

A photograph of surgeons in an operating room, wearing blue scrubs and masks, illuminated by large overhead surgical lights. The scene is viewed from a low angle, looking up at the surgeons and the lights. The text 'MIDLANDS ENGINE' is overlaid on the image in a blue box.

MIDLANDS ENGINE

MIDLANDS ENGINE HEALTH Focus on: MedTech

MARCH 2021



Empowering our region's critical mass of MedTech expertise

Not only is the Midlands health and life sciences sector home to the UK's largest cluster of Medical Technology (MedTech) businesses, but our region also boasts world-leading academic and clinical facilities, research and expertise, along with two Life Science Opportunity zones and the East Midlands Freeport. As a result, the Midlands is ideally placed to lead the development of new MedTech products and services from bench to bedside, create start-ups, drive regional growth and capture the growing national and global MedTech market.

Our thriving NHS partnering ecosystem, together with cutting-edge facilities and internationally renowned expertise, also attracts global companies eager to relocate to our region. Generating an impressive £1.6 billion GVA annually, the Midlands MedTech sector is a robust and highly sustainable industry supported by almost 1,000 businesses and a workforce of 23,600.

The Centre for Healthcare Technologies is a collaboration between the University of Nottingham and Nottingham University Hospitals NHS Trust to help rapidly translate scientific discoveries into technologies that will provide health and economic benefits.

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The West Midlands Health Technologies Cluster is a new initiative being developed to help existing MedTech businesses to be more successful and contribute even more to our regional economy, and to attract investment and new companies to our region.

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In fact, the majority of organisations within the sector are over ten years old, a longevity that can clearly be accredited to our region's innovative and entrepreneurial spirit.

Any barriers to growth, such as supply-chain fragmentation and limited access to private investment, have been identified and strategies to overcome them are being developed. Our aim is to prioritise MedTech as a core Midlands sector, which operates effectively and innovatively, and demonstrates national and global leadership.

The proposed Medical Technologies Innovation Accelerator (MTIA) will harness the Midlands' unique industrial base, patient population and academic-NHS innovation environment to create the UK's leading cluster of excellence for development, evaluation and adoption of MedTech.

The Medical Technologies Innovation Facility, based on the Boots Nottingham Enterprise Zone, supports our region's industry and universities to take ideas from bench to bedside, accelerating the development of innovative MedTech to treat patients faster.

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Combining many specialist areas, the **Ophthalmic Technology and Devices Research Centre** has spun off several companies in the Midlands and beyond, and is working with businesses from SMEs to multinationals to translate technological advances into clinical practice.

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Strengthening our reputation for medical imaging excellence

The breadth of medical imaging expertise within the Midlands is phenomenal. Collectively, we cover virtually every aspect of medical imaging, not only as applied to clinical disorders, but also in relation to the fundamental understanding of the healthy body. The Midlands also provides access to large and diverse populations that are essential for us to develop our understanding of how to use medical imaging techniques. The result is an exceptional opportunity to collaborate and develop a unique environment for medical imaging research and application.

Most importantly, the Midlands is at the international forefront of pioneering translational imaging research. Our aim is to become the home of ultra-high field imaging, both for clinical and research use, and to have the UK's first 11.7T MRI facility. This will operate as a national facility, providing a platform for world-leading neuroscience-focused and clinical studies. The facility will also unlock new opportunities for assessing brain function, anatomy and organ metabolism in ever-closer detail, as well as the further development of MRI technology.

Building on Nobel-prize-winning work in developing MRI in the 1970s, the **Sir Peter Mansfield Imaging Centre** aims to develop and commercialise medical imaging in experimental medicine and translational medicine.

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Also exemplifying our region's excellence in imaging innovation, the **Midlands Medical Imaging Network** connects multidisciplinary researchers to drive the field forward and develop new ways of imaging the body so that we can provide fundamental insights in health and pathology.

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The Centre of Membrane Proteins and Receptors brings together leading researchers from the Universities of Birmingham and Nottingham to identify new approaches for the prevention and treatment of cardiovascular disease, respiratory disease and cancer angiogenesis.

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Championing the life sciences manufacturing capability in the Midlands

The Midlands is the UK's manufacturing heartland, combining life sciences excellence and MedTech expertise. Our region contributes over £200 billion a year to the UK economy. We have an advanced manufacturing and engineering base that employs 614,000 people and accounts for one fifth of the UK's manufacturing employment, while the life sciences sector has over 1,200 businesses supporting over 33,000 high skilled jobs. Of the 5.2 million people working in the Midlands Engine, 41.6% are in knowledge-intensive sectors.

This makes the Midlands the ideal home for the UK's Life Sciences Manufacturing Hub. Drawing together our specialisms, we aim to create a focal point for a resilient, innovative supply chain; an initiative which supports the Government's levelling up agenda, improves domestic supply chain resilience, creates new jobs and boosts our region's post-pandemic economic recovery.

Midlands Engine Health has taken a leadership role in **manufacturing supply chains for personal protective equipment**, driving forward regional activity via two key activities: the Midlands Engine PPE event series and the Midlands PPE Collective.

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Midlands Engine Health Board member Professor Mike Hannay has written a number of awareness raising articles and submitted written evidence to the COVID-19 House of Lord Select Committee on **the challenges surrounding Essential Generic Medicines supply and how the Midlands can help to address them**.

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Midlands Engine Health Board member Dr Nik Kotecha OBE (Chairman of Morningside Pharmaceuticals Ltd) has written widely on **the need for resilient and aligned supply chains** that allow companies to remain strong despite economic and political headwinds.

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Leading the world in regulatory science

The UK regulatory framework and the expertise that supports its development have for many years been at the forefront of forming international regulatory and standards policy. As we move into a new global, post-coronavirus market, it is vital that the UK maintains its position as a global thought-leader, embracing opportunities for regulatory flexibility while robustly understanding risks and challenges. Through Midlands Engine Health, our regional partners aim to work with the UK Government to create a world-leading cluster of excellence for regulatory science.

By linking to the joint academic-NHS Centre for Regulatory Science and Innovation in Birmingham, and leveraging significant ongoing work with leading

organisations in this field, as well as patient groups and the new Regulatory Horizons Council, we will cement the status of the Midlands as the leading UK region for Regulatory Science - supporting innovative businesses and accelerating benefits for patients.

The Birmingham Health Partners Centre for Regulatory Science and Innovation supports the development and delivery of novel therapeutics and medical devices in the UK, through advanced regulatory standards and tools.

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Midlands Engine Health is a partnership between industry, the NHS, academia and the public sector; all working together to powerfully promote our region's extensive capabilities in health and life sciences. Our board aims to represent all of the Midlands health and life science sector.



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The Midlands Engine is a coalition of Councils, Combined Authorities, Local Enterprise Partnerships (LEP), Universities and businesses across the region, actively working with Government to build a collective identity, to enable us to present the Midlands as a competitive and compelling offer that is attractive at home and overseas. Copyright © 2020 The Midlands Engine, All rights reserved.

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