Established in 2001, Midlands Science is a not-for-profit organisation which provides opportunities for people of all ages to explore and engage with science in the midlands counties of Laois, Offaly, Longford and Westmeath.

We recognise that science is a unique and valuable part of our culture and society. We passionately believe in the power of science to contribute to the development of the Midlands region and the importance of engaging with all members of our community in science through public engagement and outreach.

The past three years have been transformational for Midlands Science. We have developed new strategic funding partnerships, built strong capability and capacity in impact evaluation, implemented extensive training in Science Capital, expanded our team and continued to deliver innovative and inclusive best practice models of STEM outreach.

With the challenges of COVID-19 during 2020/2021 the organisation successfully quickly moved its programmes and events into an online offering and has been able to continue to adapt its model of delivery.
The management team (together with its Board and extensive consultation with key stakeholders), has developed this ambitious new strategy for 2022-2025. Midlands Science is now well positioned to move to its next stage of organisational growth through reaching new participants in the region and deepening its impact on specific targeted groups.

Our fundamental core values of inclusion, impact and innovation will continue to underpin all aspects of our future strategy.
Our Vision is for increased economic and social prosperity in the Midlands region.

We believe that the societal value created by engaging as many people as possible from all age groups and social classes in STEM (Science, Technology, Engineering and Maths) outreach can make a unique and transformative contribution, benefiting all in our community. Through active engagement with STEM outreach people can make more informed choices about education, careers and everyday decisions as consumers and citizens.

Our vision is to increase scientific literacy amongst the general population through creating positive attitudes and awareness of the essential role that science has in our lives across all demographics in the Midlands region.

Our Mission is to develop programmes and events for people of all ages to explore and engage with science in the midlands counties of Laois, Offaly, Longford and Westmeath, to encourage young people to consider a career in STEM, and to raise awareness of the value of STEM in our society and economy.

As an organisation our ambition is to become the leading model of inclusive, impactful and innovative STEM outreach in Ireland and an example of best practice within the international community.
Strategic Objective 1: **Growth**

Grow participant reach through STEM Outreach programmes and events in Midlands by 20%.

**Goals:**
1. Deliver STEM Outreach activities to 120 schools.
2. Deliver 60 public engagement activities and quality localised programming for national weeks including Science Week, Tech Week, Maths Week and Engineers Week.

Strategic Objective 2: **Inclusion**

Through partnerships and mapping, DEEPEN focus on those least likely to engage with STEM – class, gender and diversity.

**Goals:**
Deliver 50 Activities/Programmes targeted to those least likely to engage with STEM.
Strategic Objective 3: Leadership

Become recognised Leader in STEM outreach both nationally and internationally with specific focus on diversity and inclusion.

Goals:

1. Embed a robust impact framework for all programmes and events and support the use of Science Capital approach and associated Equity Compass framework.

2. Develop programmes focussing on STEM outreach and communications informed by Science Capital approach.

3. Develop a Media Campaign for the organisation to raise profile both nationally and internationally.

4. Build 3 strategic partnerships with sectoral experts.

Continued...
Strategic Objective 4: **Scale**

Strengthen operational framework to ensure consistent approach and enable a robust model for scaling of organisation.

**Goals:**
1. Productise the Midlands Science methodology in programme development and delivery to ensure consistent high quality approach.
2. Continue to build staff capabilities to support values of inclusion, impact and innovation.

Strategic Objective 5: **Scale - Financial**

Develop multiannual funding streams for future sustainable growth.

**Goals:**
1. Develop 4 Strategic Partnerships with a view to a long-term funding commitment to our common objectives.
2. Build and maintain a Donor Stewardship Programme for both existing and new funders.
3. Secure 6 new corporates over the 3 year period, for funding, “Giving in Kind” or volunteers for our schools outreach programme.
Midlands Science has two primary target demographic markets within the Midlands Region:

- **Primary and Secondary Students aged 7-17.**

- **General population with a focus on parents, families, teachers as part of the organisation’s strategy of building Science Capital.**

Within these two target demographics Midlands Science pays particular focus to the under-served and under-represented communities. Ensuring and enabling equality of access, diversity and inclusiveness for its programme participants is a unique strength of the organisation and is recognised as such by its key stakeholders.

Where possible Midlands Science works with the younger age school cohort. This is driven by evidence and research that students’ attitudes towards STEM were largely set by age 10 so early positive experiences are an important part in the future choices they make at a later stage.
We provide opportunities for people of all ages to explore and engage with science and encourage young people to consider a career in science, technology, engineering or mathematics.

Our programmes are highly innovative with content being customised for specific audiences and delivered through a range of approaches. Midlands Science successfully managed to move all of its programming online and will be able to adopt its delivery model to an online/hybrid model depending on the external context requirements.

Throughout the year, we deliver programmes for primary and secondary schools in the region and raise awareness of the value of STEM to our society and economy. The suite of programmes that we offer are divided into four key categories:

1. School science outreach
2. Informal science outreach
3. Public engagement with science
4. Innovation and best practice
Our fundamental core values of inclusion, impact and innovation underpin all aspects of how we work.

Science Capital is the central principal to the development and delivery of all our programmes. Science Capital is a conceptual tool developed by the Science Capital Research team at University College London, for measuring an individual’s exposure and knowledge of science and is an internationally recognised best practice model. Science Capital can be defined as the sum of all the science-related knowledge, attitudes, experiences and resources that an individual builds up through their life. This includes what science they know about, what they think about science, the people they know who have an understanding of science, and the day-to-day engagement they have with science.

We have consulted with the Science Capital Research Team at University College London and conducted focus groups with representatives from industry, education and local development in our region. From this work, we have a core set of criteria for the curation and development of all our programmes and activities. In addition, we now use a tool, an Equity Compass, (also developed by University College London) which helps to build equity into the design of projects and outreach from the start particularly for those involving under-served communities.

A key element of how we work is to ensure the localisation of content and situational awareness is in all of our programming. Where possible experts from the local area are used and workshops based around local issues which supports the deep engagement from the target audience.

Throughout our ongoing engagement with industry experts we strive to maintain our leading position as an innovative and socially engaged organisation.
There is a wide range of policy work highlighting how economies and societies are changing and much of these changes are driven by science and technology and their increasingly important role in a growing competitive economy. Equally there is extensive evidence and analysis on how the world of work is changing. A high percentage of current job roles will no longer exist and will be replaced by job roles that we do not yet envisage. What is known however and universally agreed across all policy makers is that understanding technology and the scientific world will be essential in future trends of employment. This is reflected in many policy documents including OECD Dream Jobs, Science Foundation Ireland 2025, Shaping our Future, Deloitte Generation Z and Accenture Talent for Tomorrow, which we have included in our research for this strategy.

In addition (outside of the employment and jobs focus), there is a need to create a more scientifically literate public given how science and technology impacts on every aspect of our life. This is clearly aligned with Midlands Science methodology of the value of building Science Capital and the impact that such capital can make for economic development and engaged citizenship. Our work is mapped to Sustainable Development Goals 4, 5 and 8 – inclusive and equitable quality education, gender equality and inclusive and sustainable economic growth.
Within these issues a central theme of the work of Midlands Science is to ensure that STEM outreach is inclusive and accessible to all. Recent evidence highlights that those from lower socio-economic backgrounds [C2DE] are the least likely of all groups to engage with STEM outreach creating inequalities and lack of diversity in the sector. This focus on diversity is equally supported in the SFI recent strategy and a key pillar of Science for Everyone with the stated objective of "creating a diverse scientific, research and innovation workforce which is welcoming to all."

Specific to Midlands Region

For the Midlands Region there are additional specific factors as to the importance of building STEM knowledge. The Midlands region has a history of socioeconomic disadvantage and low engagement with further education and particularly with STEM. A transition is taking part in the economy in the midlands due to decarbonisation of our economy, jobs and skills in the future will be informed by STEM.
### MIDLANDS SCIENCE

#### UNIQUE VALUE PROPOSITIONS

<table>
<thead>
<tr>
<th>Proposition</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Inclusiveness</strong></td>
<td>Extensive focus on inclusion and diversity with a targeted approach to reaching those least likely to engage in STEM outreach.</td>
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<tr>
<td><strong>Innovative Approach to Design and Delivery of Programmes</strong></td>
<td>High quality, innovative and customised for specific audience programmes.</td>
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<td><strong>Science Capital Approach</strong></td>
<td>Recognised as a leader in Ireland in this international best practice approach.</td>
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<td><strong>Impactful</strong></td>
<td>An experienced impact framework developed with recognised expertise in the area.</td>
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<td><strong>Management Team</strong></td>
<td>Deep domain knowledge and expertise of STEM outreach within the management team. Creative and flexible approach.</td>
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<td><strong>Board</strong></td>
<td>Strong well-balanced Board with expertise across a range of STEM and business sectors.</td>
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<tr>
<td><strong>Strategic Partners</strong></td>
<td>Excellent relationships with a broad group of industry strategic partners.</td>
</tr>
<tr>
<td><strong>Organisational Culture</strong></td>
<td>Community and inclusiveness deeply embedded in all this work.</td>
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Key stakeholders include Science Foundation Ireland, Rethink Ireland, The Ireland Funds Private Donor Network, The Naughton Foundation, Corporates (both Multinational and indigenous Irish Companies) & private Philanthropy.

We work in partnerships with teachers and local community groups to promote our programmes and the Science Capital approach.

This focuses on how our work can contribute to creating a diverse scientific, research and innovation workforce which is welcoming to all. It extends to active engagement and co-creation with all those we interact with. It will be inspirational for future generations and it will provide excellent opportunities to recruit and support outstanding researchers at all stages of their careers in both academia and industry.
To date Midlands Science have achieved significant success with a small, highly focused and expert team.

As part of this strategy the organisation will see some incremental growth in staff numbers with potential recruitment of project-based staff when required.

Roles and Capabilities

Deep industry knowledge has been recognised as a key competitive advantage for the organisation.

Maintaining the existing strength of Board, Advisory Group and high levels of corporate governance will remain a priority for the next 3 years.
Midlands Science is considered unique in the STEM outreach sector for its strong impact measurement approach which takes place across all programmes and is an embedded value within the organisation. The organisation measures the impact of its work through a stacked approach of evaluation of impact measures. This approach combines a number of methodologies, including Science Capital scoring (using a scoring system provided by University College London), monitoring Higher Education Authority progression rates, focus groups with key stakeholders and participants, audience questionnaires and interviews.

Midlands Science is also part of a three-year education evaluation of impact study with the UNESCO Centre at the NUIG. They are now half-way through this study and the work to date on independent evaluation has led to the organisation achieving level 1 Social Return on Investment certification for its work. In addition to high standards of corporate governance, this certification provides an additional level of assurance and accreditation for the work, highlighting our adoption of best practice in this field.
OUR TEAM

Jackie Gorman, CEO
Pauline Nally, Business Development Executive
Gillian Maunsell, Communications Manager
Aoife Scanlon, Public Engagement Executive

BOARD OF TRUSTEES

Dr Craig Slattery, UCD
Dr Aisling Twohill, DCU
Caroline Brazil, Accenture
Anne Scally, Pro-activ HR
Gerry Buckley, NIS
Patricia Nunan, Hibernia College
Paul Carroll, formerly Cpl

INDEPENDENT EXPERT ADVISORY GROUP

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