

The Tomorrow's Engineers Code

Biennial Report 2020 to 2022

December 2022



TOMORROW'S
ENGINEERS

CODE

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Foreword

According to the Commission for Employment and Skills, 43% of STEM vacancies in the UK exist due to a shortfall in applicants. Notwithstanding the hard work of many organisations over many years, we need to enthuse yet more young people to consider their future in engineering. And the need remains also to improve diversity and inclusion across the sector. We therefore need to work smarter, which we can do through The Code by connecting organisations undertaking STEM outreach activity and working together to cover more ground and drive real change that will enable the UK economy to thrive.

This Biennial Report shows the progress The Code has made since launching in October 2020. It has brought together a community of over 250 organisations all committed to inspiring the next generation of engineers needed for the future. The Code Community has gone from strength to strength, supporting and sharing with each other via our online workshop programme, in-person Tomorrow's Engineers Live conference and newly launched online tool, Code Connect.

Looking ahead, The Code will move into a truly collaborative phase, enabling our growing Community to work through challenges together, network with likeminded peers and act as champions within their sectors and regions. This will enable us collectively to improve the work we are doing with young people and inspire them to be tomorrow's engineers.

We, the Code Community, are passionate about working together to tackle the skills shortfall and lack of diversity and inclusion in the engineering sector, and to inspire the future workforce needed within the UK. Please join us, together we can impact further, faster.



Sir Julian Young

Chair of the Tomorrow's Engineers Code Advisory Board

1. Background

Engineering is at the heart of the UK's economic success: it generates 27% of UK turnover, employs 5.7 million people and produces the majority of the nation's exports. However, almost half of engineering employers report significant recruitment and retention difficulties, and there is a clear need to improve diversity and inclusion within the sector.

While [women now make up 16.5% of the engineering workforce](#), this remains woefully short of their 48% overall workforce presence. Comparable figures for other groups fall less short though are still under where they should be, including: 24% vs 26% for people from [poorer socioeconomic backgrounds](#); 11% vs 15% for [disabled people](#); and 11% vs 13% for people from [minority ethnic groups](#). These shortfalls are amplified by the need to grow overall numbers in the workforce.

EngineeringUK, in partnership with others, is set up to tackle this challenge. We are passionate about inspiring the next generation of engineers and creating a diverse future workforce that enables the UK to thrive. We do this by working in partnership with the engineering community to grow the collective impact of work across the sector to help inspire tomorrow's engineers and increase the number and diversity of young people choosing academic and vocational pathways into engineering. Our main way of doing this is through the management of The Tomorrow's Engineers Code. This report reviews the last 2 years of the Code since launch in October 2020.

2. Creating The Code

In 2018, the [Year of Engineering](#), hundreds of organisations came together to showcase the world of engineering to young people. Towards the end of 2018, a roundtable was organised working with government departments and Shell, to consider the legacy for the Year of Engineering, and to see what more the sector could do together to tackle the engineering workforce skills gap. It was here the idea to maximise the impact of the many engineering inspiration activities delivered by collectively inspiring more and more diverse young people was created.

In 2019 we held 7 co-creation workshops across the UK to build out the concept with input from over 40 organisations. From this The Code of Practice, which quickly became the Tomorrow's Engineers Code, was born and EngineeringUK was invited to manage it. Despite a few delays due to the Covid-19 pandemic, The Code was launched in October 2020 with 60 founding Signatories and Supporters.

3. What is The Code?

In 2015/16 research by the Royal Academy of Engineering and Lloyd's Register Foundation found over 600 organisations were involved in STEM outreach with young people. There is still a prolific amount of activity and significant investment to inspire young people about STEM; however, the diversity of people progressing into engineering careers remaining low. The Code provides a framework for these many organisations to maximise their impact by working better together to reach the common goal of increasing the number and diversity of young people entering engineering careers.

The framework consists of 4 pledges, which organisations commit to when they sign The Code. The pledges cover the areas which are important when designing, funding or delivering engineering inspiration to young people and are intended to drive a set of values and behaviours. How organisations deliver against these pledges is flexible so Signatories can tailor their ambitions relevant to the context, their strengths and challenges.

Any organisation with UK operations that funds, designs and/or delivers engineering outreach activities is invited to become a Signatory and it's free to join. Any organisation that doesn't meet these criteria though still supports the aims of The Code can join as a Supporter.

The pledges



Inspiring connection

Ensure programmes contribute to a sustained and rich STEM journey for all young people.



Driving inclusion

Ensure all young people have opportunities to engage in engineering-inspired activities and no one is left behind.



Showcasing engineering

Promote a positive, compelling, and authentic view of engineering, showcasing the breadth of opportunities.



Improving impact

Improve monitoring and evaluation of programmes and activities to develop a shared understanding of what works.

4. Managing The Code

EngineeringUK were invited to manage The Code in 2019. As The Code is owned by the community, a governance structure was put in place to represent the views of the Code Community and wider engineering sector. This covers 2 groups:

Thinking Group – people from key organisations who test ideas, solutions and provides advice and guidance on key elements of The Code.

Advisory Board – senior people who provide strategic guidance and direction for The Code.

The membership of these groups is reviewed and tested at regular intervals to ensure a diversity of views are represented. Current membership of these groups can be found on <https://code.tomorrowsengineers.org.uk/about-the-code/team/>.

At EngineeringUK there are currently 1.5 FTEs dedicated to The Code, as well as support from teams across the whole organisation including the Executive Team, Business and Industry, Research & Evaluation, Communications, Environmental Sustainability and EDI.

5. Progress 2020 to 2022

5.1 Growing The Code: recruiting Signatories

The first 2 years of The Code has focused on building up a critical mass of Signatories and Supporters to create a Code Community that is representative of the diverse engineering sector. At launch in October 2020 there were 60 Founding Signatories and Supporters. From here a recruitment plan was implemented, leveraging our own network of partners and corporate members and also working with umbrella organisations who could encourage their member organisations to sign up. During the first year of The Code, it grew to 160 members and by October 2022 this had grown further to 247. Chart 1 below shows the cumulative growth in Signatories and Supporters across the 2 years of The Code. There was a notable recruitment rise during the run up to Tomorrow's Engineers Live, which took place in July 2022 as access to the event was promoted as one of the benefits of joining The Code.

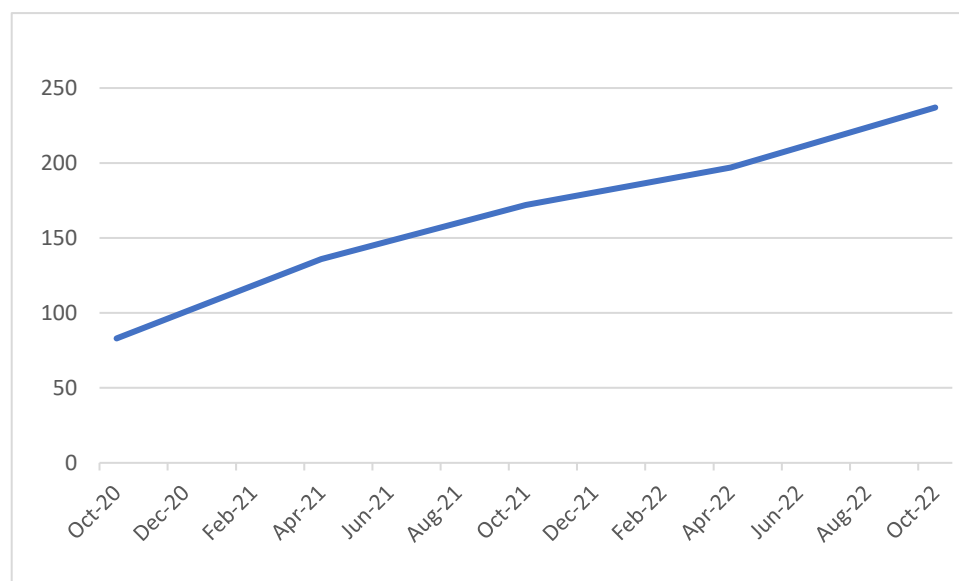


Chart 1: Cumulative growth in Code Signatories and Supporters Oct 2020 to Oct 2022

The Code Community represents a wide variety of organisation types, including companies, STEM outreach organisations, professional engineering institutions (PEI), trusts & foundations, government departments (statutory) and universities (HEI). 40% of Signatories and Supporters are companies, followed by STEM outreach organisations (26%).

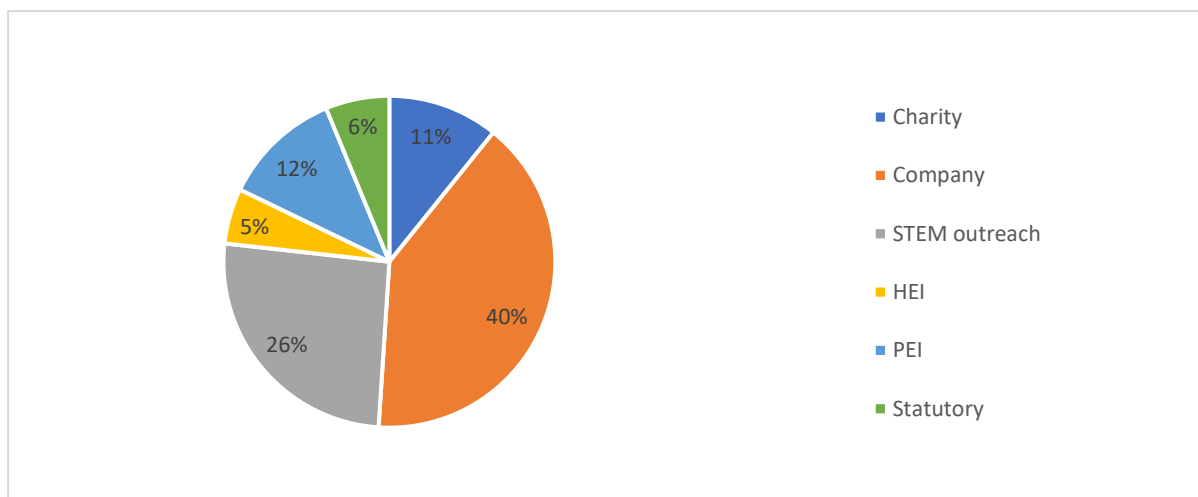


Chart 2: Code Signatories and Supporters by organisation type

*Statutory refers to government department

With 40% of the Code Community being companies, it is clear that engineering employers want to improve their engagement with young people and grow and diversify their future workforce. In 2023 The Code Team will seek to recruit more company Signatories and expand into sectors currently underrepresented amongst Code Signatories.

Sector	Percentage of Code Community
Energy & utilities	18%
Construction & civil engineering	16%
General engineering	14%
Aerospace & defence	8%
Technology, computing and IT	7%

Table 1: Top 5 sectors represented by companies in Code Community

Looking specifically at company Signatories and Supporters by size of organisation (where numbers of employees are known), 67% of companies are large, and 33% are SMEs. We are working with a group of SMEs to understand the barriers to them in delivering engineering outreach activities and how we could support them through The Code.

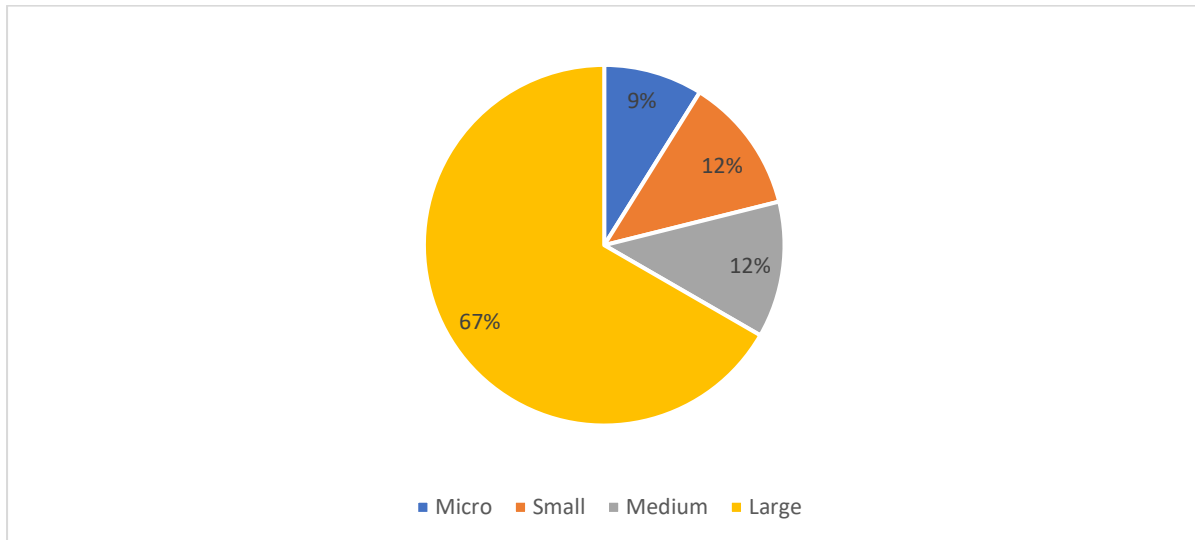


Chart 3: Company Code Signatories and Supporters by size

5.2 Providing support: empowering a change in behaviour

As Signatories work towards meeting the 4 pledges, The Code team provide different types of support. The Code has ambitious plans to reach over 300 organisations by August 2023, building to 500 by 2028, so it's important that the support provided by the Code Team is light touch, focusing on empowering the Code Community to change its own behaviour using the tools and resources provided by The Code. The support provided takes a few different forms as follows.

5.2.1 Digital support

To enable the light touch empowerment The Code requires a strong digital presence. This is done through 2 main platforms: [The Code microsite](#) and the [Tomorrow's Engineers](#) website.

The Code microsite

The first Code microsite was developed for Code launch in October 2020 providing a home for people to find out more information on The Code. 18 months later, the site had a refresh to reflect the growth of The Code making it easier to engage with and navigate the site. Since launch the site has seen 13,648 users and 38,311 unique page views and now hosts [Code Connect](#), a new way for the Code Community to search, locate and collaborate with other members of the Community (see below for more info). The microsite provides:

- information on the benefits of The Code for potential Signatories
- a place for organisations to sign up
- case studies of Signatories who have benefited from The Code
- FAQs
- signposting, resources and tools to help empower the Signatories to meet the pledges
- Signatories with a better understanding of the scale and depth of the activity delivered by the Code Community, and the ability to connect with like-minded Signatories to collaborate via Code Connect

Code Connect

[Code Connect](#) meets a need within the Code Community evidenced via our check-in (see [section 5.3](#)). The Code Community told us they wanted to better understand who was doing what with young people in engineering/STEM engagement and where so they could consider who they'd like to collaborate with. A database within the Code microsite was developed to enable Signatories and Supporters to search and filter others in the community by sector, organisation size, age group of young people they engage with, activity type they deliver and the regions they deliver in. Each Code member will have a profile card, as shown in image 1. Once they find an organisation they'd like to learn more about they can 'request to connect'.

Code Connect was launched on 20 October 2022 and is the next phase of The Code, enabling more and better collaboration across the community. It will also provide an insight into what the engineering sector is doing regarding outreach with young people that EngineeringUK will share through the Tomorrow's Engineers website and workshops. By December 2022, we had already seen 60 connection requests from Signatories looking to contact and collaborate with others in the community. Some examples of these connection requests include Signatories wanting to join up with others in similar fields to share best practice, partner with others to create careers inspiration materials, and work together on developing new content for their programmes.

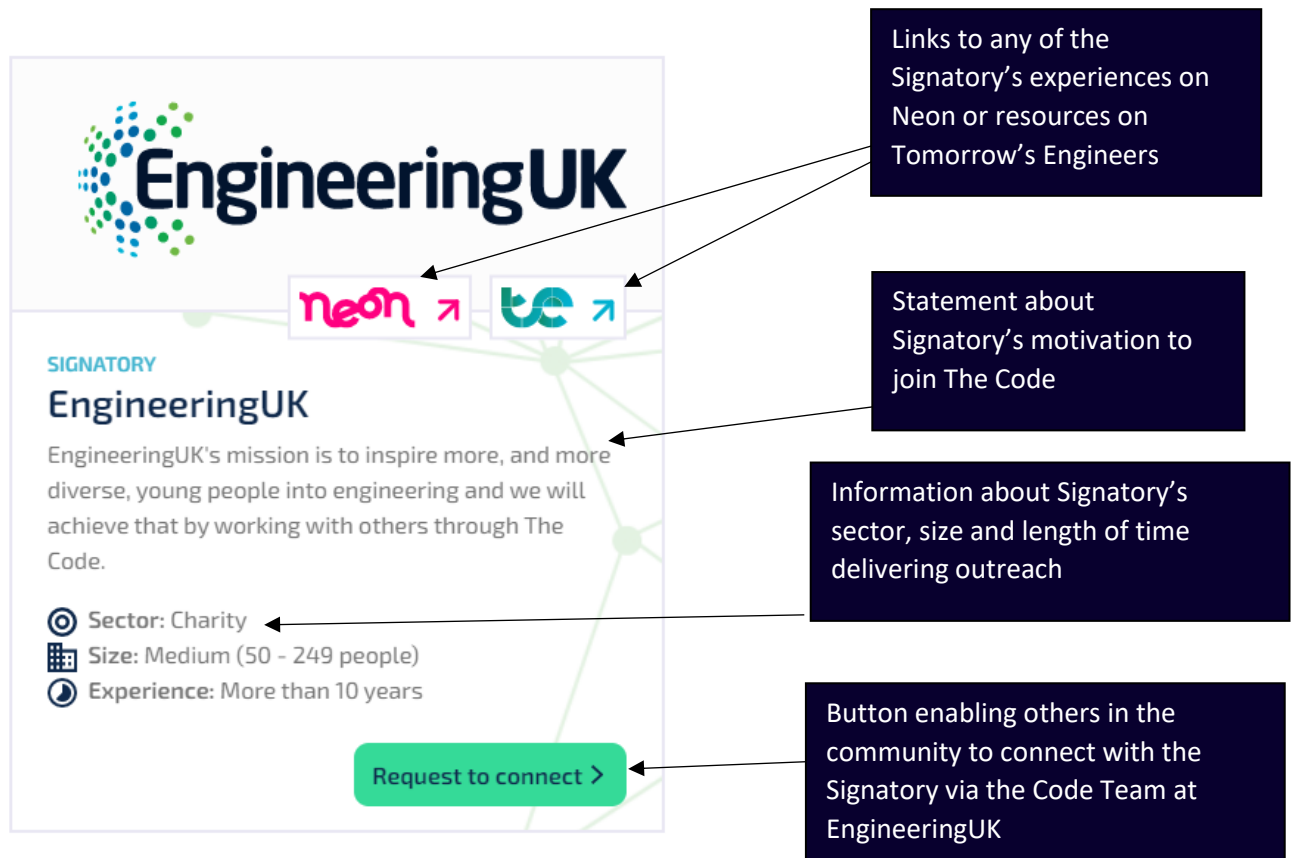


Image 1: Example of Code Connect profile card

Tomorrow's Engineers website

[The Tomorrow's Engineers](#) website helps people get the most from their engineering engagement activity with guidance and information drawn from across the STEM community. The website has 4 sections that align closely with the 4 pledges of The Code: [careers inspiration](#), [delivering inspiration activities](#), [equality, diversity & inclusion](#), and [research & evaluation](#). Each section has a range of resources to guide organisations to improving their outreach programmes and Signatories can submit their own resources to be published on the site. Submissions are assessed to ensure that they align with the purpose of the site and will be beneficial to users. Since launch the site has seen 18,626 users and 41 resources added.

5.2.2. Building relationships – Code team at EngineeringUK

Alongside the digital support provided to help empower the Code Community meet the pledges, there is also a Code team at EngineeringUK that are on hand to answer any

questions and offer guidance. The team builds relationships with the Signatories by providing key information and signposting to any relevant resources that could help them and provide a bit of oversight as to where they are in their journey to meet the pledges.

As The Code focuses on empowerment of Signatories to adapt their own behaviours around the framework of the 4 pledges, relationship building and regular communication with the Community is hugely important. The Code team works with the EngineeringUK internal communications team to implement a yearly communications plan to keep the community informed with up-to-date information, highlight any future workshops and events and any new resources on Tomorrow's Engineers that can help them meet the pledges. Communications include onboarding emails that include welcome pack materials and signposting to resources for each pledge, a virtual welcome meeting, monthly e-shots and invitations to relevant events.

5.2.3 Sharing the learning – providing space to learn and share

One of the key aspects of The Code is to share learnings about engaging with young people across the community. To enable this, The Code runs a workshop programme throughout the year along with an annual event: Tomorrow's Engineers Live (TE Live).

Workshop programme

Throughout the year a series of workshops are held covering topics closely related to The Code's pledges. Each workshop is around an hour long so people can dip in during a break and typically involve a presentation by a fellow Code Signatory where they share information about a project they've worked on, a problem they've encountered and overcome or evaluation learnings they'd like to share. Different formats for the workshops have been used including webinars, live Q&As and collaborative breakout sessions. Since October 2020, 11 online workshops have taken place in partnership with 15 Signatories as presenters and over 370 attendees. Appendix 1 provides an overview of the workshops delivered over the last 2 years.

The workshop programme has been a huge success and will continue into 2023 and beyond. The Code Team have also been running focus groups with both Signatories who have attended previous workshops and those who have not attended any to test the format and what works for them.

Tomorrow's Engineers Live

By the summer of 2022 the pandemic had subsided, face-to-face events were starting up again, and the Code Community had grown enough to merit an event with the purpose to bring people together to learn, share and connect. So, in July 2022, The Code Community and others across the engineering engagement sector came together at the inaugural [Tomorrow's Engineers Live \(TE Live\)](#). Signatories, Supporters and others from the community came together as a group for the first time, networked, joined in debates and panel sessions, listening to peers sharing their experience and shared good practice.



Image 2: Plenary session panel at TE Live, July 2022

The event was attended by over 100 people from across the community. The programme for the day was guided by feedback from The Code Community via the Check-in and covered topics such as why working together to inspire young people in engineering matters, the nature and scale of engineering engagement needed to reach all young people, what is effective collaboration and how to harness the power of SMEs. Speakers were drawn from both within and outside The Code Community including from large corporates, SMEs, schools, government departments and STEM outreach organisations. The full programme with speakers is in appendix 2. More information about the event including video footage can be found at www.tomorrowsengineers.org.uk/live.

The event was hugely successful with 96% of survey respondents rating it as 'good' or 'excellent' and 94% saying they were 'likely' or 'very likely' to attend a future Tomorrow's Engineers Live event. When asked about how they might change their activity following TE Live, common themes included making more space for collaboration, getting more insight from young people themselves, more engagement with SMEs and looking again at how impact is being measured. The next Tomorrow's Engineers Live is being planned for March 2023.

5.3 Evaluating progress and measuring success

Progress towards the ambition of The Code is monitored against a theory of change (ToC) and a set of KPIs. These were developed in 2020 working with EngineeringUK's Research team, the Thinking Group and the Advisory Board. The ToC against which the KPIs were set

can be found in appendix 3. Data and information to assess progress towards the KPIs is collected through The Code check-in.

Code Check-in

In November 2021 the first Code check-in was launched. All Code Signatories were asked to provide information via an online survey answering questions about the following areas:

- Their views of The Code and perceived impact of being a member
- What they have done to embed the 4 pledges in the past year
- What their plans are for the coming 12 months
- What additional support they need in meeting the pledges

The information provided in the check-in gives the Code Team an overview of how The Code is progressing towards the KPIs, insight into the delivery by the Code Community, helps us tailor our support for Signatories and guides us to future developments to facilitate Signatory progress towards all 4 pledges. The 2021/22 check-in received a 70% response rate, which is incredibly high and shows the commitment of The Code Community. Some key findings from the 2021/22 Code check-in include:

- When asked how likely it is that they would recommend joining The Code to a friend or colleague, Signatories on average gave a score of 8 (on a scale of 0-10)
- Across 9 areas that The Code aims to support with, on average, Signatories reported improvements on 5 different aspects
- 61% agreed or strongly agreed that being a member of The Code improved the way their organisation includes information that shows engineering's diversity in terms of roles, opportunities and pathways
- Over half of respondents also agreed or strongly agreed that being a member improved the way they understand how their activities relate to other STEM outreach (55%) and collaborate with other organisations involved in STEM outreach (51%)
- However, Signatories reported experiencing challenges around knowing what's happening across the sector and when asked what further support they required, many referenced more opportunities to collaborate, with suggestions such as 'ability to share good practice with others' and 'a searchable responsory to see what is being offered across the community'

These findings led us to develop Code Connect - a direct output from listening to what the Code Community told us through the check-in. The next check-in will be in March 2023. The full 2021 check-in report can be found at <https://code.tomorrowsengineers.org.uk/resources/the-code-check-in>.

KPIs

A set of KPIs and targets were created based on the medium/long term effects identified in the ToC and what were the key changes in behaviour The Code was hoping to achieve. There is a core set of KPIs plus a set of points to monitor. Table 2 below shows the progress towards the 2023 KPIs as evidenced by the 2022 annual Check-in:

KPI	Progress to date
Recruit 300 Signatories from a diverse range of sectors and size	247 Signatories (October 2022)
At least 90% retention of Signatories annually	Will be reviewed in September 2023
75% of Signatories using resources on TE to guide improvement related to pledges	57% of Signatories reported having used TE resources
At least 70% of Signatories collaborating	51% reported that being a member of The Code had improved the way their organisation collaborates with other organisations involved in STEM outreach *

Table 2: KPIs for delivery of The Code by September 2023

*We will also use Code Connect to measure this going forward

Table 3 below shows KPI measures to show outcomes for The Code and a more detailed table can be found in appendix 4.

Medium outcome (6 to 12 months)	Long term outcome (12 to 24 months)	Progress to date
Pledge 1 (inspiring connection)		
Signatories understand how they can collaborate/share with each other to improve practice	Signatories increase collaboration/sharing with each other to improve practice	51% agreed or strongly agreed that being a member of The Code has improved the way their organisation collaborates with other organisations involved in STEM outreach.
Pledge 2 (driving inclusion)		
Signatories able to identify how to reach priority groups	Signatories actively increasing reach to priority groups	43% agreed or strongly agreed that being a member of The Code has improved the way their organisation targets schools and/or students who are under-represented in engineering.
Signatories have understanding of how to approach equity, diversity & inclusion (EDI) in their activities	Signatories adapted activities to improve EDI	72% actively considered how to target young people or schools that don't typically participate in engineering-inspiration initiatives in our activities and/or programmes. However, only 46% collected demographic data on participants in their activities and/or programmes and 42% analysed the demographic data they collect on participants.
Pledge 3 (showcasing engineering)		
Signatories understand how to showcase engineering in a positive, compelling and authentic way through their activities	Signatories say that they have changed their presentation of engineering to be more positive, compelling or authentic	61% agree or strongly agree that being a member of the Code improved the way their organisation includes information that shows engineering's diversity in terms of roles, opportunities and pathways.
Pledge 4 (improving impact)		
Increase in monitoring/evaluation of activities	Increase in monitoring/evaluation of activities	48% agreed or strongly agreed that being a member of The Code has improved the way their organisation evaluates its STEM outreach activities.
Signatories share evaluation findings with each other	% of Signatories that share findings	29% shared learnings from evaluation results with other members of the STEM community.

Table 3: KPIs to measure outcomes of The Code

5.4 How The Code has made a difference

The Code check-in showed us that Signatories are positive about the impact of being a Code member. We've dug deeper into this with stories of how 2 Signatories have used The Code pledges to improve their engineering outreach work. The Code Community is made up of wide range of organisations and these case studies demonstrate this, showing how The Code's pledges can be applied in an SME in the south-west of England (Alderman Tooling) and a large energy company (SSE).



Alderman Tooling

The Code has provided Aldermans with the chance to share ideas and learn from others in order to extend and improve their engineering engagement. As a medium sized enterprise, Aldermans has found the 4 pledges of The Code (inspiring connection, driving inclusion, showcasing engineering and improving impact) a flexible and useful tool to support this work.

Aldermans has helped to 'drive inclusion' by working with City College Plymouth on a project to celebrate International Women's Day with an engineering focus, and also providing Kickstart placements for young people on Universal Credit, one of whom progressed to a 4-year engineering apprenticeship scheme.

As part of The Code Community, Aldermans has 'inspired connection' by providing mentoring and work experience opportunities for local engineering students, working in collaboration with FE and HE providers. The company also supported MVV Environment Developments Ltd and Exeter Science Park on a virtual schools' event during the pandemic.

To 'showcase engineering' and 'improve impact' the company ensured that apprentices were included on the website, to inspire others. Its regular social media posts and shares are evidence of its support for apprenticeships.

"We are incredibly proud of the work we are doing with young people in our community. Using the 4 pledges of The Code has provided us with a practical framework so we understand and recognise our achievements. This inspires us to do more" Karen Friendship, Managing Director



SSE plc

SSE plc signed The Code in November 2020 and have used the 4 pledges of The Code - improving impact, driving inclusion, inspiring connection and showcasing engineering - to underpin their engineering outreach strategy.



Sam Greer, Education and Employability Manager, explains what The Code has meant for SSE plc, especially in the areas of improving impact and showcasing engineering.

“SSE have been doing great outreach for years, but not capturing it, evaluating, or checking the activities aligned to our business needs. Since putting the SSE outreach strategy together there have been some useful tools from the Tomorrow’s Engineers website that have helped me including the Impact Framework and the Measures Bank. These have been invaluable to us.”

The Code’s driving inclusion pledge also prompted SSE plc to be more mindful of driving diversity in our volunteer community. We have also become more aware of digital poverty and look to provide SSE devices for young people on our employability programmes, we look to support schools which are in need due to pupil poverty, levels of ethnic minority or gender imbalance in STEM.

Sam concluded: **“The Code definitely came along at the right time for me. I was able to utilise the pledges to underpin the new STEM strategy, aligning all outreach activity to the needs of our business in our drive to achieve net-zero and establish a long term, sustainable approach to outreach.**

More detailed case studies can be found at <https://code.tomorrowsengineers.org.uk/why-become-a-signatory/case-study>. We will continue to work with the Code Community to develop case studies, particularly showcasing collaborations between Signatories as a result of using Code Connect.

6. Looking to the future

Following on from the first 2 successful years of The Code, the focus for the next 2 years and beyond will be facilitating more and better collaboration, whilst continuing to grow to a community of 500+ Signatories by 2028.

- **Collaboration across The Code Community** - We will build on the momentum from TE Live, with another more interactive in person event, allowing more space for the Community to work through challenges together and network with peers. We will leverage Code Connect, bringing together like-minded Signatories delivering in common regions, sectors and type of activities.
- **Building relationships with The Code Community** - The Code Team will continue to build on our relationships with the community, hosting regular drop-ins to support current Signatories in meeting the pledges and for prospective Signatories to understand more about The Code and its benefits.

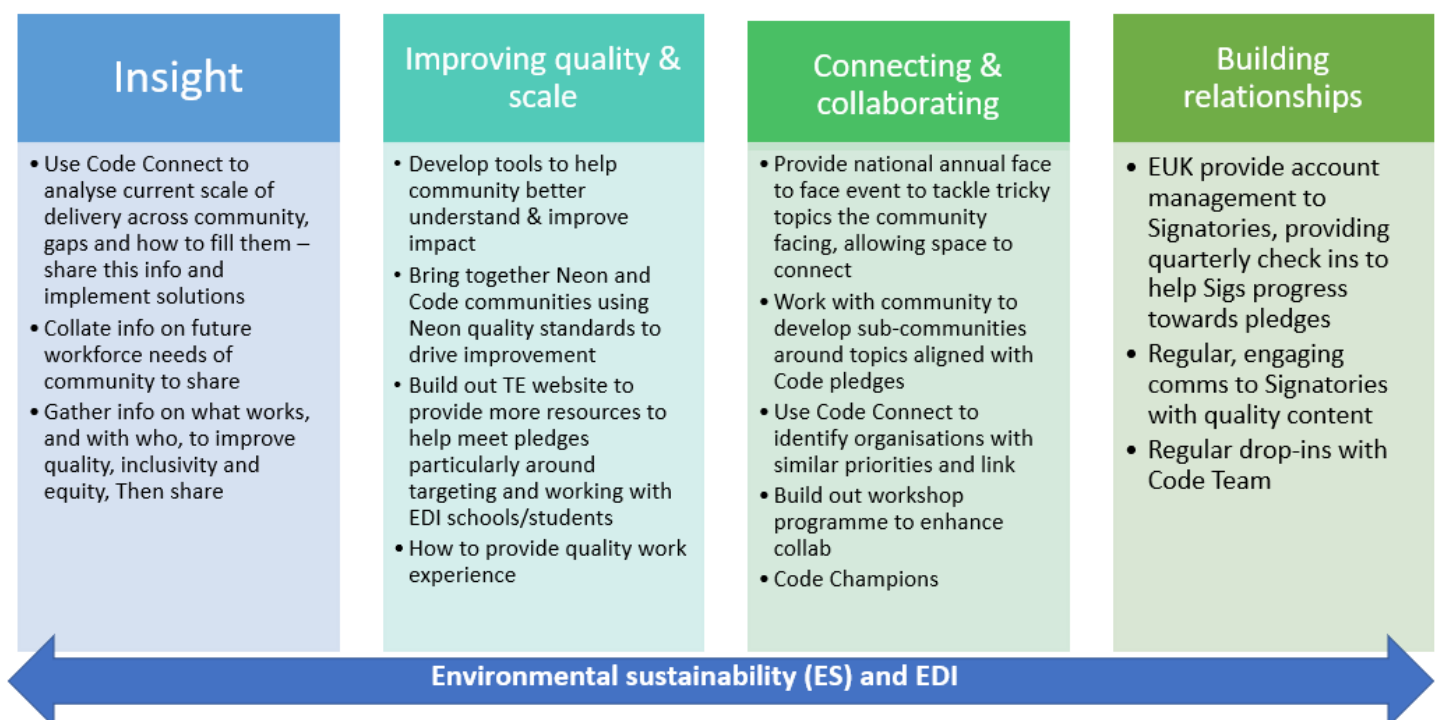


Image 3: Code focus areas for 2023 to 2028 strategy

- **Growing The Code Community** - We will look to target particular sectors, guided by the data on future workforce needs and work with the community to establish 'Code Champions' who will drum up support for The Code in their own sectors, regions and supply chains. We will continue to bring [Neon](#)* Providers and Code signatories closer together, so that The Code becomes the community of practice for Providers. We will also look to identify strategic partnerships which align with The Code's mission and bolster recruitment.

Strengthening the messaging - We will work with the community to ensure that The Code reflects the need to inspire young people into the future workforce required for the UK to achieve net zero and speaks to technology employers. We will also ensure that The Code has an updated and clear mission and vision, shared by the community.

*Neon is a teacher-facing website where deliverers can promote their activities and programmes to teachers.

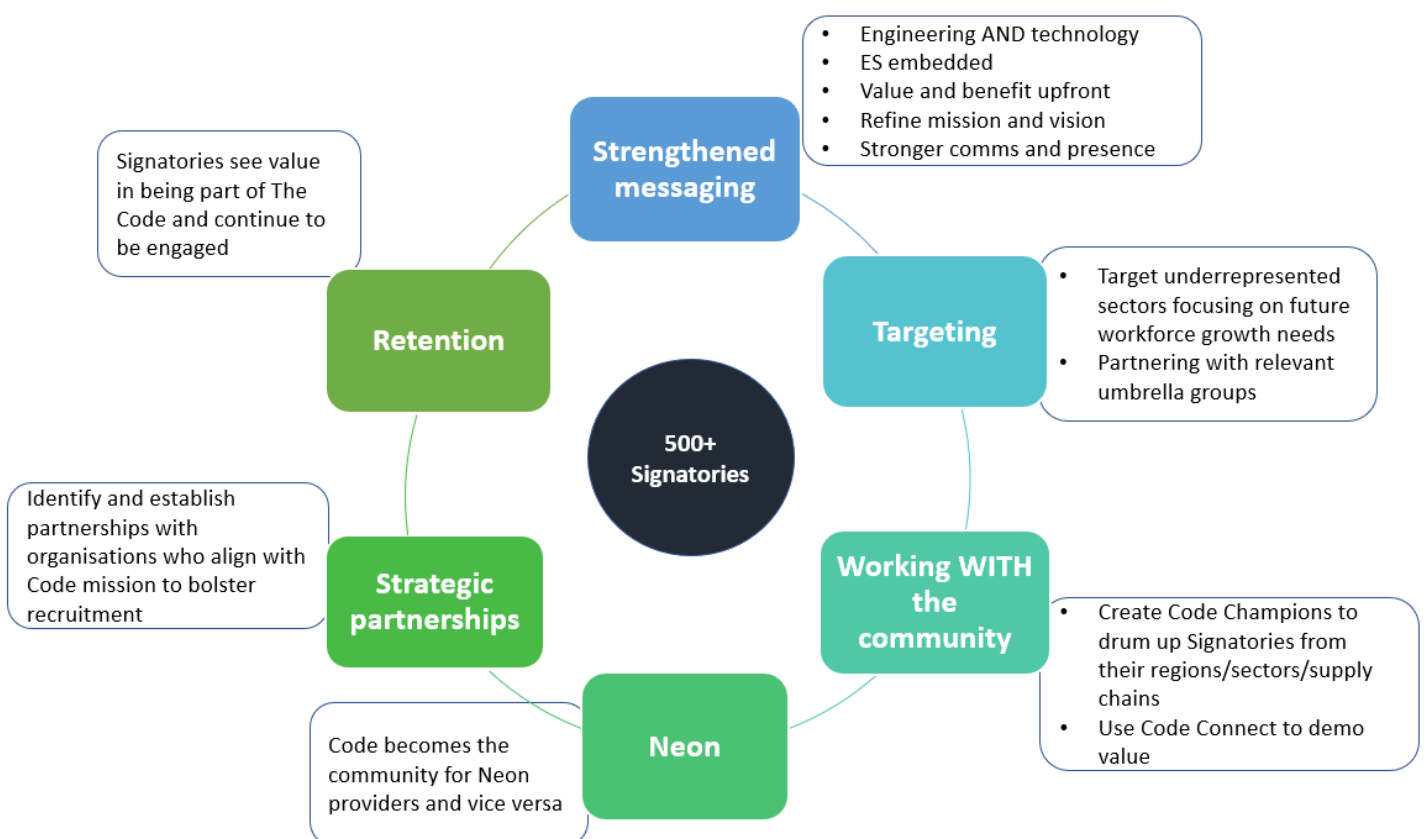


Image 4: Code recruitment strategy 2023-28

7. Final Thoughts

During the first 2 years of The Code a thriving community of Signatories and Supporters has been built with a growing toolkit of resources, programme of events and support. This has all been possible thanks to the generous funding and in-kind support. The Code Team at EngineeringUK will work to continue this and take the Code into this next collaborative phase and ultimately work together to inspire the next generation of engineers.

Appendix 1- 2020-22 workshop programme

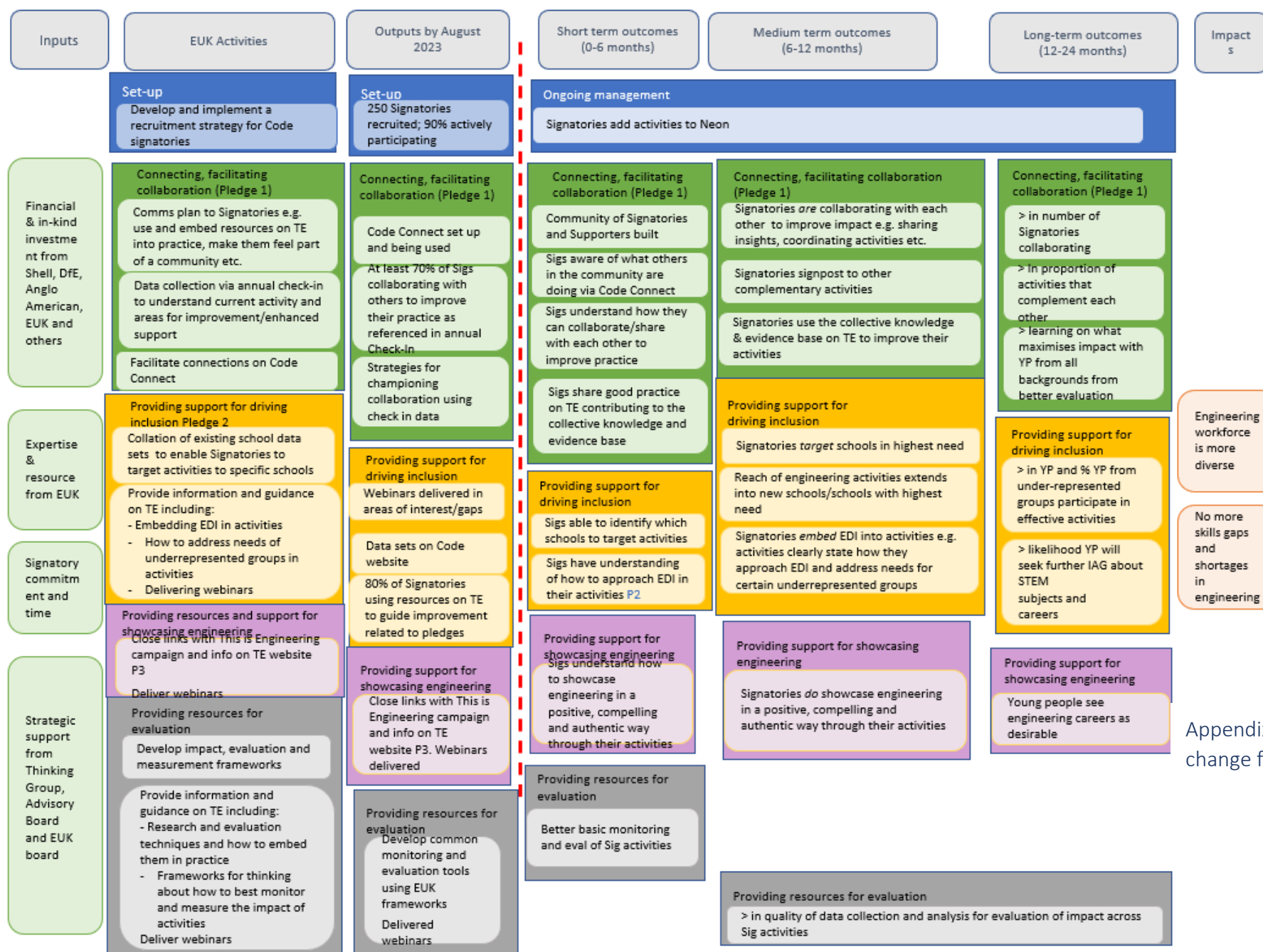
2020/21				
Topic/shared problem	Pledge(s)	Date	Speakers	No. of attendees
Collaboration in The Code Community	All	March 2021	Facilitated by The Code Team at EngineeringUK	53
The Gatsby Benchmarks in Practice	Inspiring connection	April 2021	The Careers and Enterprise Company	31
Inspiring Young People on Environmental Sustainability in Engineering	Showcasing engineering	May 2021	Engineers without Borders, EDF, Solutions for the Planet	27
Applying an Impact Framework to Engineering Outreach	Improving impact	June 2021	Head of Research and Senior Research and Impact Manager both at EngineeringUK	24
Virtual Work Experience: Sharing Best Practice in The Code Community	Showcasing engineering	July 2021	Speakers for Schools, Siemens, Jacobs	20

2021/22				
The Skills Builder Partnership: Ensuring that the future workforce have the essential skills to succeed	Driving inclusion	November 2021	The Skills Builder Partnership	-
Reaching underrepresented groups in engineering outreach programmes	Driving inclusion	November 2021	EngineeringUK's Head of Equality, Diversity and Inclusion, Smallpeice Trust, HS2	45

How to talk about engineering careers with young people	Showcasing engineering	March 2022	EngineeringUK's Head of Careers	90+ (open to organisations outside The Code and Neon)
Harnessing the power of employees as engineering outreach volunteers	Showcasing engineering	April 2022	STEM Learning Civil Aviation Authority and Thales.	30+
Top tips for delivering engineering outreach to primary school	Inspiring connection	June 2022	First Lego League at the IET, Sentinus and STEMWorks.	24
Making your outreach more accessible to disabled young people	Driving inclusion	July 2022	Emma Diserens, EngineeringUK's Head of Equality Diversity and Inclusion	35

Appendix 2- TE Live programme- July 2022

Introduction <ul style="list-style-type: none"> Fayon Dixon, Tomorrow's Engineers Live host Sir Julian Young, President of The Institution of Engineering Technology (IET) and Chair of Tomorrow's Engineers Code Advisory Board
Plenary 1 - Why working together to inspire young people in engineering matters <ul style="list-style-type: none"> Barry Andrews, HR Manager, Kenard Engineering Paula McMahon, Civil Engineer, Sir Robert McAlpine Marianne Shelton, UKRI Jim Smith, Headteacher Andy Sweeting, Head of Transport Labour Market and Skills, Department for Transport
Session 1- The challenge: the nature and scale of engineering engagement needed to reach all young people <ul style="list-style-type: none"> Dr Hilary Leever, Chief Executive, EngineeringUK Yvonne Baker, Chief Executive, STEM Learning
Session 2- Effective collaboration <ul style="list-style-type: none"> Amit Kotecha, Senior Campaigns Manager, Network Rail Tina Cator, Corporate Communications Business Partner, VolkerRail Neil Robertson, Chief Executive, NSAR Richard Winter, Education Manager, HS2
Session 3- Showcasing modern engineering <ul style="list-style-type: none"> Jo Trigg, Director of Communications and Engagement, Royal Academy of Engineering
Plenary 2 - Reaching beyond the stereotype <ul style="list-style-type: none"> Caroline Maston, Teacher, Lighthouse School Nike Folayan, Technical Director, Railways Division WSP Lauren Mistry, Strategy, Impact & Comms Director, Youth EmploymentUK Dilani Selvanathan, Research and Development Engineer at Herotech8 Simon Earnshaw, General Manager Supply Chain and Logistics, Air Products
Session 4- Targeting and delivering to diverse groups <ul style="list-style-type: none"> Mark McBride-Wright, Founder, EqualEngineers Kate O'Hara-Hatchley, Head of Early Careers, D&I and Development, McLaren
Session 5- Delivery with impact <ul style="list-style-type: none"> Fiona Dyer, Shell UK National STEM Programme Manager Alex Stutz, Research Manager, CFE (Research and Consulting) Ltd
Session 6- Harnessing the power of SMEs <ul style="list-style-type: none"> Caroline Murray, Founder and Director, Calm Engineering Natalie Tickle, Head of Programmes, Heart of the City Rob Dodds, Training Academy Controller, Unipres (UK) Limited
Close- Thank you and next steps <ul style="list-style-type: none"> Dr Hilary Leever, Chief Executive, EngineeringUK <p>* Delegates were able to attend the plenary sessions, 2 of the 3 morning breakout sessions, as well as 2 of the 3 afternoon breakout sessions. All attendees and speakers were also invited to stay for networking drinks following the closing remarks.</p>



Appendix 3- Theory of change for The Code

Appendix 4- KPI to measure outcomes for The Code

The table below is an extended version of table 3 with additional measures included.

Medium outcome (6-12 months)	Long term outcome (12-24 months)	Progress to date
Pledge 1 (inspiring connection)		
Signatories understand how they can collaborate/share with each other to improve practice	Signatories increase collaboration/sharing with each other to improve practice	<p>51% agreed or strongly agreed that being a member of The Code has improved the way their organisation collaborates with other organisations involved in STEM outreach.</p> <p>49% agreed or strongly agreed that being a member of The Code has improved the way their organisation shares learning about what works with others across the STEM outreach sector.</p> <p>66% reported working with other STEM community members to deliver joint STEM outreach activities and/or programmes.</p> <p>64% considered how their activities fit within the wider STEM outreach sector.</p> <p>39% have added STEM outreach activities to online platforms such as Neon or Skills Development Scotland's Marketplace.</p>
Pledge 2 (driving inclusion)		
Signatories able to identify how to reach priority groups	Signatories actively increasing reach to priority groups	43% agreed or strongly agreed that being a member of The Code has improved the way their organisation targets schools and/or students who are under-represented in engineering.
Signatories have understanding of how to approach EDI in their activities	Signatories adapted activities to improve EDI	<p>72% actively considered how to target young people or schools that don't typically participate in engineering-inspiration initiatives in our activities and/or programmes.</p> <p>However, only 46% collected demographic data on participants in their activities and/or programmes and 42% analysed the demographic data they collect on participants.</p>
Pledge 3 (showcasing engineering)		
Signatories understand how to showcase engineering in a positive,	Signatories say that they have changed their presentation of	61% agree or strongly agree that being a member of The Code improved the way their organisation includes information that shows engineering's

compelling and authentic way through their activities	engineering to be more positive, compelling or authentic	diversity in terms of roles, opportunities and pathways.
Pledge 4 (improving impact)		
Increase in monitoring/evaluation of activities	Increase in monitoring/evaluation of activities	<p>48% agreed or strongly agreed that being a member of The Code has improved the way their organisation evaluates its STEM outreach activities.</p> <p>62% collected feedback on the delivery or content of their STEM outreach.</p> <p>56% designed activities and/or programme with key performance indicators or learning outcomes in mind.</p> <p>44% used evaluation findings to develop or improve STEM outreach.</p>
Signatories share evaluation findings with each other (e.g., via LinkedIn and/or TE)	% of Signatories that share findings on LinkedIn and/or TE	29% shared learnings from evaluation results with other members of the STEM community.