

Science Technology Engineering and Mathematics (STEM) Strategy 2018-2023

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Date of Origin	Last Updated	Proposed Review Date	EQIA Date	Responsibility For Review
26 March 2018	26 March 2018	June 2020	March 2018	Vice Principal, Curriculum

STRATEGY

This strategy document is intended to provide all stakeholders who have a responsibility for or interest in STEM (Science, Technology, Engineering, Maths) with a clear understanding of our purpose and definition of our priorities and objectives.

Partnership working, particularly in the Schools Sector and employer engagement are central to the success of the STEM Strategy and it is pivotal that the Faculties and Business Development teams continue to nurture existing partnerships and develop new relationships; diversifying activities and providing enhanced opportunities as outlined in *Developing Scotland's Young Workforce*, Scotland's Youth Employment Strategy.

This document covers the five year period AY 2018/19 – 2022/23 and reflects regional commitments as detailed in Lanarkshire's Outcome Agreement (OA).

PURPOSE

Provide an innovative, influential and professional service that works in partnership with local authorities, schools, employers, universities and stakeholders to develop and deliver STEM

COMMITMENT

New College Lanarkshire (NCL) is committed to supporting the Scottish Government's (SG's) ambitions to grow, enhance and widen participation in STEM as communicated within Science Technology Engineering Mathematics, Education and Training Strategy for Scotland, Scottish Government; 2017.

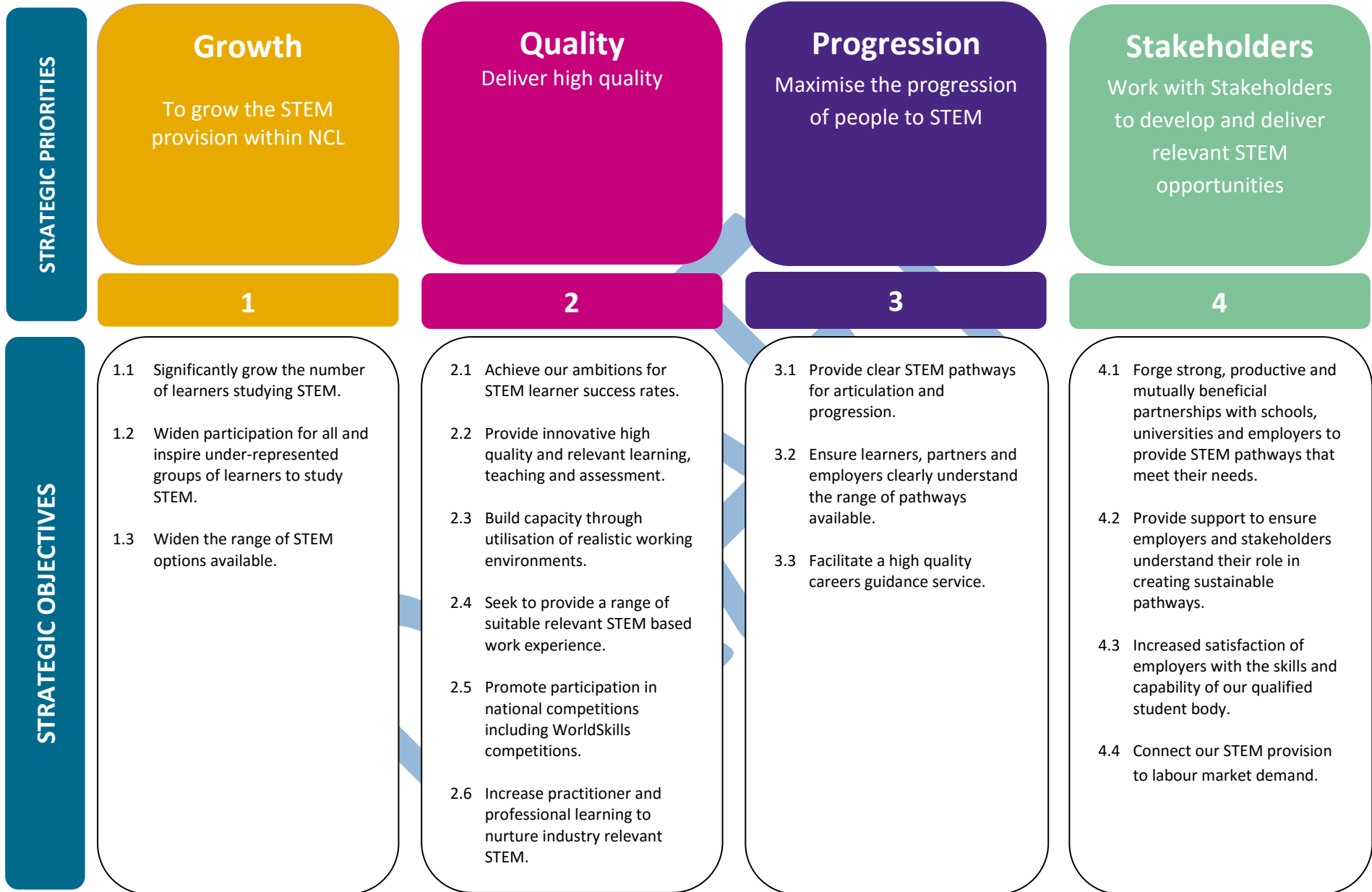
We are determined to further enhance the quality and flexibility of the provision we offer to ensure that people have the correct skills to mould and negotiate the future labour market to help support and sustain economic growth in Scotland.

As there is an identified Skills gap in STEM subjects in the region, a particular focus has been given to pathways which will encourage learners along these routes. The development of our Curriculum Portfolio clearly emphasises STEM. This ranges from collaborative development of NCLs Construction Academy for school age learners through to ground breaking development such as Scotland's first BSc degree in Dental Nursing in partnership with the University of the West of Scotland. We are focussed on STEM subjects, in particular through Engineering, Construction, Care and Computing subject areas which includes leading edge delivery in Micro-renewables, Dentistry and Science and through the Oracle Academy.

DELIVERY

- Grow and increase in the number of learners studying STEM by developing a curriculum which offers more choice and is attractive to learners and employers.
- Widen participation and inspire learners to study STEM by removing both real and perceived Barriers.
- Align our provision using national and regional skills analysis to ensure we have a STEM workforce which supports economic growth, innovation, creativity.
- Work with employers in the region and the local community to equip businesses and employees with the skills, knowledge and qualifications that they need to remain competitive and ensure future sustainability. Increase satisfaction of employers with the skills and capability of our qualified student body.
- Promote participation in national competitions including WorldSkills competitions.
- Forge strong connections with schools, universities and employers through initiatives such as the STEM Ambassador Scheme which has already seen approximately 30 STEM Ambassadors (Staff and Students) within the Science and Dental curriculum, with ambition to expand cross-college.
- Build capacity through utilisation of realistic working environments.
- Increase practitioner and professional learning to nurture industry relevant STEM.
- Connect our STEM provision to labour market demand to ensure employers have access to the workforce they need.

The Vice Principal for Curriculum and Assistant Principals for Learning & Teaching and Quality Enhancement will support the Heads of Faculty by providing leadership, guidance and direction in order to ensure that strategic priorities, objectives and targets are achieved.



KEY STRATEGIC ENABLERS

Staff: Ensure that all staff involved in STEM are empowered to meet the needs of the programme. Strive to provide an innovative, dynamic and fulfilling work environment where success and hard work are recognised and celebrated. Provide opportunities for and encourage relevant Continuing Professional Development (CPD) and make the discussion of ideas and innovation the norm.

Communication: Ensure Curriculum teams communicate effectively and work together to meet our shared objectives. Engage effectively with key employers and stakeholders; demonstrate the success of our work; ensure people understand what we do and change perceptions where necessary. Ensure all staff know and understand the standard of service we are expected to provide. Employers and stakeholders should know the quality of services they should expect and know what we may reasonably expect of them. Provide opportunities to allow employers and stakeholders to communicate their needs. Provide a regular and consistent flow of information. Enable mechanisms to gather feedback to inform self-reflection and ensure quality of service and employer and stakeholder expectations are exceeded.

Planning and Self-evaluation: Work to encourage Curriculum team participation in the self-evaluation and planning process, through looking inward, outward and forward. Develop direct involvement to help facilitate shared values, ownership, empowerment, pride and job satisfaction. Use this as the platform upon which to continually build upon our high standards of management, delivery and quality of service. Work in an assistive manner to assist all Curriculum team members see their part in contributing to the delivery of the College strategy, operational objectives and goals.

Budgeting: Utilise sound financial planning, monitoring and control to ensure an ongoing ability to deliver our STEM strategic objectives whilst operating within strict budgetary constraints.

Key Indicators

Growth: Substantially grow the number of STEM learners across Lanarkshire

1.1	1.2	1.3
<p>Outcome Agreement National Measures Table:</p> <p><i>Volume and proportion of Credits delivered to learners enrolled on STEM courses (OA National Measure 3)</i></p>	<p>Outcome Agreement National Measures Table:</p> <p><i>Volume and proportion of Credits delivered to learners in the most deprived 10% postcode areas (OA National Measure 1c – filtered for STEM)</i></p> <p><i>The volume and proportion of Credits relating to learners from different protected characteristic groups and Care Experienced (OA National Measure 1d – filtered for STEM)</i></p>	<p>STEM Action Plan:</p> <p><i>New frameworks</i></p> <ul style="list-style-type: none"> <i>Digital Skills</i> <i>Early Years & Childcare</i> <i>STEM related industries</i> <p><i>In place with key milestones for new frameworks in 2017, 2019 and 2021.</i></p>

Quality: Deliver an outstanding STEM Programme at all levels

2.1	2.2	2.3; 2.4; 2.5	2.6
<p>Outcome Agreement National Measures Table:</p> <p><i>Proportion of enrolled students successfully achieving a recognised qualification (OA National Measure 4a – filtered for STEM)</i></p>	<p>HGIOC annual evaluation formal endorsement:</p> <p><i>Positive relevant endorsement</i></p>	<p>learner and Stakeholder satisfaction surveys and engagement events:</p> <p><i>Positive relevant endorsement</i></p>	<p>CDP records:</p> <p><i>CPD activity relevant to STEM</i></p>

Progression: Maximise the progression of people to STEM programmes

3.1	3.2; 3.3
Faculty Curriculum Delivery Plans (CDPs): <i>Pathways clearly identifiable relevant to STEM</i>	learner and Stakeholder satisfaction surveys and engagement events: <i>Positive relevant endorsement</i>

Stakeholders: Work with Stakeholders to develop and deliver relevant STEM opportunities

4.1; 4.2	4.3	4.4
learner and Stakeholder satisfaction surveys and engagement events: <i>Positive relevant endorsement</i> Faculty Operational Plan and Annual Curriculum Evaluation (ACE) Quality Improvement Plan (QIP) <i>Positive relevant endorsement</i>	Stakeholder satisfaction surveys and engagement events: <i>Positive relevant endorsement</i>	Faculty Operational Plan Faculty Curriculum Delivery Plans (CDPs) <i>Evidence of consideration of labour market demand</i>