Royal Academy of Engineering
Pilot Inclusive Leadership Programme
Theory of Change

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1 Theory of Change

1.1 Introduction: purpose of a theory of change (ToC)

A Theory of Change (ToC) sets out how the activities of an intervention will, in theory, lead to the intended outputs, outcomes and impacts. Typically a theory of change comprises a visual logical framework illustrating the flow from programme inputs through to impacts and narrative that describes the pathways by which this flow occurs. The theory of change also makes explicit the assumptions underpinning the pathways plus any further barriers or risk that may negatively influence the pathway.

This document presents the theory of change for the Royal Academy of Engineering's proposed pilot Inclusive Leadership Programme. It presents:

- The rationale and objectives of the pilot
- A visual logical framework
- Each element of the theory of change in turn (inputs, activities, etc) – presented through a summary table and a narrative
- Assumptions, barriers and risks

1.2 Terminology / glossary

Table 1   Glossary

Term/ acronym	Definition
The Academy	The Royal Academy of Engineering
ILP	Inclusive Leadership Programme
EDI / D&I	Equality, diversity and inclusion / Diversity and inclusion
ToC	Theory of change
ILP Pilot	The pilot Inclusive Leadership Programme (also referred to as 'the pilot')
MCL	Mid-career leader (in engineering industry)
SL	Senior leader (in engineering industry)
ECL	Early-career leader (in engineering industry)
HRL	Human resources leader
Company Team	The team of four people within a company participating in the ILP i.e. the MCL, SL, ECL, HRL
In-company project	The project undertaken in within the ILP, led by the MCL to stimulate wider change within the company. This may be an HR-focused project or an engineering-outcomes-focused project
Culture-focused project	A project focused on internal operations and practices e.g. HR practices as a route to stimulating wider changes in mindsets, behaviours and culture within the company (and more broadly)
Engineering-outcomes-focused project	A project focused on inclusivity of engineering outcomes / the work that engineers deliver for society i.e. a project based on the concept that more diverse inputs and a more inclusive approach to engineering will deliver more inclusive outputs

1.3   Rationale and objectives of the ILP Pilot

The Academy has been working to improve diversity and inclusion in the engineering sector for many years. Its first inclusive cultures report in 2017[1] identified that leaders have a critical role to play in creating inclusive cultures and its recent scoping research has formed the basis for the design of the ILP pilot.

The ILP pilot will contribute to the Academy's wider strategic goals, specifically the goal:

- **Inclusive economy**: The UK has a world-leading, truly diverse and inclusive engineering workforce

An inclusive workforce is deemed to be key to developing more inclusive engineering solutions that are better suited to addressing significant global challenges and therefore the programme will also contribute to the goal of:

- **Sustainable society:** engineers are influential agents of change in the drive for a more sustainable society, in the UK and globally. Engineers are developing more and better engineering solutions are enabling faster decarbonisation and more sustainable use of resources

It directly aligns with the strategy's priority action to:

- Catalyse a step change in the diversity of the workforce and prevalence of inclusive cultures across engineering industry

It is an activity that supports the delivery of the Academy's Diversity and Inclusion (D&I) Action Plan, specifically:

- Goal 2: Employers are supported and challenged to increase diversity and cultivate inclusive cultures
- Goal 4: A network of champions advocating for improved diversity and inclusion across engineering

The pilot's objectives are:

- The Academy will contribute to building an inclusive culture in engineering and increase focus on engineering inclusive outcomes by
  - Creating a cohort of 60 inclusive engineering leaders who exhibit and role-model inclusive behaviours and set the bar for their colleagues and peers
  - Generating evidence of what works (and doesn't work) in the development of inclusive leaders
  - Generating initial evidence of what works (and doesn't work) to support inclusive engineering cultures and outcomes i.e. engineering solutions and outcomes that are inclusive as they deliver impact for our diverse society
  - Refining an ILP that can be rolled out and scaled after the pilot

The pilot is intended to be the start of a process to intervene within the engineering eco-system to catalyse a shift towards increased diversity and inclusion.

1.4   ToC logic model

The logic model for the ILP pilot is overleaf (presented as two diagrams – full logic model followed by a closer look at the inputs to outcomes).

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[1] Creating cultures where all engineers thrive https://raeng.org.uk/media/pmaiogoy/inclusive-report-2018.pdf

Figure 1   ILP logic model: full

Figure 1   ILP logic model: full

INPUTS	ACTIVITIES	OUTPUTS	OUTCOMES (1-2 years post-pilot)	OUTCOMES (5 years post-pilot)	OUTCOMES (5 years+)	IMPACT (10 years+)

INPUTS
- Academy funding
- Academy knowledge and networks
- Participants' knowledge, skills, lived experience
- Participating organisations' resources

ACTIVITIES

LEARN
Training in:
- Understanding EDI
- Being an inclusive leader
- Influencing others
- How to mentor and be mentored
- How to sponsor and be sponsored

PLAN (ALL)
Develop and plan ambitious EDI project

ACT
- Reciprocal mentoring (All)
- Coaching (SL/MCL)
- Sponsorship (SL/MCL)
- Peer group workshops

ACT (ALL)
Deliver ambitious EDI project

ACT (MCL/SL)
Role modelling internally and externally

AMPLIFY
The Academy and awardees exploring options and making plans for amplifying the effects of the pilot

OUTPUTS

Individuals
- A group of EDI champions in engineering
- A group of mid-career and senior leaders feel confident in their abilities to be and role model inclusive leadership
- A group of early-career leaders feel supported and see a path to becoming future inclusive leaders
- A group of HR leaders that feel confident to implement EDI change activities
- Participating leaders from under-represented groups feel a greater sense of belonging within the company
- Participating leaders from the majority have greater understanding of the lived experience of underrepresented groups, have adjusted their leadership behaviours and are convinced of the benefits
- Intergenerational relationships created

Teams within participating companies
Participants in in-company ILP project team have:
- Gained insight into lived experience of under-presented groups
- Experienced inclusive leadership
- Made some adjustments to their own behaviours or have intentions to do so
Learnings from the project are ready to be shared more widely within the company
There are recommendations or plans for further actions within the company to increase diversity and inclusion
Participating leaders are advocating for further change

Eco-system
- The Academy has evidence of that works/ doesn't in increasing EDI in engineering and examples of inclusive engineering outcomes
- The Academy has access to an alumni group of confident inclusive leaders, role models and champions at mid-career and senior levels that they can support and encourage to take collective action to create further improve EDI
- The Academy has developed options for wider roll-out of the programme

OUTCOMES (1-2 years post-pilot)

Individuals
The participating leaders continue to be inclusive leaders, EDI role models and champions – in their company and externally

Supportive MCL-SL and MCL-ECL relationships have been sustained

SLs and MCLs are sponsoring and mentoring a new group of leaders

The participating leaders are driving further actions to improve EDI in their company

Organisations
More staff are requesting EDI training and support

There is some evidence of wider behaviour change (e.g. among teams involved in the in-company pilot projects)

Tangible effects of EDI changes are being seen in terms of changes to policies, procedures etc

The companies are starting to gain a reputation (externally) as companies that are serious about improving EDI

Eco-system
The alumni group are taking collective action to try to the engineering sector (e.g. advocating for including EDI in chartered status requirements)

Increasing uptake of Inclusive Leadership Programme

Pilot alumni influencing policies, standards etc of professional engineering bodies

Improved evidence for inclusive engineering

OUTCOMES (5 years post-pilot)

The short-term outcomes of the pilot ILP will

- Influence, combine with and reinforce other Academy and non-Academy activities to increase EDI in engineering
- Develop a greater interest in generating inclusive engineering outcomes

Greater numbers of engineering organisations will be requiring and supporting people to become inclusive leaders

Inclusive leadership will increasingly become the norm

The engineering sector will be becoming more attractive as a profession, in particular for those from underrepresented groups

OUTCOMES (5 years+)

A network of champions advocating for improved diversity and inclusion across engineering
(Academy diversity and inclusion plan goal 4)

Employers are supported and challenged to increase diversity and inclusion
(Academy diversity and inclusion plan goal 2)

Catalyse a step change in the diversity of the workforce and prevalence of inclusive cultures across engineering industry

INCLUSIVE ENGINEERING INDUSTRY
An engineering industry which serves our diverse society and in which all engineers can be themselves

Increased understanding of inclusive engineering solutions

IMPACT (10 years+)

INCLUSIVE ECONOMY
UK has a world-leading, truly diverse and inclusive engineering workforce

INCLUSIVE ENGINEERING CAPABILITIES ARE WIDESPREAD

SUSTAINABLE SOCIETY
Engineers are influential agents of change in the drive for a more sustainable society, in the UK and globally

More and better engineering solutions are enabling faster decarbonisation and more sustainable use of resources

Figure 2   ILP logic model: detailed (inputs to outcomes)

INPUTS

- Academy funding
- Academy knowledge and networks
- Participants' knowledge, skills, lived experience
- Participating organisations' resources

ACTIVITIES

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Training in:
- Understanding EDI
- Being an inclusive leader
- Influencing others
- How to mentor and be mentored
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PLAN (ALL)
Develop and plan ambitious EDI project

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- Reciprocal mentoring (All)
- Coaching (SL/MCL)
- Sponsorship (SL/MCL)
- Peer group workshops

ACT (ALL)
Deliver ambitious EDI project

ACT (MCL/SL)
Role modelling internally and externally

AMPLIFY
The Academy and awardees exploring options and making plans for amplifying the effects of the pilot

OUTPUTS

Individuals
- A group of EDI champions in engineering
- A group of mid-career and senior leaders feel confident in their abilities to be and role model inclusive leadership
- A group of early-career leaders feel supported and see a path to becoming future inclusive leaders
- A group of HR leaders that feel confident to implement EDI change activities
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Teams within participating companies
Participants in in-company ILP project team have:
- Gained insight into lived experience of under-presented groups
- Experienced inclusive leadership
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Learnings from the project are ready to be shared more widely within the company

There are recommendations or plans for further actions within the company to increase diversity and inclusion

Participating leaders are advocating for further change

Eco-system
- The Academy has evidence of that works/ doesn't in increasing EDI in engineering and examples of inclusive engineering outcomes
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OUTCOMES (1-2 years post-pilot)

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The participating leaders continue to be inclusive leaders, EDI role models and champions – in their company and externally

Supportive MCL-SL and MCL-ECL relationships have been sustained

SLs and MCLs are sponsoring and mentoring a new group of leaders

The participating leaders are driving further actions to improve EDI in their company

Organisations

More staff are requesting EDI training and support

There is some evidence of wider behaviour change (e.g. among teams involved in the in-company pilot projects)

Tangible effects of EDI changes are being seen in terms of changes to policies, procedures etc

The companies are starting to gain a reputation (externally) as companies that are serious about improving EDI

Eco-system

The alumni group are taking collective action to try to the engineering sector (e.g. advocating for including EDI in chartered status requirements)

Increasing uptake of Inclusive Leadership Programme

Pilot alumni influencing policies, standards etc of professional engineering bodies

Improved evidence for inclusive engineering

OUTCOMES (5 years post-pilot)

The short-term outcomes of the pilot ILP will
- Influence, combine with and reinforce other Academy and non-Academy activities to increase EDI in engineering
- Develop a greater interest in generating inclusive engineering outcomes

Greater numbers of engineering organisations will be requiring and supporting people to become inclusive leaders

Inclusive leadership will increasingly become the norm

The engineering sector will be becoming more attractive as a profession, in particular for those from underrepresented groups

1.5 Inputs

The inputs to the ILP pilot are presented in the table below. These include not only the financial resources assigned to the pilot by the Academy, but other inputs required (networks, knowledge, etc) to deliver the pilot.

Table 2   ILP: Inputs

Input	Description
Academy funding	In addition to 0.5FTE of a fully resourced Programme Manager and 0.25% of a Senior Manager, £170,000 has been assigned to the programme per year of the pilot. This funding will be used to deliver a programme of activities through the ILP including training, mentoring, coaching and tailored guidance and support to participating leaders. It is expected this will enable 20 Company Teams to participate in the ILP across two cohorts, supporting 60 engineering leaders and 20 HR leaders in engineering businesses.
Academy knowledge and network	The participating leaders will have access to the knowledge, skills and experience of the Academy D&I team and wider Academy staff and resources
Participants' knowledge, skills and lived experience	Many of the people participating in the ILP will bring their lived experiences as under-represented groups in engineering, and in society, to the pilot, which includes their in-company project. All participants will bring their knowledge, skills and experience of engineering, the cultures, policies and processes of their company to the ILP. Senior leaders will bring their knowledge, skills and experience of influencing change within their company and externally. HRLs will bring HR knowledge, skills and experience to the project.
Resources of participating companies	Companies that employ the participating leaders will provide resources to the ILP project in terms of: • Staff time for the four people involved in the project • Staff time for additional people involved in the in-company project • Non-staff resources to support the ILP project and in-company project

We do not present any assumptions regarding the inputs as the funding has been allocated and the assumptions regarding inputs from engineering companies are presented below in the 'activities' section.

1.6 Activities

The ILP pilot activities are presented in three groups:

- (A) Establishing the ILP pilot
- (B) The ILP
- (C) Exploring options for amplification of pilot effects

For each group, the activities are summarised as a table followed by a narrative focused on key features of the programme design and how they are expected to generate change.

1.6.1 (A) Establish the ILP pilot

Table 3   Activities (A) – establish the ILP pilot

(A) Establish the ILP pilot and select ILP projects / project teams	
Procuring delivery partners	The Academy will tender, select and fund expert delivery partners (there may be more than one) to provide training, coaching, mentoring support, peer group support, team project guidance and monitoring and evaluation support.
Selection of participating leaders and their companies	The Academy will: • Promote the ILP pilot to engineering companies via its networks – clearly articulating the benefits for the different participants and their companies • Design selection criteria and application templates • Discuss the pilot with potential applicants (most typically with HRLs, MCLs, SLs in engineering businesses) • Run two calls for ILP projects (invite applications from MCLs and their companies, sift applications, interview a selection of applicants, select applicants) • Select 10 Company Teams per call, with each project supporting 4 leaders (an MCL, SL, ECL, HRL) – i.e. a total of 20 companies and 80 leaders[2] • Assign an Academy point of contact for each selected Company Team
Academy / delivery partnerships	The Academy and delivery partners will work in partnership to support the leaders supported by the pilot

Key features of stage (A)

The Academy will be holding an open call for EDI experts as delivery partners. As this is a pilot programme, it is intended that the Academy and the delivery partners will work in partnership to deliver programme activities, taking an agile approach with regular review points to maximise learning and adjust the pilot where needed.

It is intended that the applications to the programme will developed and submitted by a mid-career leader (MCL). The application will be supported a senior leader (SL) from the (same) company and will name the early-career leader (ECL) and the HR leader (HRL) from the company who will be involved.[3]

The MCL, SL and ECL are intended to be engineering leaders i.e. people leading engineering teams (or in the case of the ECL, future leaders of engineering teams). The pilot is open to applications from under-represented groups and majority allies and the Academy has no targets for either but will strive for a diverse cohort.[4] Due to demographics and likely interest in the pilot, it expected that MCLs and ECLs are more likely to be from under-represented groups. Due to the current composition of senior leaders in engineering sector, it is expected that SLs are most likely to be majority allies.

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[2] Though, as a pilot, the Academy aims to be flexible in terms of the numbers of cohorts and Company Teams per cohort

[3] It should be noted that, for the ILP pilot, the term 'leader' is not restricted to senior leaders. The scoping research identified that leaders exist as all levels within an organisation, where leadership was defined as visible, influential role models that inspire people through their actions and behaviour.

[4] The ILP pilot is not designed to be a positive action programme

The MCL is the *primary awardee* of the ILP, however a wider group of leaders in the same company are needed to participate and work as a team to deliver the intended outputs and the pilot is designed to generate benefits for all participants (see section 1.6.2).

Each company will need to commit time and resources to the 18-month ILP. At application stage, the detailed content of the in-company project is not required but applicants will be expected to provide brief details of initial ideas they have and any expected barriers to delivery.

Applications will be assessed and a number of selected applicants and members of their proposed ILP team (e.g. the MCL and SL) will be invited for interview by a panel led by the Academy. A key element of the interview process will be to ascertain the level of commitment of the MCL and SL and the wider company to the ILP project.

The Academy is intending to run two calls for applicants and select 10 Company Teams per call, with each comprising 4 leaders (MCL, SL, ECL, HRL). **Therefore, in total, the Academy is intending to support a total of 20 companies and 80 leaders (60 engineering leaders, 20 HRLs).**

1.6.2   (B) ILP activities

Table 4   Activities (B): ILP

(B) ILP Project activities		
LEARN	**Kick-off induction session**	1-2 days session, including breakouts/parallel tracks among peer groups in the cohort
	Training	MCLs, ECLs and SLs will receive training to: • Increase their understanding of EDI • Understand themselves in an EDI context • Develop understanding and skills in role modelling inclusive leadership • Understand their own sphere of influence and how to work with others to influence and drive change • How to mentor and be mentored effectively • How to sponsor and be sponsored effectively • Training in the principles and practice of inclusive engineering It is expected that some training will be core and some will be tailored to leaders at different levels. HRLs will join some of the above training where it adds value.
	Mentoring	Establish and undertake reciprocal mentoring relationships between MCL & SL and between MCL & ECL. These will take place throughout the 12-month project.
	Coaching	Monthly 1:1 coaching sessions (coaches will be provided by the delivery partner(s)). These will take place during the initial training stage.
	Peer-group workshops	Monthly guided group workshops to connect leaders with their peer awardees, supported by a delivery partner but likely facilitated by the Academy (i.e. all MCLs together, SLs together, ECLs together, HRL together). These will take place throughout the 12-month project.
PLAN	**Design and plan the in-company project**	MCL to lead an in-company team, supported and sponsored by the SL, to design and plan an in-company project. The MCL will be supported and advised in their planning by the Academy and external EDI experts. The project will be tailored to their company context with the aim of starting a process of change towards increased diversity and inclusion.

		Projects are intended to be one of two types: • **Culture-focused project:** focused on internal operations and practices e.g. HR practices as a route to stimulating wider changes in mindsets, behaviours and culture within the company (and more broadly) • **Engineering-outcomes-focused project**: focused on inclusivity of engineering outcomes i.e. a project based on the concept that more diverse inputs and a more inclusive approach to engineering will deliver more inclusive outputs Within cohorts, **the Academy is open to the idea of cross-company projects** where there is value in doing so, in particular where they provide opportunities for leaders to put their inclusive leadership learning and skills into practice. The Academy will work with the leaders (and the ED experts) to advise and support the development of such cross-company projects.
ACT	**Undertake in-company project**	• Implement the in-company project, supported by the Academy and external EDI experts (or undertake a cross-company project) • Provide regular progress reports to the Academy and to their company • Participants to share experiences and learning with their respective peer-groups at the monthly peer-group workshops • MCLs to proactively build their inclusive leadership profile, supported by other leaders
EVIDENCE	**Lessons learned**	• The Academy will work with a provider to design and implement a monitoring, evaluation and learning plan and agree with Company Teams the data to be collected throughout the pilot • The Academy and the provider will review evidence on the progress and achievements of the ILP projects throughout the pilot (collected via project reports, delivery partners, internal Academy project officers, etc) • Learning from cohort 1(what works well, less well) will feed into cohort 2 • Learnings from both cohorts will feed into the design of the final ILP and alumni programme, should evidence suggest it is impactful

Key features of stage (B)

As described above, the Company Teams are intended to be led by a MCL, sponsored and supported by a SL and involving an ECL and a HRL. The Company Teams will engage in three stages of activity described below.

Figure 3   ILP project participants
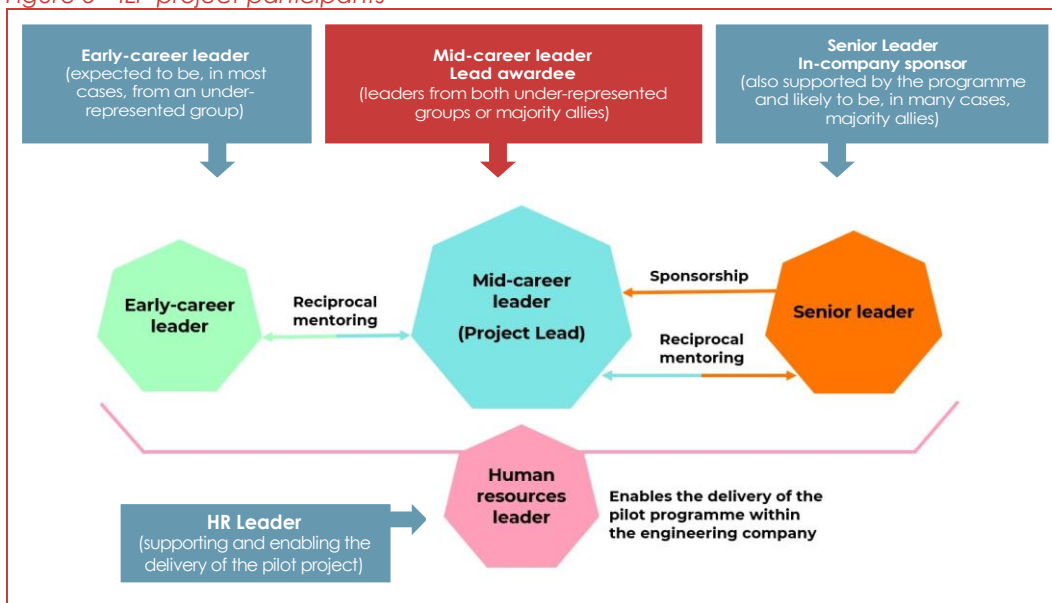
Figure 4   ILP pilot key activities and timeline

Pilot phase 2023 to 2026 – an 18-month commitment from awardees and their organisation

Learn	Evidence	Plan	Act	Evidence	Amplify
Kick-off and "Summer school" June to Sept 2023	Preliminary evaluation of 'Learn' phase 2023	Organisational project planned Oct to Dec 2023	Organisational project delivered Jan to Sept 2024	Full evaluation of Pilot Year 1 Oct to Dec 2024	Showcase and enter alumni programme Jan 2025
Kick-off and "Summer school" June to Sept 2024	Preliminary evaluation of 'Learn' phase 2024	Organisational project planned Oct to Dec 2024	Organisational project delivered Jan to Sept 2025	Full evaluation of Pilot Year 2 Oct to Dec 2025	Showcase and enter alumni programme Jan 2026

LEARN: undergo training in inclusive leadership, start to develop in-company / external peer group relationships

- For the **MCLs and SLs the training is focused on inclusive leadership** – the aim being to enable them to understand what inclusive leadership really means (rather than any preconceptions they may have) and what the mindset and, importantly, the behaviours of a truly inclusive leader are. They will be given structured activities, time and support to enable them to reflect and understand themselves and their current mindsets and behaviours in terms of the attributes of an inclusive leader. They will also learn how to (or will improve their skills in) influencing others in order to stimulate shifts in the mindsets and behaviour of others. The training is intended to enable the MCL and SL to consider how to adjust their own mindsets and behaviours in order to become inclusive leaders and to be able to role model inclusive leadership in their professional life.[5]

- **SLs will also receive training into how to be an effective sponsor** in order that they will be able to support and advocate for the MCL awardee effectively. SL sponsorship is intended to be personal sponsorship of the MCL, as opposed to project /change sponsorship, though they will be expected to be champions of the ILP in-company project as well as the MCL. SLs will gain understanding and experience that they can apply to sponsoring other colleagues, particularly those from under-represented groups.

- The **MCLs, SL and ECLs will receive training** how to build effective mentoring relationships - how be both an effective mentor and effective mentee.

- The **HRL** will not receive specific training support with the exception of how they can enable the mentoring, sponsorship and coaching relationships. They are expected to be influenced by the other leaders in ILP project and will be supported by the delivery partner and the Academy during the in-company project.

- **Training will take place among the peer groups** (e.g. all MCLs trained together, all SLs trained together) in order to provide a safe space for personal explorations of EDI

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[5] The primary focus is their professional life but it is likely (and desirable) that their mindsets and behaviours would become more inclusive beyond their professional life

mindsets and behaviours and introduce leaders to their peers. This will be followed by **monthly peer-group workshops** throughout the 12-month pilot to continue to embed learning, explore issues arising in the ILP projects and to build peer group relationships and support networks.

- Participants will meet their coaches (who will be provided by the delivery partners) and commence their **coaching activities to further embed their learning**

- **Reciprocal mentoring relationships** will be established within each company – between the MCL and the SL and between the MCL and the ECL. These are intended to be two-way relationships that share experiences and provide guidance and aim to support the professional and personal development of participants. In the context of inclusive leadership, important additional aims of the two-layers of mentoring (i.e. MCL-SL and MCL-ECL) are to (i) enable sharing and increase awareness of the lived experience of under-represented groups with people from the majority groups and (ii) bridging the generational gap by sharing and discussing the values and desires of the younger engineers with older more senior leaders.

- The **psychological safety** of participating leaders (which is particularly important for participants from under-represented groups) will be safeguarded via confidential coaching sessions, access to support via the peer groups and the ability to have confidential discussion with the assigned Academy staff. In addition to this, the MCL-SL and MCL-ECL relationships are intended to provide a safe space for confidential conversations.

PLAN: design and plan and in-company /cross-company project to stimulate positive change in terms of diversity and inclusion

The MCL in each company will lead an in-company team (supported by the SL) to design and plan an in-company / cross-company project. The MCL will be supported in the process of project design and implementation by the Academy and external EDI experts. The key aim of the project is for the MCL (and also the SL, ECL) to put the inclusive leadership skills learned into practice.

The project will be tailored to the specific organisational context and aimed at starting a process of positive change in diversity and inclusion within the company. The project will be one of two types:

- **Culture-focused project**: focused on internal operations and practices e.g. HR practices as a route to stimulating wider changes in mindsets, behaviours and culture within the company (and more broadly)

- **Engineering-outcomes-focused project**: focused on inclusivity of engineering outcomes i.e. a project based on the concept that more diverse inputs and a more inclusive approach to engineering will deliver more inclusive outputs

The Academy would like to see a 50:50 split (approximately) of the two types of projects but this is not a fixed rule, as it is more important that MCL are supported to implement the activity most appropriate for their company context.

Within cohorts, the Academy is open to the idea of cross-company projects where there is value in doing so, in particular where they provide opportunities for leaders to put their inclusive leadership learning and skills into practice.

While it is important that the in-company projects are realistic for the timeframe available, they are intended to be ambitious and innovative (and different from business-as-usual), allowing the MCL and their project team to explore approaches to generating real

improvement in diversity and inclusion. The support provided by the external EDI experts and Academy will challenge the MCL (and their team) to be ambitious and innovative and provide ideas and options where needed. Examples of the types of in-company projects that be undertaken include

- Culture-focused projects:
  - Internal accountability (e.g. embedding EDI in performance management)
  - External accountability (e.g. promoting EDI through partnerships)
  - Trialling a novel approach to hiring talent
  - Reviewing diversity of suppliers and/or inclusivity of procurement policies
- Engineering-outcomes focused projects:
  - Assigning R&D budget to bring together a diverse team to design of a hypothetical inclusive engineering solution
  - Audit/re-design a recent engineering solution using inclusive engineering approach

Learning will continue to be embedded via on-going mentoring, sponsorship and peer-group workshops throughout the 'Plan' stage.

ACT: implement the in-company project

The in-company project will be implemented, led by the MCL, supported by the SL, ECL and HRL along with a wider team of company staff where necessary. (If a cross-company projects then groups of leaders from different companies will be working together in this way.)

Throughout the delivery of the project the Company Team will role-model inclusive leadership behaviours, seeking to stimulate reflection among themselves (and wider groups targeted by the project) about their mindsets and behaviours and inspire them to begin a process to modify their own behaviour.

Figure 5 ILP project relationships and effects

Regular reports on project progress and achievements will be provided both within the company and to the Academy to provide opportunities for learning and early evidence of success. ILP participants will also share learning and experiences with their respective peer-groups at the monthly peer-group workshops.

Learning will continue to be embedded via on-going mentoring, sponsorship, monthly coaching and peer-group workshops throughout the 'Act' stage.

It is also intended that the MCL and SL will be role-modelling inclusive leadership in their professional and personal relationships and activities outside their company; with the MCL in particular raising their professional profile as a future engineering leader and, importantly, as an inclusive leader.
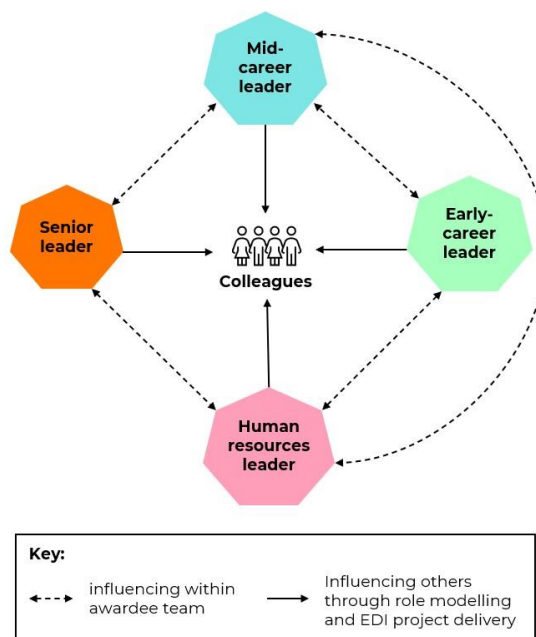
EVIDENCE: Lessons learned from cohort 1 / improving pilot for cohort 2

The Academy will review evidence on the progress and achievements of the ILP projects throughout the pilot – collecting data and feedback via project reports, delivery partners, internal Academy project officers, etc. Learnings from cohort 1 (what works well, less well) will feed into adjustments to the pilot design for cohort 2. The main points in the pilot schedule for review and capturing lesson learned will be at the end of the 'Learn' training period (e.g. via feedback gathered from the training delivery partners) and at the end of the 'Plan' period (e.g. via project reports and Academy project officers). For further detail see section 2 below.

1.6.3 (C) Explore options for amplification of ILP project effects

Table 5   ILP: Activities (C) – explore options for amplification of pilot effects

Activity	Description
(C) Explore options for amplification of pilot effects	
Review and promote evidence from the pilot	• Collect evidence of which activities work well and less well • The Academy will review evidence on the achievements of the ILP projects throughout the pilot (collected via project reports, delivery partners, internal Academy project officers, etc) • Synthesise, promote and share learnings from the pilot
Amplification	The Academy will: • Consult with participating leaders on the format, objectives and activities of an alumni programme • Establish an alumni programme • Explore options, with the alumni, for amplifying the positive effects of the ILP pilot

As a pilot programme, the Academy seeks to learn from the programme and share learning across the engineering community. It will design and implement a monitoring and evaluation framework to collect and analyse evidence throughout the pilot. It seeks to understand what actions and approaches worked well and less well within the pilot in terms of improving leaders' approaches to inclusive leadership and improving diversity and inclusion within teams and companies. It also aims to gather evidence of how more diverse engineering team can generate inclusive engineering solutions and outcomes (or at least evidence of the potential for more inclusive engineering outcomes).

During the pilot the Academy, working with the EDI experts and the cohort themselves, will explore options for amplifying the learning and positive effects of the pilot. The Academy intends to establish an alumni network and will consult with the participating leaders in each cohort about the format, objectives and activities of the alumni network. They will encourage and support the network to take collective action (the MCLs in particular) to influence wider change within their organisations and within the wider engineering eco-system itself (e.g. advocating within professional engineering institutes for changes to the criteria for chartered status or for regulators to embed inclusion in their requirements.

The Academy will also consider how the ILP pilot might scaled-up – considering the extent of demand, delivery methods, delivery bodies, etc.

1.7   Outputs

Table 6   ILP: Outputs

Activity	Description
Leaders supported by the ILP pilot	
Upskilled and confident leaders	• MCLs and SLs supported by the ILP pilot feel able and confident to be inclusive leaders and in their ability to influence others in inclusive behaviours • MCLs and SLs are role-modelling inclusive leadership behaviours • Participating leaders from under-represented groups feel more supported and listened to and better understood by participants from the majority (e.g. in-company team members) than they did before the pilot. They feel a greater sense of belonging within the company and the profession. • SLs (in particular plus MCLs from the majority) better understand the lived experience of under-represented groups and have incorporated this understanding into their leadership behaviours • MCLs feel better prepared to develop into future inclusive leaders at a senior level • ECLs feel better prepared to develop into future inclusive leaders
Teams within participating companies	
Greater awareness and understanding of inclusive behaviours and approaches	Team members of the teams involved in and/or 'addressed' by the in-company projects: • Have gained insight into the lived experience of under-represented groups • Have seen and learned from the inclusive behaviours and approaches role-modelled by the MCL, SL, ECL participants • Some have made adjustments in their behaviours or have intentions to do so
Participating companies	
Evidence of inclusive leadership in practice and options for further activities	• In-company projects have created options/ recommendations for further action to improve diversity and inclusion (such as changes to policies, procedures, practices, etc) • In-company projects have created evidence and lessons learned for generating inclusive engineering solutions and outcomes

	• The ILP leaders are advocating for, proposing and/or making further changes to improve diversity and inclusion in their company
Wider engineering ecosystem	
A cadre of inclusive leaders	• A cadre of 40 MCLs and SLs who are inclusive leaders (and inclusive champions) are present in the UK – who will continue to act as role-models within their companies and within the engineering profession • A cadre of 20 ECLs who have experienced inclusive leaders and who are potential future inclusive leaders themselves • 20 HRLs who have experience of implementing /supporting change processes to improve diversity and inclusion
Evidence of inclusive leadership in practice	The Academy has: • Evidence of approaches that work well (and less well) in the development of inclusive leaders • Initial evidence of what works (and doesn't work) to support inclusive engineering cultures and outcomes i.e. engineering solutions and outcomes that are inclusive as they deliver impact for our diverse society • Evidence to be able to refine an ILP that can be rolled out and scaled after the pilot

Outputs will be generated at different levels within the engineering community

Participating leaders

The participating leaders will experience the principal direct effects of the pilot. The intention is to create a small cadre of inclusive leaders - role-modelling inclusive leadership behaviours and confident in their abilities to influence others to think and act inclusively.

Leaders from under-represented groups will feel a greater sense of belonging within their company and within the engineering profession, seeing themselves as future senor leaders.

Leaders from the majority have a deeper understanding of the lived experience of under-represented groups and have incorporated this understanding into their leadership behaviours.

Company level

At the end of the pilot activity most of the effects will be within the teams involved in the in-company project and/ or the groups addressed by culture-focused change projects implemented. These teams will have gained insight into the lived experience of under-represented groups and will have experienced, and had the opportunity to reflect and learn from, the inclusive behaviours and approaches role-modelled by the MCL and SL. Some may have made adjustments to their own behaviour as a result or may have intentions to do so.

At the end of each ILP, there is not likely to be significant change in inclusive behaviours at company level. Nevertheless, the ILP will have established a starting point for further change. It will have created some diversity and inclusion champions within the company and generated evidence to form the basis of further change activities (examples of inclusive engineering outcomes and/or effective approaches to raising awareness of diversity and inclusion and inclusive behaviours). Specific changes to policies, procedures and practices may have been recommended or be underway. The Company Team members will be advocating for further change - proposing and/or making further changes to improve diversity and inclusion in their company.

<u>Wider engineering eco-system</u>

While the pilot itself is unlikely to generate significant change at the level of the engineering eco-system, the new cadre of inclusive leaders, although relatively small in number, constitute a group of inclusive leadership role-models and champions for the wider engineering sector. They will continue to act and role-model inclusive behaviours within their companies and within the engineering profession, causing others to reflect on, and potentially change, their own behaviour. The participating leaders can also act as an alumni group, seeking to influence and amplify change towards a more diverse engineering sector more widely through systemic change.

As a thought-leader and influencer in the engineering community, the Academy can promote and share the evidence it has gained via the pilot to stimulate wider discussion of inclusive leadership and catalyse wider actions to improve diversity and inclusion.

1.8   Outcomes and impact

For the participating leaders and companies, outcomes will be in the form of continued inclusive leadership behaviours driving further change (and being valued and rewarded for driving such change) and stimulating others to change their own behaviours (including seeking training and guidance) and then driving and supporting further change. Effects may be visible in tangible ways such as changes to formal policies and procedures and in the longer-term in terms of more diverse recruitment and improved retention and progression of under-represented groups (participating companies may gain a reputation as inclusive employers for example). Effects may also be less tangible such as a sense of belonging felt by under-represented groups.

Wider effects will depend on the scale and scope of the activities undertaken by the alumni network. It is intended that the pilot will stimulate, and the Academy may support, collective action to build momentum for further change.

As presented in section 1.3 the ILP pilot will contribute to the Academy's strategy's priority action to *catalyse a step change in the diversity of the workforce and prevalence of inclusive cultures across engineering industry* and its strategic objectives to create *an inclusive economy where the UK has a world-leading, truly diverse and inclusive engineering workforce and a sustainable society underpinned by inclusive engineering practices and outcomes.*

These longer-term goals will be driven by a wide range of activities undertaken by the Academy and engineering sector more broadly and driven and influenced by changes in wider society. The extent to which the ILP pilot plays a role in this is dependent (at a minimum) on the ability of the effects of the pilot to be amplified by its alumni.

1.9   Assumptions, barriers and risks in the theory of change

In this section we present assumptions, barriers and risks within the pathway from inputs to outcomes. We focus primarily on assumptions because many barriers and risks are the inverse of the assumptions. Where barriers and risks are not covered by this approach they are presented separately. Assumptions are presented for each step in the theory of change: from inputs to activities, from activities to outputs and outputs to outcomes. Where the assumptions are well-founded, this is noted and where there are potential solutions to the barriers or risks these are also noted.

Inputs to activities

- **Assumption:** appropriate delivery partners can be found and are available to meet the planned schedule for implementing the pilot. The Academy has already been in discussion with potential delivery partners and is confident they can be selected and contracted.

- **Assumption:** The pilot is attractive to leaders (and their companies) in the engineering sector and sufficient high-quality proposals are submitted. The Academy intends that the ILP pilot is regarded as a prestigious award (akin to other existing Academy awards) and that, as a thought-leader and a convenor in the engineering sector, it will be able to stimulate interest in engineering leaders and companies to participate. However, several **barriers and risks** have been identified regarding the attractiveness of the pilot:

- **Barrier:** lack of clarity regarding who the awardee or main beneficiary is. The group nature of ILP participation may lead to a lack of clarity here. Conversely if the main beneficiary is clearly the MCL then there may be less incentive for the SL, ECL and HRL to participate. The Academy will need to make the pilot design and the 'offer' clear while also articulating the benefits for each participant and their supporting company.

  - **Risk:** low numbers of MCLs apply – either because (i) they are not willing to 'put their head over the parapet' and apply or (ii) they are unable to secure support from a senior leader in their company / the company won't support their bid. As above the Academy will need to clearly articulate the 'offer' and promote it widely within the sector. It may need to support interested MCLs to build a team for the pilot.

- **Risk:** the pilot predominantly receives proposals from leaders and companies with a strong track record for diversity and inclusion, thereby reducing the ability to make further change in the sector. This risk is considered to be relatively low as the Academy believes that inclusion is a journey for all leaders and companies, both within the sector and beyond. Furthermore, where inclusive engineering outcomes are concerned, the concept itself is not widely understood and rarely implemented in practice. However, the Academy will need to consider how it targets its 'offer' to maximise the potential impact that can be achieved.

- **Assumption(x2):** very small companies may not be able to apply due to the requirements for a team of four leaders (they may not have a HRL for example or be able to allocate time to the project); and that in a very large multi-national company, a team of four will be unable to make on influence change at a company level. The Academy is considering the size of companies targeted by the programme as they need to be large enough to be able to participate (e.g. have an HR function and / or enough staff of different levels to build a Company Team)[6] but not so large that it may be too difficult to stimulate change. As this is a pilot, the Academy will be flexible in their approach to which companies may be best placed to participate and will also seek to ensure a range of different size companies from different sub-sectors participate in order to generate learning for the sector and the design of the future programme.

- **Assumption:** a sufficiently ambitious in-company project can be designed and implemented that will contribute to the objectives of the ILP pilot. The ILP teams will be challenged and supported by the external EDI experts and the Academy to be ambitious and innovative. Similarly **it is assumed** that companies will support and allocate resources

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[6] The Academy is implementing another service (an online Platform) specifically targeting improving D&I in small companies

for the planned project. It is intended that the prestigious Academy brand will mitigate any problems here, but the Academy could step in to influence company leaders if/ when such issues arise.

- **Assumption:** psychological safety can be maintained for participating leaders, particularly those from under-represented groups. As described in section 1.6.2, this has been considered in the programme design; psychological safety will safeguarded via the confidential coaching sessions, access to support via the peer groups and the ability to have confidential discussion with the assigned Academy point of contact.

Activities to outputs

- **Assumption:** the teams of four leaders can build and sustain effective working relationships throughout the 18-month project. The mentoring will be key here as will be the confidential 1:1 coaching sessions and the peer group workshops where individual leaders can work through any issues they may have.

- **Assumption:** the design of the pilot activities (training, mentoring and working together via the in-company project) will sufficiently change the behaviours of the participating leaders. While it may be reasonable to assume that participants from under-represented groups will embrace the opportunity to develop and role-model inclusive leadership, there **is a risk** that leaders from the majority (SLs in particular) either pay lip-service to participation (e.g. they want to be seen to be inclusive or believe they already are) and /or they believe have developed the skills without developing the true insight needed for behaviour and underlying mindset change. The ILP project places considerable emphasis on the SLs from the majority (in particular) to deeply understand the lived experiences of others and deeply consider their current behaviour and underlying mindsets and make significant shifts in their thinking. This may prove to be very challenging for some participating leaders and some may not stay the course. The interview stage of the selection process might identify participants where 'lip-service' to its goals is a risk but, as the piloting is testing whether real change to inclusive leadership behaviours can be made, the risk of unsuccessful or insufficient change is to be explored rather than selected out in its entirety. It is noteworthy that this risk has been significantly mitigated by conducting a thorough scoping phase prior to project design, during which majority SLs were consulted.

- **Assumption:** the changed behaviour and in-company projects are able to create increased awareness among a wider team of people. As above, this is to be tested by the pilot and so the assumption remains until the pilot is complete.

- **Assumption:** the in-company projects provide sufficient opportunities for learning what works well and what doesn't. Not all projects are expected to be successful, but a breadth of project activity is needed to maximise learning. The Academy will need to review the portfolio of in-company projects to ensure there is a breadth of project types (HR-focused and engineering outcome-focused) and a range of content and approaches within the projects.

Outputs to outcomes

- **Assumption:** the changes towards inclusive leadership behaviours are maintained by participating leaders after the pilot has ended. Behaviours take time to become embedded and inclusive leadership is likely to be an on-going work-in-progress for most people. For some participants this may be less of an issue but for others it may be easier to lapse to previous less inclusive behaviours. The alumni network (and wider social shifts to increased diversity and inclusion) may mitigate this to some extent.

- **Assumption:** the Academy will be able to support the alumni group to take further collective action to amplify the effects of the pilot and the alumni will be willing and able to do so. There are many reasons why the alumni may not wish to take further collective action – they have other commitments on their time and personal resources, they may feel exhausted / angry that it continues to be their responsibility to drive change, if they feel their ILP project is not successful they may feel demotivated etc. To a large extent this remains to be seen and the Academy will explore options for amplification during the later stages of each ILP cohort.

The ToC (inputs to outcomes) including the assumptions, barriers and is presented in the figure below:

Figure 6: ILP logic model: detailed (inputs to outcomes) – with assumptions, barriers and risks
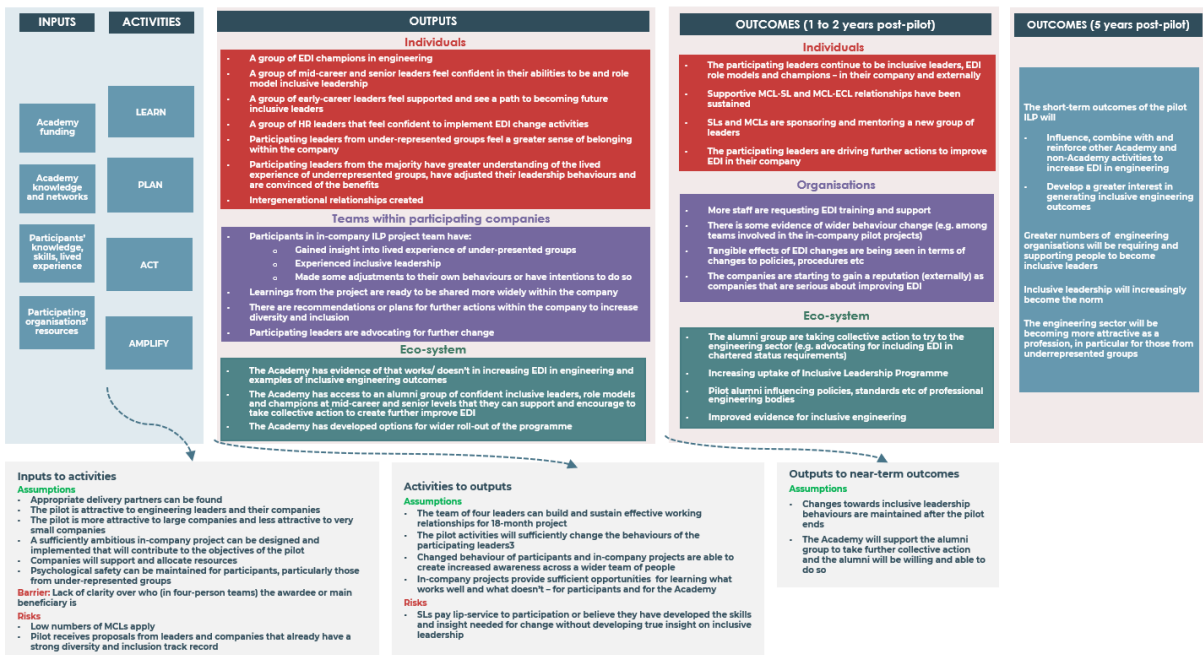
2   Overview of a monitoring and evaluation (M&E) framework

This framework will be finalised with the appointed provider.