



# *Reimagining PhD Programmes: Driving Diversity and Culture Change*

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March 2026

“Creating a dynamic and diverse pool of talent for the fields of energy storage and battery technology”

 THE FARADAY  
INSTITUTION



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The UK's flagship programme for electrochemical energy storage research, skills development, market analysis and early-stage commercialisation.

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# Seven Years of High-quality Impacts in Energy Storage



The Faraday Institution has generated a great return on the UK's investment from a standing start in 2018



## Lead 10 major research programmes

across **25 UK universities** and research partners and **148 UK industry partners**



## United a community of 500+ researchers

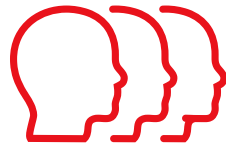
**45% new to field**, to solve battery challenges through breakthrough science



## International collaboration

DSIT funded US UK joint battery research on recycling and cathode materials

Updated October 2025



## Supported 26 spin-outs to August '25

**£225 million** in subsequent funding  
**430+** employees



## 56 inventions identified

**20** patents filed and **10** published  
**11** licensing agreements



## Published 1,200+ scientific papers

**62%** in top 10% journals  
**47.1%** in top 10% most cited  
**42.9%** with international collaborators



## Bespoke training for 116 PhDs

for UK industrial and academic careers, and an additional **72** currently affiliated with our projects



## Shaped policy

through **22 Faraday Insights**, **18 major reports**, **14 national consultations**, numerous briefings including House of Commons and House of Lords inquiries



## Hosted 7 Royal Institution Events

attracting **410,000+** online viewers

# Why was change needed?



## PhD programmes

### Challenges in traditional PhD training

- Barriers to access in STEM and battery research
- Batteries absent from the national curriculum
- Lack of diversity across the sector
- Isolated PhD environments with limited collaboration
- Unclear career routes beyond academia

### Government and partner priorities

- Clear return on investment (growth and jobs)
- Industry-ready PhD researchers

## But... the positives were

- High-growth research area with low public awareness
- Chance to build a diverse, future-ready talent pipeline
- Opportunity to shape an inclusive, collaborative culture



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# How we dealt with the challenges to diversity and culture



## Actions

### Stakeholder engagement

- Established an EDI working group
- Training programmes and diversity panels
- Identified key skills gaps

### Inclusive recruitment practices

- Developed an EDI charter
- One shared mission

### Built talent pipelines for underrepresented groups

- Undergraduate and related training programmes
- Created diverse, visible, and accessible role models

### Clearer communication of career pathways

- Introduced four structured career pathways (all students exposed)
- Developed a battery research portfolio

# Building a Strong ECR Community



## Moving beyond individual PhD experiences

### Cross-institution, multidisciplinary cohorts

- Foster collaboration and knowledge sharing

### Conferences and networking events

- Opportunities to connect across all career stages
- Embedding a strong networking culture

### Peer support networks

- Collaboration across projects and cohort opportunities
- Grants to action these opportunities

### Professional skills training

- Developing effective networking skills
- Encouraging visible platforms for sharing (e.g. LinkedIn)



## Supporting researchers beyond the lab

### Industry engagement and collaboration

- Identifying needs through stakeholder input
- Opportunities to apply training in real-world contexts
- Business and innovation training (e.g. Mini MBA)
- Embedding innovation and stakeholder perspectives into training

### Access to mentors

- Clear pathways to next steps (funding, networks)

### Preparing PhD researchers for diverse career pathways

- Real-life experience (e.g. mock interviews)
- Funded internships
- Bring in expert trainers

## Current programme

**4-year programme delivering 280 hours of training. Delivered by external partners to prepare researchers for the world of work**

- Year 1: Exposure to the full battery supply chain
- Year 2: Soft skills and entrepreneurial training
- Year 3: Preparation for internships
- Year 4: Transition to work (CVs, mock interviews)



# Inspiring and Training the Next Generation



Creating a dynamic and diverse pool of talent for the fields of energy storage and battery technology



**Researcher professional development**



**Bespoke PhD training programme**



**Faraday Undergraduate Summer Experience (FUSE) internships**



**STEM outreach**



**Equality, diversity and inclusion initiatives**



# Next Steps based on lessons learnt



## Lesson learned

- Impact takes time, but expectations for change are immediate. Managing that is hard
- Flexibility and adaptability are essential in fast-moving sectors
- Engagement across academia, industry, and early career researchers is critical. Use this as soft power!
- Creating opportunities is as important as setting expectations



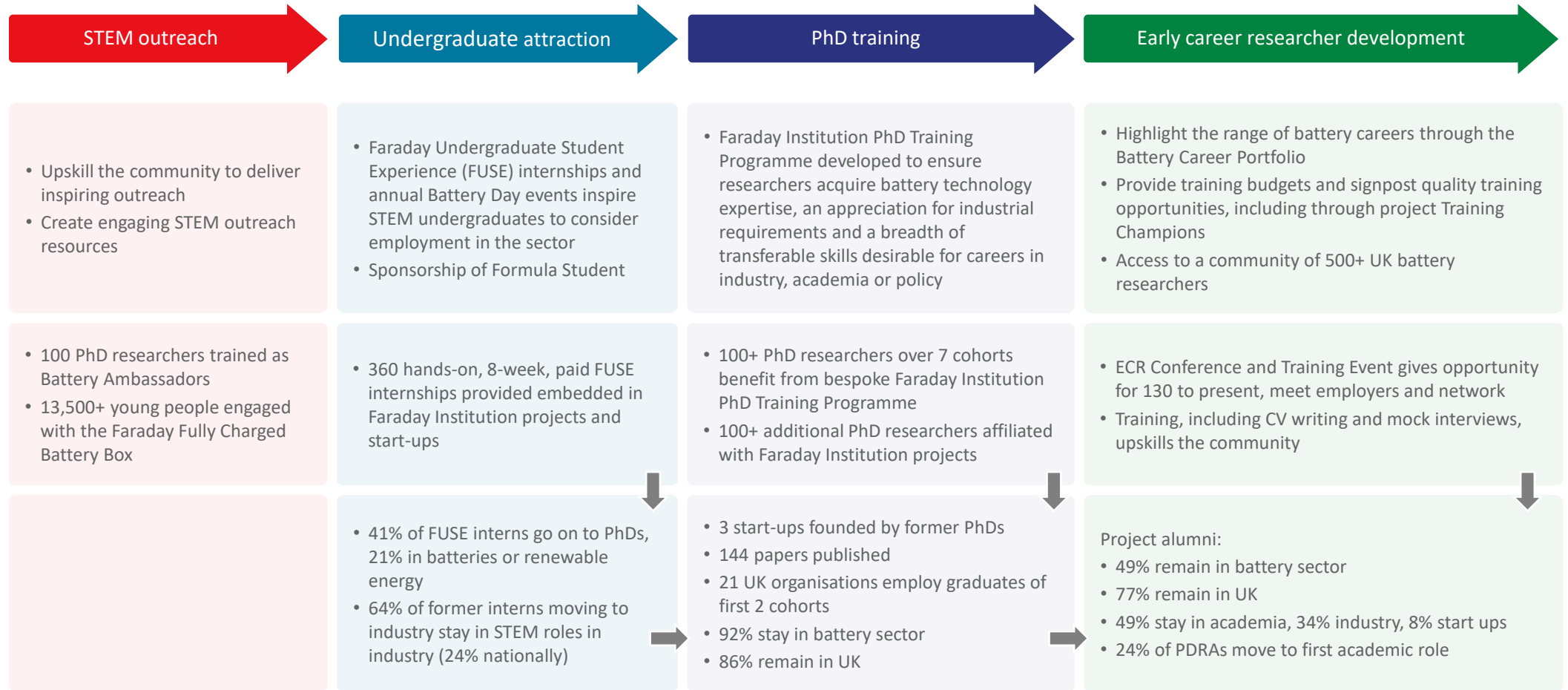
## What next?

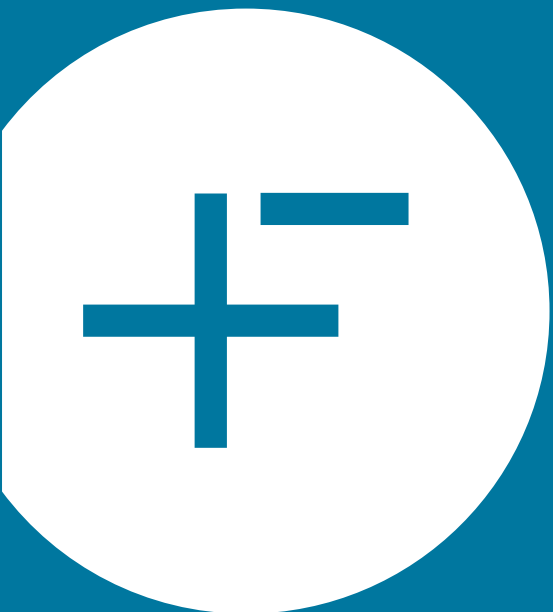
- Strengthen university, industry partnerships, including co-funded PhDs therefore strengthening industry engagement
- Continue using industry and diversity panels to shape training and priorities
- Leverage alumni to showcase career pathways and next steps for early career researchers
- Expand opportunities for collaboration, innovation, and networking at all levels
- Continue to develop agile frameworks that evolve with industry needs (the impact of AI)
- Continue to seek advice and insight early to inform direction

# Impact of Faraday Institution Training Initiatives



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