

Contents

Key Features.....	2
STEM Sector Overview	3
Local Assets	4
Employment Growth	6
STEM Skills Picture.....	7
Perspectives of STEM in Stevenage.....	8
Headlines.....	9

Key Features

The Opportunity



Stevenage is located in Britain's fastest growing STEM region, with high value manufacturing sectors, including pharmaceuticals, aerospace and life sciences.



Presently STEM industries account for 30% of industry groups in Stevenage. In turn, these industries provide 49% of employment in Stevenage.



Plans for Stevenage will see the sector grow significantly over the next decade, providing many new jobs and opportunities for Stevenage residents.



More than £1.6bn invested in bioscience companies in recent years.

Further £1m invested via the Stevenage Town Investment Plan

Approximately 8,000 new jobs over the next decade.

In discussions, Young People often felt that they didn't know about the STEM pathways and opportunities on their doorstep.



The Commitment

The 'Stevenage Works' and 'Stevenage Development Board' partnerships are well placed to build on current activities and champion future skills development.



Resources, funding and commitments to support Stevenage residents to access local STEM opportunities.



Goodwill and strong links with local businesses, education providers, young people and the local community to work collaboratively to open doors to these outstanding opportunities.



The Aim



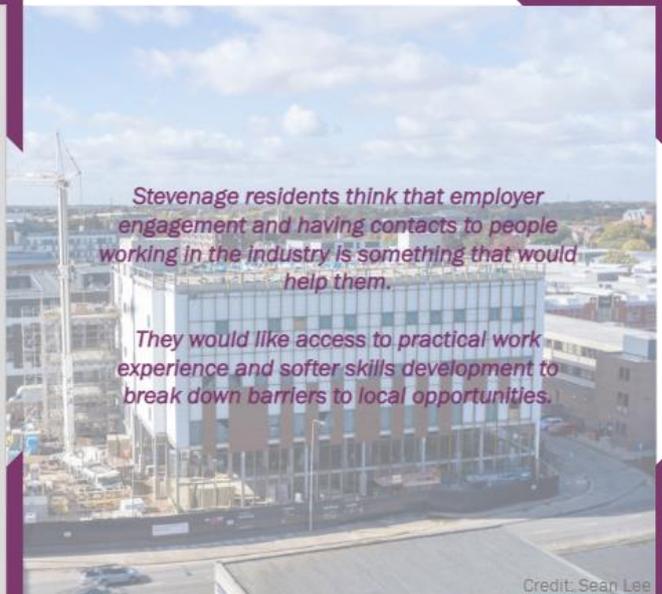
Through the voice of residents, with a particular focus on young people, develop a programme of support to help them make informed choices about STEM careers.



Realise a step change in social mobility and diversity in STEM careers in Stevenage.



Establish a Stevenage STEM centre of excellence which can act as a blueprint for others to follow and can be used as a template for other key sectors.



Stevenage residents think that employer engagement and having contacts to people working in the industry is something that would help them.

They would like access to practical work experience and softer skills development to break down barriers to local opportunities.

Credit: Sean Lee

STEM Sector Overview

The UK is a research and innovation powerhouse. Ranked in the top five in the global innovation index in 2021¹, the UK is home to one of the most productive science bases in the G7². For the UK's high value manufacturing sectors – such as pharmaceuticals, automotive, aerospace, chemicals, and electrical/electronic industries – this excellence in research and innovation is vital to their global success³.

Supporting this position is the UK Innovation Corridor (UKIC), an economic region of global significance. Identified as the UK's leading location for life sciences and knowledge-based industries, it comprises a high productivity, high performance and regional economy driven by world-class talent, knowledge, scientific R&D, and entrepreneurship. It is at the heart of the UK's tech & digital industries: and it is a major source of scale-up enterprises and success.⁴

Sitting at the heart of the UK Innovation Corridor (UKIC) is Stevenage, identified as one of the key employment centres⁵. The corridor is now Britain's Fastest Growing Region with industries focused on commercial innovation, advanced technology, and bioscience.

Additionally, Stevenage has been awarded the prestigious status of Life Science Opportunities Zone (LSOZ) identified by the Government for promoting the UK's Life Science capabilities on the global stage. Its recent designation by the DIT as a High Opportunity Area promotes the Town for the UK centre stage. Stevenage is also positioned firmly in the centre of the 'Golden Triangle' of life sciences with good transport links to and between Cambridge, Oxford and London.

More than 70 companies in the life sciences field have clustered around Stevenage over the past 8-10 years, more than 60% of them focussed on R&D in Cell and Gene therapy. This has led to Stevenage being recognised as the 3rd largest cell and gene therapy cluster worldwide and the largest in Europe. These companies have already raised more than £1.5bn in venture capital investment. Market analysis (Aritzon 2019) projects the global Cell and Gene therapy revenues at \$14bn (c. £11bn) by 2025 (CAGR 30%).



¹ Global Innovation Index 2021

² <https://www.gov.uk/government/news/safeguarding-funding-for-research-and-innovation>.

³ UKCES 2015 – Sector insights: Skills and performance challenges in the advanced manufacturing sector

⁴ The UK Innovation Corridor: Innovative Placemaking for an Innovative UK (2022)

⁵ Ibid

Local Assets

Stevenage has significant assets from which to draw to support the STEM agenda:

1. Stevenage Town Investment Plan and 2. Stevenage Development Board

The Stevenage Development Board is an independent, committed and coordinated voluntary multi-stakeholder partnership comprising key representatives from public sector organisations, private businesses, not-for-profit organisations, and Heritage organisations.

The Board provides strategic oversight for the Towns Fund projects, with all its members working together for the town. The mix of partners involved ensures that a diverse range of views is captured and considered in any plans.

Following a successful bid to the Government, the Stevenage Development Board was awarded £37.5m to deliver nine key projects contained in its proposal that included Gunnels Wood improvements, a sports and leisure hub, Stevenage Enterprise Centre, Marshgate Biotech office and key worker housing.



3. STEM Discovery Centre



The STEM Discovery Centre is a unique educational facility. Co-located with the Airbus Space and Defence 'live' testing yard for the Exomars rover, it brings together cutting-edge industry and technology with high quality education and learning.

The Centre offers school trips that spark the imagination, electrifying the senses and galvanising young people to consider a career in science, technology, engineering and maths. The education programme is linked to key stage 2 and 3 curriculum and is designed and delivered by North Hertfordshire College.

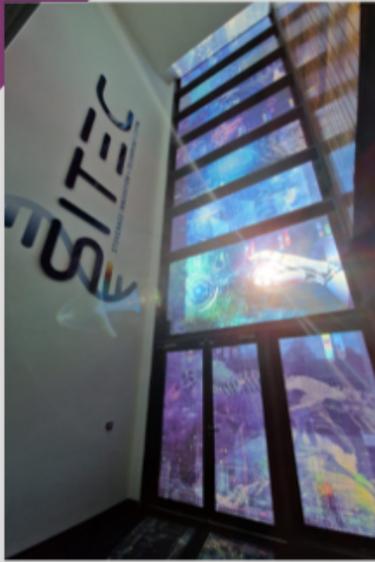
4. Generation Stevenage

An annual career fair for secondary school students in and around Stevenage to meet with local employers to discover more about local opportunities.

Following the last Generation Stevenage event, which was held virtually in 2020 with a greater STEM focus, in 2023 it branched out to encompass a wider amount of career options for young people.



5. SITEC Phase One at North Hertfordshire College



The recently opened Stevenage Innovation & Technology Centre (SITEC) aims to capitalise on Stevenage's position in the Golden Triangle of Research and Development between Oxford, Cambridge and London.

It is phase 1 of the broader NHC project to develop and deliver a range of new T-Level and Apprenticeship qualifications in Science, Engineering, Digital and Sustainable Technologies at Levels 3 - 5 (post-16 education through to Higher Education). It aims to raise the aspirations and skills of local residents and employees by providing accessible opportunities in the key growth areas for the region, including life sciences and advanced manufacturing.

Working with industry partners FourPlus, LifeArc, UCL Vax Hub, Autolus and the Cell and Gene Therapy Catapult, SITEC phase 1 has seen the creation of a simulation life sciences laboratory, immersive technologies spaces, a new digital training suite, and virtual reality training capabilities in a virtual environment.

6. Stevenage Bioscience Catalyst

Stevenage Bioscience Catalyst is a R&D location for companies to develop and commercialise cutting edge therapeutics.

Companies based at the Stevenage Campus employ over 3,500 people from over 40 companies and include GSK, the Cell and Gene Therapy Manufacturing Catapult, LifeArc and Cytiva alongside a growing cluster of start-up companies.

Since 2012, companies at the Stevenage Bioscience Catalyst have been able to secure over £3 billion in equity investment and grant funding. Of that total, over 72% has been in companies with a focus on cell and gene technologies.



7. Local STEM Industry

The depth and breadth of the local industry in Stevenage is significant, including globally recognised businesses running significant operations.

This provides the opportunity for Stevenage and the surrounding areas to benefit from corporate social responsibility (CSR) policies promoting economic, social, and environmental benefits.



Employment Growth

STEM industries account for 30% of industry groups in Stevenage⁶. In turn, these industries recruit 49% of all Stevenage employees⁷. This suggests that several organisations within these sectors in Stevenage are of a considerable size, indicating a head office or similar significant function for the organisation. As such, these are economically important to the Stevenage and Hertfordshire economies.

Count of Employees by Broad Industry Group ONS, Business Register and Employment Survey		
Industry Group	Stevenage	%
1: Agriculture, Forestry & Fishing	10	0.02
2: Mining, quarrying & utilities	40	0.8
3: Manufacturing	6,000	12.2
4: Construction	2,000	4.0
5: Motor Trades	800	1.6
6: Wholesale	1,750	3.5
7: Retail	4,500	9.0
8: Transport & Storage	1,250	2.5
9: Accommodation & Food Services	2,500	5.0
10: Information & Communication	1,750	3.5
11: Finance & Insurance	800	1.6
12: Property	500	1.0
13: Professional scientific & technical	5,000	10.0
14: Business Administration & Support	4,500	9.0
15: Public administration & defence	1,750	3.5
16: Education	4,000	8.0
17: Health	10,000	20.1
18: Arts, entertainment & recreation	2,250	4.5
Total Employment	49,760	100
STEM Total	24,500	49.3

Regeneration plans for Stevenage will see circa 8,000 new jobs delivered over the next decade and a significant number of these are expected to be within the STEM sector⁸.

The Stevenage Borough Local Plan 2011 – 2031 sets the overall spatial vision for the borough and growth direction to 2031. The consolidation and growth of Gunnel's Wood Road as the town's primary business area is prioritised and includes the continued development of the Stevenage GSK and Bioscience Catalyst and Catapult Campus. The Local Plan looks to provide at least 140,000 m² of new B-class employment floorspace and is promoting new employment opportunities as a critical component of the town centre regeneration.

A key vehicle to delivering the town centre regeneration is the Stevenage Town Investment Plan (STIP). In 2019, Stevenage Borough Council in conjunction with the Stevenage Development Board presented a successful bid to the Towns Fund. The resultant £37.5m Stevenage Town Investment Plan (STIP) sets out proposals to create an exemplary 21st century New Town, building on the existing New Town values and unlocking growth in some of the UK's cutting-edge sectors to promote and deliver opportunities for local people, (including capitalising on the Life Sciences opportunity). It includes nine overall projects that propose to deliver 168,000m² of commercial floorspace, 2,000 new homes, 8,000 new jobs and 100 apprenticeships per annum by 2035.

The Life Sciences sector is projected to be a significant contributor to the STIP jobs target. Stevenage companies currently account for 7% of the global market and 27% of Europe. The opportunity for Stevenage is not only to retain but to grow its share of the global market. Assuming it simply retains its 7% share, this will equate to annual revenues by 2025 of around £750m, capable of supporting up to 5,000 jobs, and with multiplier impacts locally, the revenues to support another 1,000 jobs.

⁶ Stevenage Business by Industry (ONS, UK Business; Activity, Size and Location, March 2022)

⁷ Stevenage Employees by Industry (ONS, Business Register and Employment Survey)

⁸ Stevenage Town Investment Plan

STEM Skills Picture

Thus, STEM skills are hugely important to Stevenage. Sitting within Britain's fastest growing region with high value manufacturing sectors, including pharmaceuticals, aerospace, and life sciences, Stevenage presents significant opportunities for its residents.

However, residents are not always in a position to take advantage of these opportunities and interventions are required to ensure equitable outcomes. When compared with the rest of Hertfordshire, Stevenage finds itself at somewhat of a disadvantage.

Stevenage Resident Qualifications	Stevenage		Hertfordshire		England	
	2011	2021	2011	2021	2011	2021
Qualified to NVQ Level 4	23.1%	29.6%	32.1%	39.4%	27.4%	33.8%
Qualified to NVQ Level 3	12.0%	17.1%	11.8%	15.9%	12.4%	16.9%
No Qualifications	20.8%	17.0%	18.2%	14.7%	22.5%	18.2%

Skills levels, particularly levels of A-level grades and apprenticeship achievements are lower than average, and this results in greater challenges for residents when applying for medium and high value jobs in the town, many of which are in the STEM Sector.

Pupil Attainment	Stevenage	Hertfordshire	England
Key Stage One (5-7 Years)	75.9%	78.3%	75.6%
Key Stage Two (7-11 Years)	58.2%	67.1%	64.9%
Key Stage Three (11-14 Years)	44.2%	51.5%	46.6%

This results in a significant amount of workforce migration with many Stevenage residents commuting out of Stevenage rather than being best placed to take advantage of the opportunities within the town.

Earnings – Medium Annual Income	Stevenage	Hertfordshire
Residents	£29,100	£35,450
In-commuters	£35,500	£32,730

The aim of this sector skills overview therefore is to address the skills challenges that local people face to build more equitable opportunities between the high value jobs that local industry and the local workforce, enabling residents to take advantage of the range of fantastic local prospects.

To achieve this, in recognition of the depth and breadth of the STEM industry, a Stevenage STEM definition has been established to ensure the industry and its sectors are defined and explained so that it is clear which elements of the industry the STEM Sector Skills overview contributes towards.

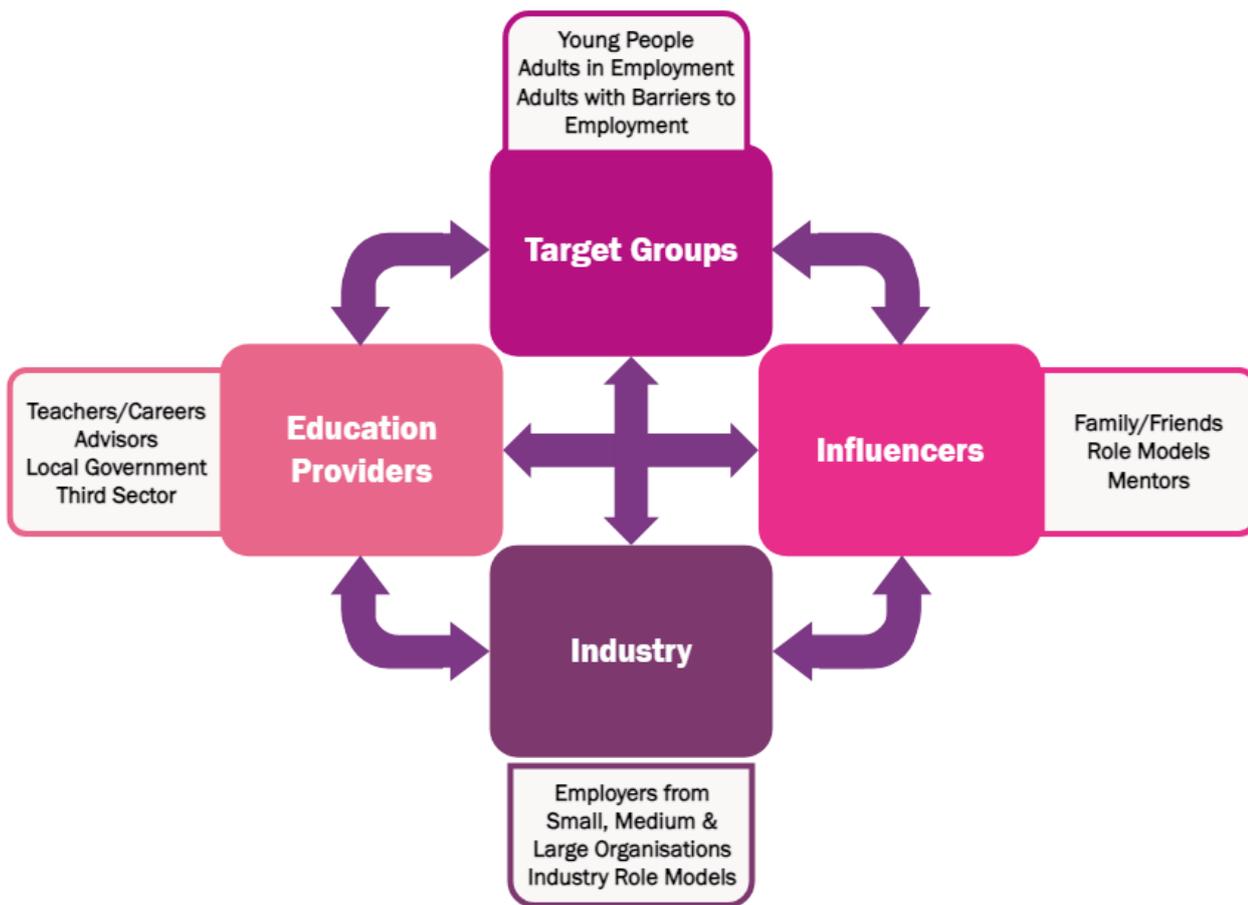
The Sector Skills overview includes recommendations that recognise the role of local government (Stevenage Borough Council, Hertfordshire County Council, and the Hertfordshire Local Economic Partnership) as a facilitator, providing policy direction, focus, and leadership. They also point to the critical roles of employers, the education sector, and agencies in delivering solutions that address Stevenage's skills gap and diversity issues, and which promote social mobility.

Perspectives of STEM in Stevenage

The Skills Framework responds to the voices of key stakeholders and is the result of significant consultation and engagement activities with these groups, with a particular focus on young people as part of the 'Pioneering Young STEM Futures' programme being delivered in collaboration with Mission44.

To support these activities, we have already established a strong partnership of key local stakeholders throughout, the public sector, education and industry. Particularly essential has been a steering group, comprised of the Hertfordshire Local Enterprise Partnership, the University of Hertfordshire, and North Hertfordshire College. Each acts as a key anchor institution in the local area and provides key expertise around the skills ecosystem.

Key stakeholders are divided into four key groups as per the diagram below. Our focus has not only been to ensure we are engaging with all groups, but to build ongoing relationships and to help build communications channels between these groups.



Consultation and engagement activities have taken many forms, including both small and large group exercises, focus groups, surveys culminating in the first Stevenage STEM Summit, held at the Airbus Campus in Stevenage in September 2023.

Throughout these activities, a number of key messages and headlines have begun to materialise which have not only shaped this framework but also comprise the backbone of the general skills and STEM sector action plans.

Headlines

<p>Benefits of Practical, Experiential Opportunities</p> <p>1 </p>	<ul style="list-style-type: none"> Practical experiences help make careers real for young people and adults alike. Whilst opportunities are available, increasing the frequency and variety of them is desirable. 	<ul style="list-style-type: none"> There is a clear generation gap in the use of communications technology. This creates a divide between those who are trying to deliver the information and those who would consume it. 	<p>Utilise Effective and Relevant Communications Pathways</p> <p> 2</p>
<p>Importance of Role Models & Mentors</p> <p>3 </p>	<ul style="list-style-type: none"> Relatable individuals within a field make the strongest candidates. Industry mentors could cascade experiences and provide opportunities to build skills through peer-to-peer mentoring. 	<ul style="list-style-type: none"> Whilst there is a lot of strong ongoing activity, there is a gap around how it strategically fits together. Skills co-ordination currently happens at a county level allowing room for tailoring for Stevenage. 	<p>Space for Local Level Co-ordination of Activities</p> <p> 4</p>
<p>Developing an Interest as Early as Possible</p> <p>5 </p>	<ul style="list-style-type: none"> Interests, skillsets, and preferences are developed well in advance of options. More explicit careers focus and links in later years of primary school would be of benefit. 	<ul style="list-style-type: none"> Both industry and education providers face significant capacity challenges. Interventions need to be designed to make best use of all stakeholder's time and resources. 	<p>Acknowledge & Support Capacity Challenges</p> <p> 6</p>
<p>Better Links Between the Classroom and Careers</p> <p>7 </p>	<ul style="list-style-type: none"> Finding STEM subjects difficult or undesirable doesn't mean careers linked to them are viewed similarly. By the time people realise this, it can be too late to develop an opportunity. 	<ul style="list-style-type: none"> It is key that stakeholder groups are provided the tools and connections to work effectively together. Distinct role in for making connections and supporting relationship building across groups. 	<p>Benefits of Establishing Strong Links Across Stakeholder Groups</p> <p> 8</p>
<p>Educating Key Influencers</p> <p>9 </p>	<ul style="list-style-type: none"> Often, those most present in target groups lives have limited knowledge of STEM, creating further barriers. Education opportunities should be extended to these cohorts as well. 	<ul style="list-style-type: none"> Key focus on equity of opportunity should be front and centre. Interventions should be primarily focused on individuals who experience deep rooted barriers to opportunity. 	<p>Focus on Equity of Opportunity</p> <p> 10</p>