed to reach children through schools, communities, science centres and families, building the evidence to understand **what works, for whom, and why.**

Our ambition is not simply to grow Cambridge Science Centre. We want to learn so that **we can contribute evidence and experience to policy and best practice**, share effective approaches across the informal learning sector and help evolve the role science centres can play in the UK's long-term approach to STEM participation and skills.

Could science centres play a greater role in connecting Britain's growth industries with children who will one day shape them?

Science centres occupy an unusual space between **industry, research, education and community**. We believe there is an opportunity to think more deliberately about that role, and about how science centres could contribute much earlier to the UK's long-term skills ambitions.



What comes next?

We want to work with **Government, Parliament, industry and the wider science centre sector** to explore that potential.

We want to:

- bring our evidence and experience into **policy conversations**
- connect with the teams shaping the **UK's approach to science, skills and growth**
- convene more industries around **meaningful early engagement** with children
- and explore how successful approaches developed and tested in Cambridge could **inform practice elsewhere**.

Cambridge can be the start. **These Programmes can travel.**

If this connects with your work, we'd like to continue the conversation.



Scan to continue the conversation

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Our mission: To craft a million awe-inspiring moments so that every child enjoys, explores and shapes the world through STEM.