

Careers Opportunities - South East Midlands High Performance Technology

What is it?



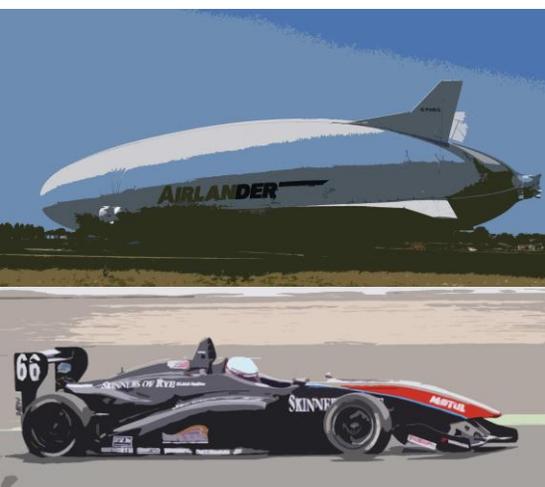
Outside of the natural world, everything that we see and use has been engineered through design, creation, testing and manufacturing. The South East Midlands has some of most innovative and dynamic businesses in the UK, with High Performance Technology (HPT) leading the way.

HPT encompasses an exciting range of industries, including automotive, aerospace, motorsport, automation, energy and next generation transport. HPT companies adopt and utilise revolutionary technologies and offer diverse careers with the benefits of variety and the opportunity to make a difference to people's lives.

High Performance Technology in the South East Midlands comprises:

- ▶ **Automotive** - Designing, developing, testing and building of vehicles and components.
- ▶ **Aerospace** - Includes the design and testing of aviation systems and supervising the manufacture of aircraft, developing cutting edge defence technology and enabling space exploration. This sector also includes aircraft maintenance.
- ▶ **Motorsport** – The UK's focal point for development and construction of racing cars and teams including some in Formula 1. This includes performance components and engines.
- ▶ **Automation** – Defined as the application of technology to monitor and control processes, minimising human intervention, this element includes businesses working with robotics, mechatronics (combining and integrating electrical and mechanical systems), electrical, pneumatic and hydraulic systems. The sector works within many areas from manufacturing to surgical.
- ▶ **Energy** - Developing new ways to generate renewable and sustainable energy, including biofuels, hydro, wind and solar power. Creating and designing energy efficient devices to reduce demand for power.
- ▶ **Next Generation Transport** - The area is a hub for the development and testing of intelligent mobility for the future including driverless vehicles and alternative energy sources.

Be inspired to make a difference, [this is engineering](#).



Prospects for the future

Myth busting

- ▶ “Engineering is low paid” - Starting salaries for all pathways are good. Starting salaries for engineering and technology graduates are around 20% higher than the average graduate starting salary and engineering apprentices earn more than double the national apprentice minimum wage.
- ▶ “It’s a job for the boys” - The [opportunities for women](#) in HPT are immense. The number of women in the engineering workforce is rising rapidly from 9% in 2015 to 11% in 2017.
- ▶ “There is little engineering in the UK” - Engineering contributes 26% of the UK’s GDP and its contribution is more than that of the retail and wholesale and financial and insurance sectors combined for Gross Value Added.

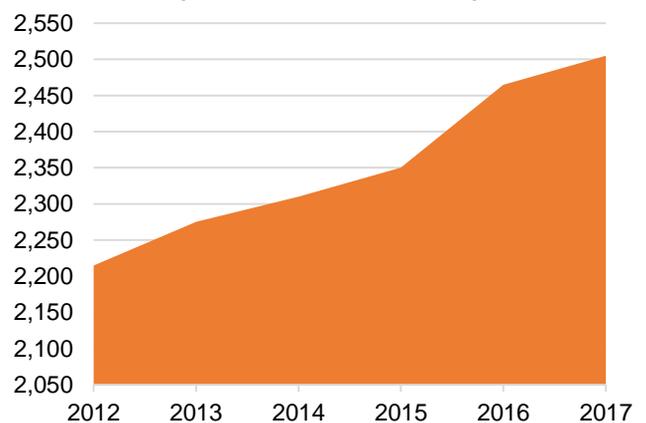
The High Performance Technology sector is growing, with a high demand for people with the right skills, qualifications, training and attitudes.

The number of HPT sector businesses based in the South East Midlands increased by 290 from 2012 to 2017, 1,955 were micro businesses (less than 9 employees).

Over 95% of the employers are small or micro businesses

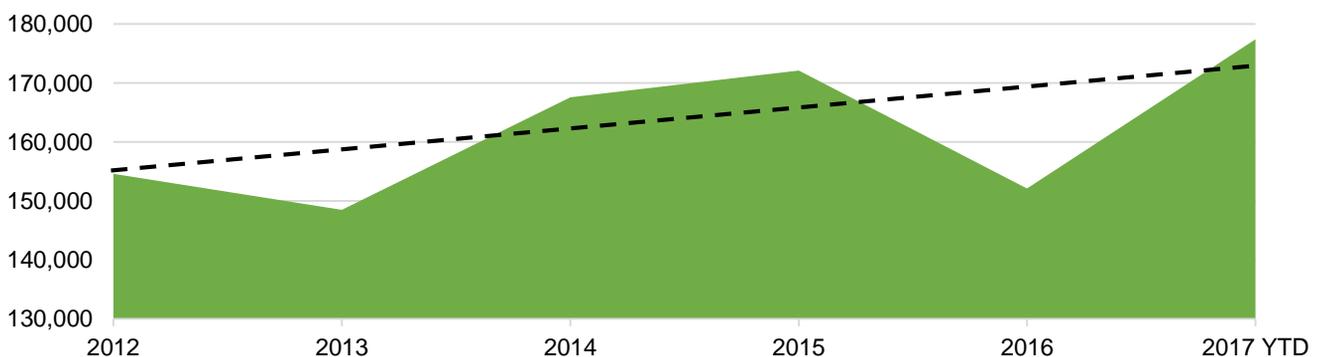
Business Size (Employees)	Proportion
Micro (0 to 9)	78%
Small (10 to 49)	17%
Medium (50 to 249)	4%
Large (250+)	1%

Number of Business Units in High Performance Technology (South East Midlands)



Over 177,000 people are employed in the HPT sector in East of England and East Midlands and this number increased by over 22,500 from 2012 to 2017.

Number of Jobs in High Performance Technology (East and East Midlands)



Prospects for the future



As the global economy evolves and Britain prepares for the future, the sector will play an ever more vital role in driving our economy. Predictions are for an increasing demand for highly skilled jobs with a “STEM” (Science, Technology, Engineering and Maths) skills set.

Examples of High Performance Technology businesses based in the South East Midlands:

[Airbus Helicopters](#)

[Aircraft Research Association](#)

[B/E Aerospace](#)

[GKN Aerospace](#)

[Leonardo](#)

[Lockheed Martin](#)

[Force India Formula One Team](#)

[Haas F1 Team](#)

[Mercedes AMG Petronas Motorsport](#)

[Red Bull Racing](#)

[Cosworth](#)

[Mercedes AMG High Performance Powertrains](#)

[Prodrive](#)

[ABB - Robotics and Motion](#)

[Axis Electronics](#)

[Festo](#)

[Hayward Tyler](#)

[Krohne](#)

[Macdonald Humfrey \(Automation\)](#)

[Benteler Automotive](#)

[Chargemaster](#)

[Faurecia Automotive Seating](#)

[GE Precision Engineering](#)

[IM Kelly Automotive](#)

[Integral Powertrain](#)

[Magna Exteriors](#)

[Mahle Powertrain](#)

[Millbrook Proving Ground](#)

[Nissan Technical Centre](#)

[Transport Systems Catapult](#)

[Vauxhall - IBC Vehicles](#)

[Wipac](#)

[Omron Electronics](#)

[Rockwell Automation](#)

[SKF \(UK\)](#)

[SMC Pneumatics \(UK\)](#)

[The Automated Technology Group](#)

Throughout the area there are Enterprise Zones and Technology Hubs with clusters of HPT businesses such as Luton Airport, Northampton Waterside, Silverstone, Cranfield and many more.

Find out more about what career opportunities and earning potential the High Performance Technology sector can provide at [Real Jobs](#) and [Prospects](#).

How do I get there?



What skills do I need?

Qualifications on their own will not be sufficient to secure a job. Employers also look for:

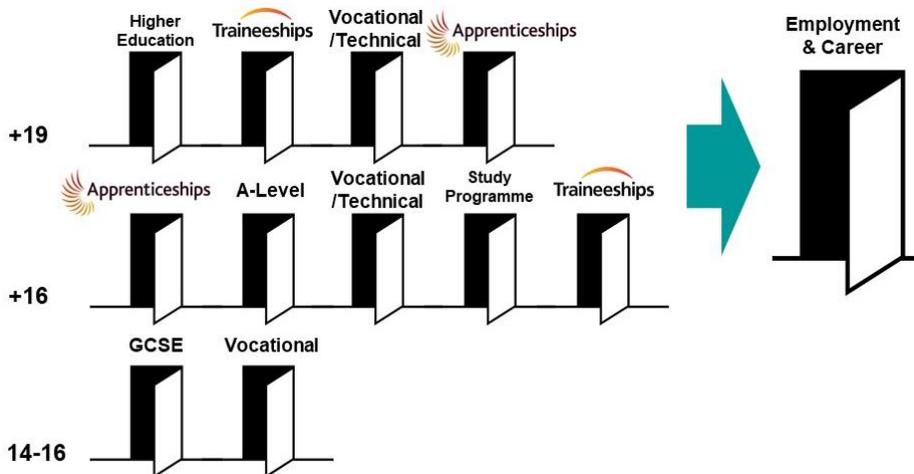
- ▶ **Core competencies** - communication, confidence, initiative, planning and organisational, problem solving, resilience, teamwork and basic IT literacy (spreadsheets, word processing)
- ▶ **Basic skills** - maths and English
- ▶ **Key employability skills** - those specific to a job, technical/practical skills and customer service
- ▶ **Experience** - gain some work experience whilst in education, this may include volunteering

Have a look at [Life Skills](#) and [Industrial Cadets](#) to prepare you for making the first step into a career.

How do I get there?

Pathways

There are many pathways into a career in the High Performance Technology sector including the traditional academic routes.



Local further and higher education providers and courses:

► Further Education

[Barnfield College](#)

[Bedford College](#)

[Central Bedfordshire College](#)

[Milton Keynes College](#)

[Northampton College](#)

[Tresham College \(Engineering/Motorsport\)](#)

► **Apprenticeships** - Apprenticeships combine practical training in a job with study. Find out more [here](#). To search for and become an apprentice, start [here](#).

► **Traineeship** - Traineeships are designed help young people who want to get an apprenticeship or job but don't yet have appropriate skills or experience. More information can be found [here](#).

► Higher Education

[University of Bedfordshire](#)

[University of Northampton](#)

[The Open University](#)

Useful websites and social media

- [Tomorrow's Engineers](#) Use the online tools to find careers and develop skills
- [This is Engineering](#) An introduction to the sector and the opportunities it offers
- [Prospects – Engineering and Manufacturing](#) Information on jobs, work experience and pathways
- [Motorsport Industry Association](#) Education pathways into a career in motorsport
- [Youth Employment](#) Careers and pathways into engineering
- [Careers Helpline for Teenagers](#)