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# **Executive summary**

A number of factors are driving demand for medtech – most notably our increasingly older global population, as well as an increasing prevalence of chronic conditions.

In parallel, advances in technology can now facilitate continued innovation and improvement in design and manufacture of devices. However, public expenditure on healthcare is generally unable to increase at a pace to match the availability of advanced medtech.

A continuing driver for medtech is in self-care and remote care by patients, particularly those with chronic conditions. The restrictions brought about by the pandemic have expedited development of remote and self-monitoring in healthcare, and this in turn will continue to drive development of devices that can facilitate this.

Medtech manufacturing in the UK (in common with many other sectors) is beset by the real risk of very negative market conditions if favourable trading conditions with its largest export market – the EU – cannot be agreed. Increased regulation, lack of clarity on regulation, increased tariffs and a potential decline in available skilled workforce could all be potential impacts of Brexit.

The impact of the Covid-19 pandemic will also take its toll as with sector is at risk from postponement of non-urgent treatment due to hospital overcrowding, as well as the increased pressure on healthcare budgets, all potentially leading to a fall in demand for medtech. At the time of writing of this report the true impact of both Brexit and Covid-19 is yet to be fully understood.

The NHS is the largest buyer of medtech in the UK. Selling to the NHS has been challenging in the past, with funding levels for cost saving medtech unable to support its adoption by the system. A number of initiatives have been established in recent years to address this issue and allow medtech to be fast tracked for purchase and use by the NHS. Continuing change in the structure of the NHS, as well as increased supports through these initiatives, national networks and innovation hubs will serve as drivers for the sector going forward.

The Midlands region is currently the strongest in terms of the number of medtech manufacturing businesses, with 778 located there. It's followed by the South East and London with 678 and 516 respectively.

This report examines the market from a variety of perspectives: discussing global trends in human health and technology which are impacting the industry, as well as the local UK market, in terms of manufacturing, supply, regulation and local characteristics.

# 1. Overview of the medtech industry

# Medtech: a growing global industry

Demand for medtech in the healthcare sector has been rising for a number of reasons:

- The population is growing older leading to increased demand for medtech for this group
- There's a growing incidence of chronic conditions in the population, increasing their associated medtech
  needs.
- High healthcare expenditures means the budgets exist for medtech solutions. The OECD average is close to 8% of GDP
- There is an ever increasing need for medtech that will improve patients' health as well as reduce costs of care.
- We are currently seeing high levels of product innovation, driven in part by continuing advances in development of IT and communications technologies.
- Greater awareness of the cause of disease such as cancer could lead to new innovations in medtech to prevent
  or treat them. So, general advances in medical science could bring about new medtech.

Cost effectiveness is essential, and medtech should ideally reduce costs as well as provide better healthcare results.

Medtech can also deliver preventative personalised medicine, and can hand over elements of care and healthcare monitoring to the patient rather than the health professional – all of this facilitated by advances in technology and communications.

#### **Activity categories in medtech** GMD, which allocates medical devices nomenclature, has divided the entire medical device product market into highestlevel groups based on device application, technology, or other common characteristics. To date it has allocated 16 of a possible 20 categories: 01 Active implantable devices 02 Anaesthetic and respiratory devices 03 Dental devices 04 Electro mechanical medical devices 05 Hospital hardware 06 In vitro diagnostic devices 07 Non-active implantable devices 08 Ophthalmic and optical devices 09 Reusable devices 10 Single use devices 11 Assistive products for persons with disability 12 Diagnostic and therapeutic radiation devices 13 Complementary therapy devices 14 Biological-derived devices 15 Healthcare facility products and adaptations 16 Laboratory equipment

## The population is aging and older people need more medtech

The UK population, currently 66.4 million, is projected to pass 70 million by mid 2031, reaching 72.4 million by 2043.

There will be an increasing number of older people; the proportion of the population aged 85 years and over is projected to almost double over the next 25 years. In mid 2018, there were 1.6 million people aged 85 years and over: by mid 2043, this is projected to rise to 3 million.

This trend is reflected globally: according to the United Nations, the world's population is ageing. Virtually every country in the world is experiencing growth in the number and proportion of older persons in their population.

One of the contributing factors to the aging population is the fact that life expectancy is set to increase. However, for many, these longer years will be beset by chronic illness.

According to data from World Population Prospects (2019):

- In 2019 one in 11 people in the world is aged 65+: this is set to rise to **one in six** by 2050.
  - In Europe and Northern America this could be one in four.
- In 2018, for the first time in history, persons aged 65+ outnumbered children under five years of age (globally).
- Globally, the number of persons aged 80+ is projected to triple: from 143 million in 2019 to 426 million in 2050.

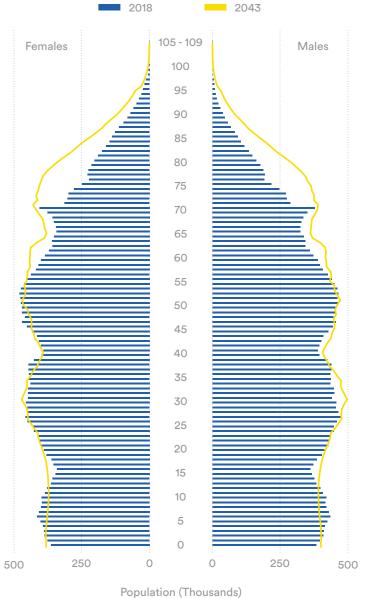
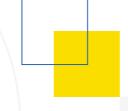


Image Source: ONS



# World Health Organization's definition of medtech:

An article, instrument, apparatus or machine that is used in the prevention, diagnosis or treatment of illness or disease, or for detecting, measuring, restoring, correcting or modifying the structure or function of the body for some health purpose. Typically, the purpose of a medical device is not achieved by pharmacological, immunological or metabolic means.

# Chronic conditions are becoming more commonplace and this is driving demand for medtech

A chronic condition is a health problem that requires ongoing management over a period of years or decades and that cannot currently be cured, but can be controlled with the use of medication and/or other therapies.

Six in ten adults in the United States has a chronic disease according to the Centres for Disease Control (CDC). This equates to 198 million people. Four in ten US adults have two or more chronic diseases.

In the UK, a study of 303,589 individuals aged 35 years and over found that 54% of people above 65 in 2015 already had two or more chronic illnesses<sup>1</sup>.

It predicted that by 2035, 2.5 million, or 17%, of people over 65 would have four or more chronic illnesses, while 67% of this group would be living with two or more.

#### From NHS England:

- About 26 million people in England have at least one chronic condition.
- 10 million have two or more chronic conditions.
- 15% of young adults aged 11-15 have a chronic condition.

#### Common chronic conditions in the UK:

- Diabetes
- Cardiovascular (e.g. Hypertension, Angina)
- Chronic Respiratory (e.g. Asthma, Chronic Obstructive Pulmonary Disease (COPD))
- Chronic Neurological (e.g. Multiple Sclerosis)
- Chronic Pain (e.g. Arthritis)

#### World diabetes prevalence

It is estimated that (globally) 415 million people are living with diabetes, which is estimated to be 1 in 11 of the world's adult population. The figure is expected to rise to 642 million worldwide by 2040. 46% of people with diabetes are undiagnosed.

#### About diabetes in the UK

The number of people diagnosed with diabetes in the UK is estimated to be 3.5 million.

It is predicted that over half a million people in the UK have diabetes that is yet to be diagnosed. This means that, including the number of undiagnosed people, there is estimated to be over 4 million people living with diabetes in the UK at present. This represents 6% of the UK population or one in every 16 people.

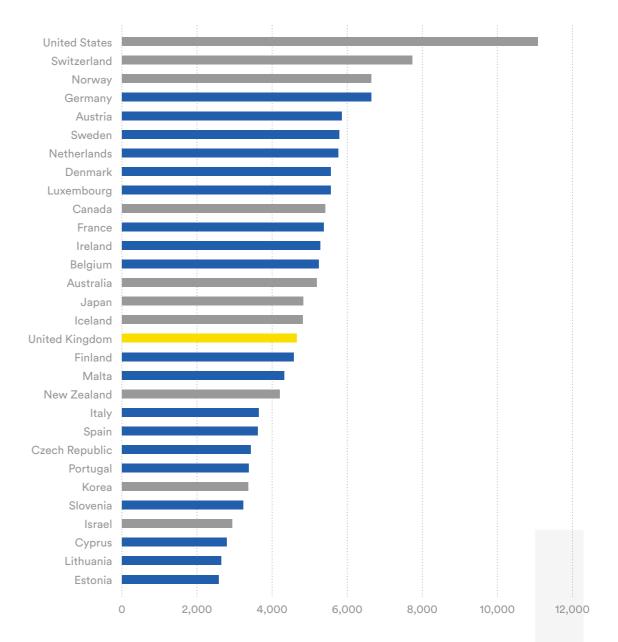
# Healthcare expenditure is a key driver for medtech

Markets with high healthcare spend are where medtech markets have the potential to grow.

The chart below shows healthcare expenditure per capita in OECD countries. EU markets are indicated in blue, other global markets in grey, and the UK in yellow.

19 of the top 30 global healthcare spending nations are within the EU, showing what an important region this is for the UK's medtech industry.

The OECD Top 30: Healtchare Spend per capita US\$



<sup>1</sup> www.academic.oup.com/ageing/article/47/3/374/4815738

#### The innovative nature of medtech

Developments in medtech have been facilitated by general advances in, and accessibility of, technology, allowing new ways of diagnosis, investigation and communication.

Innovation is flourishing in this industry, and this is essential given the demands of the healthcare sector: new devices and tools must keep pace with clinical outcome demands, cost restrictions, and the pace of developments in technology.

According to the European Patent Office the medtech industry files the most patents each year: 13,795 in 2018 - a 5% increase over 2017 and 7.9% of the total number of patent applications filed. This is significantly more than patents filed for pharma or biotechnology.

Patient expectations of technology in healthcare are rising in line with excellence in technology use overall. This will help both to facilitate and drive adoption of and development of medtech.

Better monitoring of health by the individual is a desirable scenario as this in itself could bring about prevention of illness / disease, easing pressure on healthcare systems. Medtech is ideally placed to facilitate self-monitoring in many instances. The Covid-19 pandemic has brought about a large increase in levels of remote healthcare monitoring and self-management globally.

# Challenges and opportunities in medtech

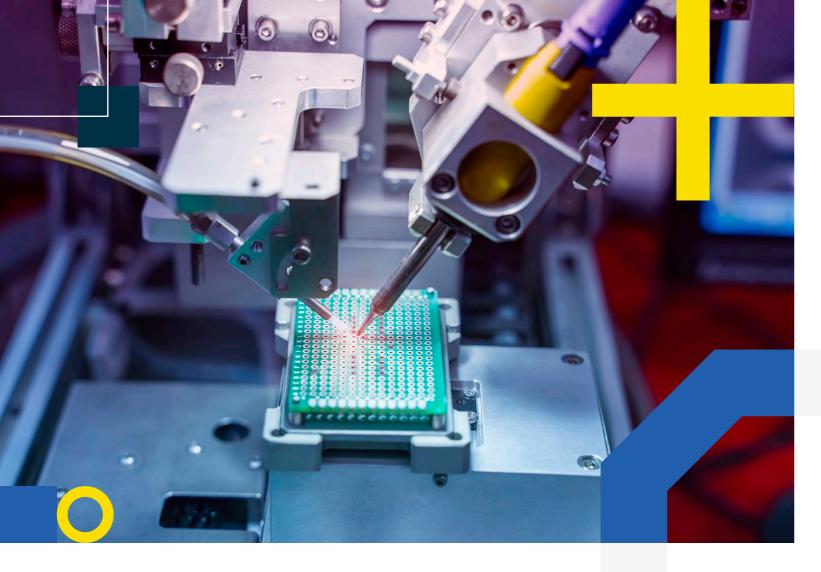
The following are some of the difficulties being experienced by the UK medtech manufacturing industry:

- Decreased spend on healthcare services, or alterations in form of spending, particularly during and post Covid-19.
- Not enough STEM graduates
- Increased regulation
- Uncertainty (political and healthcare policy) in the US medtech market
- Lack of clarity of market conditions, both import and export, in light of Brexit.

Despite these difficulties opportunities do present themselves for a thriving industry:

- Developing countries with their increased disposable income levels will lead to more demand for medical devices
- Further technology developments will continue to lay the foundations for innovation in medtech.
- Continued prevalence of chronic conditions, combined with the aging population, will provide good conditions for demand for medtech by patients increasingly using self-monitoring and self-care.





# 2. Medtech manufacturing in the UK

# Focus on the UK medtech manufacturing sector

The sector sits within the life sciences industry and is characterised in particular by the influence of medical device regulations and by the health economic considerations that impact uptake in key customer groups, most notably the NHS, which accounts for around 85% of the country's healthcare provision.

Demand is driven by demand for services alongside levels of healthcare expenditure. Where spending ability reduces, so too does market size for this sector.

The demographic trend of the aging UK population will continue to drive demand in medtech manufacturing. Another key driver is likely to be continued innovation in the sector - technological advances and short product life cycles will drive ongoing investment in R&D as well as overall industry revenue and levels of exports.

The NHS has a globally unique advantage in its potential access to millions of peoples' personal healthcare data, and so is well positioned to grow in areas like AI and genomics once the hurdles of access to such sensitive propriety data can be overcome.

Al also has the potential to significantly reduce the cost of clinical trials, while simultaneously increasing their efficiency. For example, patient data could be mined to recruit suitable trial candidates – an area which is traditionally very expensive. Digital technologies in general could improve efficacies in areas like patient engagement, data quality and sharing, planning and execution, and compliance and consent.

Figures from the Office for Life Sciences (OLS) give a sector breakdown by turnover with the largest being in vitro diagnostics followed by single use technology, digital health, orthopaedic devices, and assistive technology. These top five segments account for 42% (£8.5 billion) of medtech turnover.

#### The number of businesses in UK medtech

The Office for Life Sciences (OLS) estimates that there are 2,850 medtech manufacturing businesses in the UK.

Research for production of this report supplemented this figure with data from additional sources, such as BVD Orbis, Marketline, and locally held data from industry associations or similar local projects. This provided an additional 1,044 medtech manufacturers.



This figure was then reduced to reflect multiple sites in the UK for single businesses.

The resulting figure for the number of medtech manufacturers in the UK is 3,972. In 2019, the value of exports of medtech by these manufacturers was €5.9 billion (Medtech EU).

In comparison, there are currently around 450 medtech manufacturers in Ireland (with nine out of 10 of the world's leading medical technology manufacturers having a base there). Irish exports for these 450 companies stood at €12.6 billion in 2019, reflecting the quite different profile of the sector in Ireland.

	Medtech manufacturers	Medtech Exports (2018)
UK	3,972	€5.8
Ireland	450	€11.6

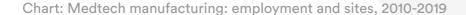
The ABHI (Association of British HealthTech Industries) estimates that the UK industry has experienced growth of around 5% in recent years.

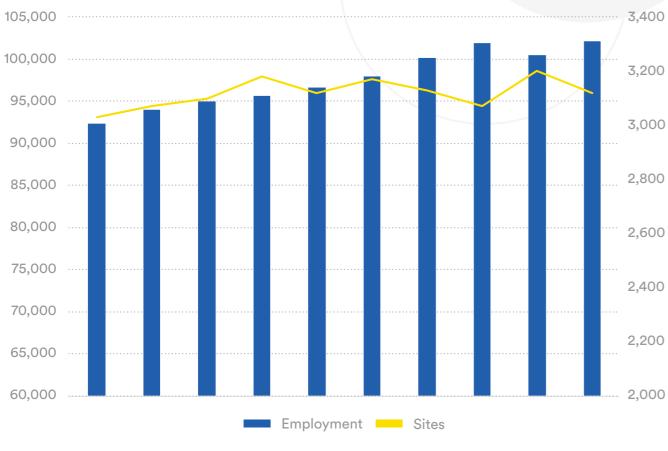
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# **Employment in UK medtech**

The Office for Life Sciences (OLS) has carried out detailed research on employment and turnover in its list of just under three thousand UK medtech manufacturers.

Employment in the OLS group of 2,850 companies was estimated at 102,800 in 2019.





	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Employment	92,300	94,000	95,000	95,600	96,600	98,000	100,200	101,900	100,500	102,100
Sites	3,030	3,070	3,100	3,180	3,120	3,170	3,130	3,070	3,200	3,120

Source: OLS

This data shows just moderate growth over the past nine years: and it remains to be seen how the sector will be impacted by Covid-19 and by Brexit over the coming years.

According to the OLS, the five largest medtech segments account for 47% (48,600) of the sector's employment.

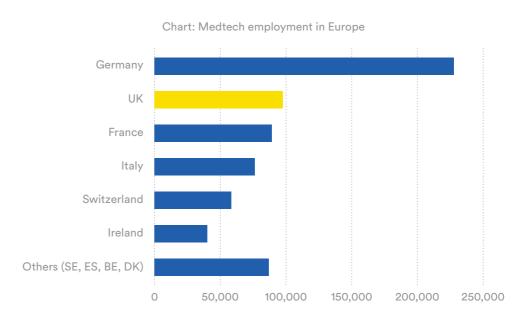
# **Employment in European medtech**

MedTech Europe is the new name for the organisation created by the merger of European Confederation of Medical Devices Associations (Eucomed) and the European Medical Device Manufacturers Association (EMDA).

According to MedTech Europe there are 730,000 people working in 32,000 medtech companies in Europe.

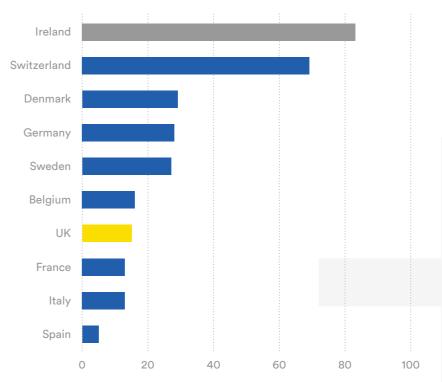
The highest number is in Germany, followed by Italy, the UK, France and Switzerland.

95% of these companies are SMEs.



When it comes to employment per capita however, Ireland leads the way in Europe with 83 medtech employees per 100,000 inhabitants (versus 15 in the UK). This shows the relative importance of medtech manufacturing in both markets.

Chart: Employment in medtech per 100,000 inhabitants



## Suppliers to the sector

Medtech businesses are supported by large specialist UK based service & supply businesses.

The medtech service & supply chain sector employs 29,000 people in 1,210 businesses, with a turnover of £5.2 billion, according to data published by OLS in 2020.

The largest segments in this sector are reagent & equipment suppliers, contract manufacturing and research, and specialist consultants.

#### Rapid change on the supply side

The Life Sciences Recovery Roadmap, a joint report to the Life Sciences COVID-19 Response group published in June 2020, provides a number of key recommendations as to how the sector can work successfully with the NHS in the future:

- Transforming our partnership with the NHS to support delivery of the Long Term Plan.
- Developing a comprehensive strategy to improve UK manufacturing capability and supply chain resilience in medicines, medical devices and diagnostics.
- Powering up the benefits of public and charity spending on medical research and delivering bold policies to incentivise research investment.
- Transforming the UK's clinical research processes.
- Taking an innovative approach to regulation.
- Accelerating deployment of new and existing treatments and technologies where there are system and patient benefits.

Covid-19 has already begun to accelerate change in these areas, and companies should be poised to take advantage of this and play their part in expediting change in areas such as supply chain resilience. It's clear that concerns still exist among stakeholders in this area, and new thinking availability on the manufacturing facilities as well as improvements in logistics will be welcome. The report calls for improved demand forecasts and transparency along the supply chain, support for supply diversification and international inventory management.

Supply of adequate and correct PPE is an area which has already been given specific attention with the announcement of a new PPE strategy by government. Two key elements of this strategy are:

Building resilience and overcoming supply challenges: in which the strategy recommends strengthening
relationships and arrangements with overseas suppliers. It says:
 As part of a combined cross-government effort, we have screened and approved global manufacturers and
have developed a pre-market supply chain engagement plan that, within the public procurement rules, enables
suppliers to better support DHSC's needs. We will use the data we gathered in this pre-market engagement
to inform tender specifications in order to create diverse and resilient frameworks to ensure long-term supply
security. For each category we have considered options that secure medium to long term capacity through

setting up Original Equipment Manufacturers (OEM) contracts, as well as purchasing on spot markets.

- Increased UK manufacturing capability: UK manufacturing is now in place in almost all product categories: on average, UK-based supply is anticipated to meet 70% of forecasted demand in December for all categories of PPE. This is significant growth in this sector and should be taken into account to understand levels of market opportunity. It says:
  - Government received over 24,000 offers of support from more than 15,000 suppliers, to assist with the crisis and provide PPE to frontline staff.

#### Research institutes, research labs and testing companies

Another key category in the supply of medtech is in research labs and testing and clinical trials facilities. Here we've listed some of the leading names in each category.

# 4

#### Some leading research institutes:

- Babraham Institute, University of Cambridge
- Earlham Institute, Norwich Research Park
- Francis Crick Institute
- Galen Research
- Research Complex at Harwell
- Medical Technology Research Centre, ARU

#### Some clinical trials and research labs:

- Visioncare Research
- Synexus Clinical Research
- Quotient Sciences Limited
- Parexel International
- Hammersmith Medicines Research
- Clinical Trials Lab Services Ltd
- Aptus Clinical
- Afortiori Development

#### Some medical device testing companies:

- SGS
- MET
- Medvance Ltd
- Helvic
- Eurofins

## How a changing regulatory environment impacts medtech

Today, with the rapid emergence of technology including innovations such as nano-materials, 3-D printing and of course digital apps, the medtech sector is a highly complex segment within the Life Sciences industry. Significant potential for hazards is inherent when using a device for medical purposes and thus medical devices must be proven to be safe and effective with reasonable assurance before regulating governments allow marketing of the device in their country. Regulation is a critical requirement for medtech with countries constantly driving improvements in their regulatory environments to reflect developments. Particularly, for start-ups and SMEs, the challenges of navigating and achieving compliance under different countries regulatory regimes can be challenging without the support of an R&D partner as well as a funding partner.

There are a number of regulatory requirements that must be met before a medical device can enter the UK or European markets. Until recently, devices had to conform to one of three EU Medical Device Directives (Medical Device (MDD), Active Implantable Medical Device (AIMDD) or In-vitro Diagnostic (IVDD)). However, in May 2017, new EU Regulations for medical devices and diagnostics were introduced:

- The Medical Device Regulation (MDR) (2017/745)
- In Vitro Diagnostic Medical Device Regulation (IVDR) (2017/746)

To have a medical or diagnostic device authorised for sale in any EU country, devices must bear the CE mark. The authorisation of medical devices and diagnostics is guaranteed by a Declaration of Conformity. This declaration is issued by the manufacturer itself, but must be verified by a Certificate of Conformity issued by a notified body. A notified body is a public or private organisation that has been accredited to validate the compliance of the device to the European Regulation.

A transition window is in place for manufacturers in EU member states to comply with the new regulations. The MDR was due to become fully applicable on 26 May 2020 after a three-year transition period. The IVDR is due to become fully applicable on 26 May 2022, a further 2 years in a five-year transition period. Industry had been petitioning for additional time to prepare for the new regulations, particularly in the supply of a sufficient number of Notified Bodies to carry out the inspections. These concerns, together with the impact of the Covid-19 crisis on the industry have resulted in a postponement by the EU. The amendment to the MDR was published in April 2020, amending the MDR Date of Application to 26 May 2021. The date of application of the IVDR remains to the original published date of the 26 May 2022.

On 1 September 2020, the UK government announced that, as the MDR and IVDR regulations take effect after the transition period, they will not be transposed into law and implemented in Great Britain. This means that from 1 January 2021, the Great Britain route to market and UKCA marking (replacing CE Mark) requirements will continue to be based on the requirements derived from current EU directives. UK government says that standards to maintain safety of medical devices will be enabled through the Medicines and Medical Devices Bill. The MHRA will continue to perform market surveillance of medical devices on the UK market and will be able to take decisions over the marketing and supply of devices in the UK.

A 'directive' is a legislative act that sets out a goal that all EU countries must achieve. However, it is up to the individual countries to devise their own laws on how to reach these goals.

A 'regulation' is a binding legislative act. It must be applied in its entirety across the EU.

Regulation will differ in Northern Ireland, in terms of CE/UKNI marking of devices, and registration with the MHRA.

It is the responsibility of the medtech manufacturer to track and monitor these and other changes to regulations and to ensure they are prepared and will comply: refer to <a href="https://www.gov.uk">www.gov.uk</a> for updates and more detail.

# How Irish medtech is well placed to respond to developments to the regulatory environment

Irish medtech companies have a good record in navigating the complexities of a changing regulatory landscape and in maintaining compliance. This is likely attributable to Irish companies' emergence alongside the large global multinationals, which have been boosting their presence in the country over the past 25 years.

As foreign direct investment increased over the years, Irish sub-supply companies began to feed into these global multinationals. Amongst the benefits to these companies has been and continues to be the development of significant capabilities and skills in meeting demanding customer and regulatory requirements – particularly those imposed by the FDA in the US and the European Commission on behalf of the EU28 Competent Authorities.

This level of excellence in regulatory compliance, alongside adoption and adherence to applicable industry standards, is a strength in this sector. In a post-Brexit market Irish companies can offer a quality of service to companies operating in the Eurozone's remaining 27 member countries in navigating the device/drug approvals process and in the supply of quality and compliant products and materials.

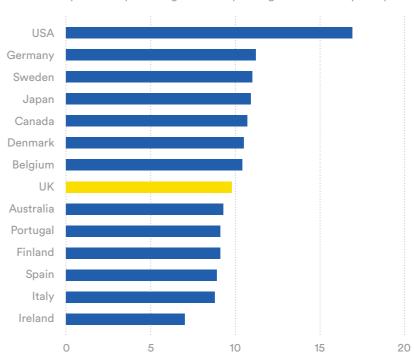


# 3. Selling medtech to the UK market

# **UK spending on healthcare**

In 2018 the UK spent 9.8% of GDP on health. When compared to similar countries this is slightly below the average of 10.3%.

Chart: a comparison of percentage of GDP spending on healthcare per capita



Source: The King's Fund

#### Reimbursement of healthcare services, including medtech, in the UK

There are three routes to market for suppliers to the healthcare market in the UK:

- To a healthcare provider the NHS or a private provider
- Direct to patients
- To a company which is already selling to patients or providers

#### The private healthcare sector

The private health sector is funded through health insurance, NHS referrals or self-pay patients. Its strengths lie in the provision of secondary and tertiary care, fields not traditionally offered by the NHS, or where public sector service is limited.

The acute hospital sector is dominated by a small number of hospital groups such as: Spire Healthcare (39 hospitals), BMI Healthcare (58 hospitals), Ramsey Healthcare (33 hospitals) and Nuffield Health (31 hospitals, 112 fitness and wellbeing centres and 39 medical centres).

The private healthcare service in the UK is relatively small, with the large majority of healthcare service delivered by the NHS.

## An introduction to the NHS budget and how it is spent

In 2018/2019 planned spending by the Department of Health & Social Care was £140.4 billion. The majority of this is day to day spend on salaries and pharmaceuticals. The remainder (around £7 billion) is allocated to capital spend and other services and products, including medtech.

This budget increases each year, but at a rate (1.4% on average in the last ten years) that is insufficient, based on a history of under-funding, according to commentators. An increase of 3.4% each year from 2019/20 to 2023/24 was announced in 2018. What impact Covid-19 pandemic has on the NHS budget and spending remains to be seen.

Around two thirds of spend on healthcare services is commissioned by CCGs (Clinical Groups) and medtech must be approved by CCGs in their own region in order to be reimbursed. Medical technology is more likely to be authorised by CCGs if it has NICE approval.

Much of the NHS purchasing on capital items (including medtech) is managed through the central procurement system, the NHS Supply Chain, and the aim is to have 80% of purchases through here by 2022.

Pricing of medical devices is not regulated in the UK. However, price is a key element of the purchasing decision, and value for money is in constant demand by the NHS.

# +

#### Clinical Priorities for the NHS: 2019 - 2029 (from the NHS Long Term Plan)

- 1. A strong start in life for children and young people
- Maternity and neonatal services
- Children and young people's mental health services
- Learning disability and autism
- Children and young people with cancer
- Redesigning other health services for children and young people
- 2. Better care for major health conditions
- Cardiovascular disease
- Stroke care
- Diabetes
- Respiratory disease
- Adult mental health services
- Short waits for planned care
- Research and innovation to drive future outcomes improvement
- Cancer

A range of indicators and deliverables, from the broad to the very specific, is associated with each priority area. The plan can be read in full at: <a href="https://www.longtermplan.nhs.uk">www.longtermplan.nhs.uk</a>

#### The current structure of the NHS

The NHS accounts for around 80% of all healthcare spending in the UK. It is free to use for people who have lived in the UK for at least 6 months and it's the fifth largest employer in the world with around 1.5 million employees in 2017.

The NHS receives funding from central government and is managed as four separate entities: NHS Wales, NHS Scotland, HSC Northern Ireland, and NHS England with the large majority of funding going to NHS England.

Patient care in NHS England is delivered mainly by the following groups:

- Clinical commissioning groups (CCGs)
   CCGs are responsible for planning most primary care, community care and hospital care services in their local area. There are around 200 CCGs in England.
- Acute hospital trusts
   All NHS hospitals are managed by acute, mental health or specialist trusts and as of October 2019 there were 223 trusts.
- Ambulance trusts
   There are ten of these in England.
- 4. Community trusts and mental health trusts
  There are around 90 of these in England.

In 2016 NHS England divided the country into 44 STPS – Sustainability and Transformation Partnerships. These were set up to move towards coordinated and group delivery of services in a particular area or region. These have now begun to evolve into ICSs (Integrated Care Systems).

## The proposed new ICS structure

NHS England's Long Term Plan states that by Aril 2021 each area of England will have an Integrated Care System (ICS) with typically just one CCG per ICS area.

Below is an image from NHS England of the typical structure of an ICS and its components, using South Yorkshire and Bassetlaw as an example.



Image source: NHS England

This ICS - South Yorkshire and Bassetlaw - comprises the following:

- 36 neighbourhoods with a population of 30-50 thousand.
- 5 places with populations of between 250-500 thousand.
- One ICS system with a population of 1.5 million. NHS England says that strategic planning and improvements can take place within this ICS.

Care will be focused on location, with each area-based ICS joining together primary, secondary and other healthcare providers to form multi-disciplinary teams. This is to encourage local teams to work together to improve healthcare in the local population. The ICS organisations will partner with local authorities and other organisations such as local charities and community groups for delivery of health and social care in the area.

The move away from Payment by Results model within the NHS towards a model which recognises the direct impact on patients and their long term health within their community reaffirms this move towards location based care systems. This will bring changes to how medtech is procured and consumed within the NHS and could even bring change to how devices are developed and intended for use.

## How to access NHS procurement channels in England

The main routes to market for companies interested in supplying the NHS are:

- selling direct to trusts or primary care organisations
- selling through the new NHS Supply Chain
- selling through collaborative purchasing arrangements
- national framework collaborations and contracts
- government tenders and contracts

#### Selling through the new NHS Supply Chain

40% of the NHS's c. £6 billion spending on everyday hospital consumables, common goods, high value healthcare consumables and capital equipment goes through the NHS Supply Chain. The aim is to increase this proportion to 80%.

A series of procurement category towers have been established under the NHS Supply Chain. They focus on:

- medical products
- capital expenditure
- non-medical spending

More information on these category towers, and on the timing of framework agreements with suppliers can be found at: www.supplychain.nhs.uk

#### Selling through collaborative purchasing arrangements

Some local NHS organisations may choose to work together in a regional purchasing arrangement which enables them to benefit from the economies of scale and avoids duplication of work, such as on product assessments.

Four procurement hubs have formed a collaborative procurement partnership and others have formed alliances, confederations and collaborative partnerships. Some examples are:

- NHS Commercial Solutions (www.commercialsolutions-sec.nhs.uk)
- NHS North of England Commercial Procurement Collaborative (www.noecpc.nhs.uk)
- East of England NHS Collaborative Procurement Hub (www.eoecph.nhs.uk)
- NHS London Procurement Partnership (www.lpp.nhs.uk)

#### Selling direct to trusts or primary care organisations

A company which has a specific product or service easily matched to an NHS organisation can sell to them directly, within purchasing rules. This process involves identifying the right contact (generally clinicians, the procurement team and the finance team) within the selected NHS organisation, which can be difficult.

#### National framework collaborations and contracts

These are collaborative purchasing contracts with groups of suppliers who have responded to tender notices and have had their credentials reviewed and approved. These suppliers then contractually agree to provide a certain product or service at a given price to any NHS trust that uses them.

The Crown Commercial Service (CCS) manages these framework agreements, not only for the health service for also for education and local government etc. in the UK.

#### **Government tenders and contracts**

The NHS complies with the EU Directive on public procurement. It advertises all large-scale contracts with a total value of over £118,133 for supplies and services or £4,551,413 for works in the Supplement to the Official Journals of the European Union.

# NICE approval (National Institute of Health and Care Excellence)

NICE's role is to improve outcomes for patients by producing evidence-based guidance, standards and information for all stakeholders in public health.

NICE's guidance includes technology appraisals. These assess the clinical and cost effectiveness of health technologies, including medical devices.

When NICE recommends a treatment 'as an option', the NHS must make sure it is available within three months. This means that, if a patient has a disease or condition and the doctor responsible for their care thinks that the technology is the right treatment, it should be available for use, in line with NICE's recommendations.

The NHS is legally obliged to fund and resource medicines and treatments recommended by NICE's technology appraisals. Companies pay to have their product appraised by NICE.

Companies can find out more from NICE's Office for Market Access: www.nice.org.uk/about/what-we-do/life-sciences/office-for-market-access

The Medtech Early Technical Assessment (META) developed by NICE helps product developers understand what evidence is needed to make a convincing case to payers and commissioners for their technology:

The META tool is an online service that helps medical technology developers optimise their development plans for their medical technology...It can help to help identify potential gaps in your product development plans and the potential next steps to bring a product to market.

By using the META Tool you can develop an understanding of the level of evidence needed to show your product's value to the NHS. It can be used at any stage of development of your product.

For more information see: www.meta.nice.org.uk

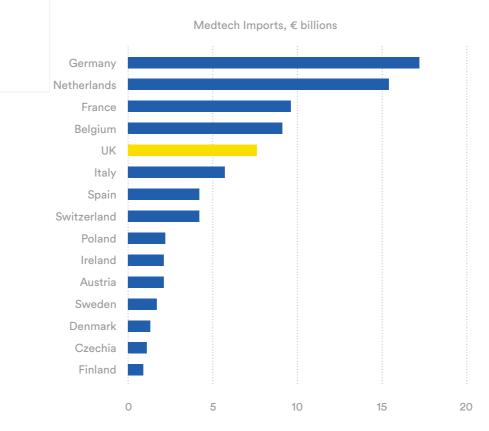
In 2019 NICE announced that it would carry out a review of its Health Technology Appraisal process, in light of new and more fast moving advances in technology which means that its old evaluation methods may no longer be appropriate. Chief Executive Sir Andrew Dillon said: "NICE is undertaking this review at a time of unprecedented change in the healthcare system, where developments such as personalised medicine, digitalisation of health, and use of cell and gene therapy, mean products are becoming ever more challenging to evaluate."

This review is due for completion at the end of 2020.

#### The level of demand in the UK for medtech

MedTech Europe provides figures on the value of imports and exports to each EU market. Figures are for 2018 or most recent. These figures place the UK at mid table for exports of medtech products.

However, the UK is the 5th largest importer of products, showing that it is a sizeable market in terms of demand.



Source: MedTech Europe

#### NHS efforts to match innovation with demand

While UK research and development is promoted and invested in, take-up of new products has not always been adopted at the same rate. Demand for innovative new products has not been as healthy as the innovative processes driving them, due to spending constraints and the way the NHS has traditionally procured and adopted products into day to day use.

The NHS has recognised this and is working to put procedures and initiatives in place to allow for quicker adoption of technologies that are 'proven and affordable'.

#### NHS Accelerated Access Collaborative (AAC)

The AAC was set up to facilitate the faster adoption of products by the NHS and to foster a climate of innovation within the organisation. According to the Department of Health & Social Care, the AAC will: "act as the 'front door' for innovators looking to get their products funded by the NHS and will provide support to overcome barriers that can prevent the best medical innovations from reaching patients".

The AAC supports both early stage and late stage products.

In 2019 the AAC agreed three early stage product areas for its focused support:

- Advanced Therapy Medicinal Products, or ATMPs.
- Histology Independent Treatments for Cancer.
- Artificial Intelligence.

Late stage products are supported through running or partnering on three programmes:

#### 1. Rapid Uptake Products

The AAC provides tailored support for selected innovative products which have received approval by NICE. Updates to the list of Rapid Uptake Products can be viewed here: <a href="www.england.nhs.uk/aac/what-we-do/what-innovations-do-we-support/rapid-uptake-products">www.england.nhs.uk/aac/what-we-do/what-innovations-do-we-support/rapid-uptake-products</a>

#### 2. Innovation and Technology Payment (ITP)

Delivered in partnership with the AHSNs, this programme focuses on new types of innovative technologies each year, and calls for specific types of products which will focus on different treatment areas. Once the technology has been identified and verified by the NHS, it can be purchased directly by NHS Trusts with the supplier being reimbursed through the programme by the NHS. The programme has a focus on low cost innovations which can prove their effectiveness. For more information see: <a href="www.ahsnnetwork.com/supporting-innovation/innovation-technology-payment-itp">www.ahsnnetwork.com/supporting-innovation/innovation-technology-payment-itp</a>

#### 3. The AHSN Network

The AHSN Network is tasked with co-ordinating and organising a number of initiatives in this area: it works with partners to deliver on the ideas outlined in the Long Term Plan published in early 2019. AHSN contributes to the ITP initiative, and the AAC and Rapid Uptake Products. In addition to these it contributes to the following initiatives:

#### Innovation Exchange

The Innovation Exchange is an AHSN-coordinated forum for supporting innovations. More information can be found here: www.ahsninnovationexchange.co.uk

#### Digital and Artificial Intelligence (AI)

AHSNs work specifically in the area of AI to understand how these innovations can deliver proven and affordable value to the NHS, and to help facilitate the development of specific products in this area.

#### NHS Innovation Accelerator (NIA)

This initiative accelerates uptake of high-impact innovations and is delivered in partnership with all 15 AHSNs across England, hosted at UCLPartners.

#### SBRI Healthcare Prgramme

The SBRI Healthcare programme supports early stage development of products towards implementation, run in two phases. Phase 1 contracts for feasibility testing are valued at up to £100,000 and last for six months. Phase 2 contracts for prototype development are worth up to £1 million over one year. www.sbrihealthcare.co.uk

#### **Medtech Funding Mandate**

In the NHS Long Term Plan, the NHS declared that it would accelerate the uptake of proven, affordable innovations through a new medtech funding mandate, applying to all medtech that had been assessed by NICE, and that it intended to increase the number of NICE evaluations to support this. Currently this initiative has been paused.



## **NHS procurement outside England**

#### **NHS procurement in Scotland**

The NHS in Scotland spends around £2.5 billion each year on a wide range of goods and services.

Suppliers can register on the Supplier Finder at Public Contracts Scotland for lower value contracts and for the Quick Quotes system: <a href="https://www.publiccontractsscotland.gov.uk">www.publiccontractsscotland.gov.uk</a>

More information on procurement in NHS Scotland can be found at: www.nhsscotlandprocurement.scot.nhs.uk

NHS Scotland has a Health Innovation Assessment Portal (HIAP) where individuals or companies can submit ideas for review by a panel of experts. This can support the trialling of new products and assist suppliers with gathering useful data on the use of their products. For more information see: www.hiap-scotland.org

#### NHS procurement in Wales

NHS Wales includes around 100 hospitals and about 440 GP practices in seven health boards and three trusts providing pan-Wales services.

NHS Wales Shared Services Partnership Procurement is the procurement service provider to NHS Wales. It works with the UK's national bodies, the NHS Supply Chain and the Crown Commercial Service.

#### NHS procurement in Northern Ireland

NHS Northern Ireland includes nearly 40 hospitals and over 340 GP practices. Procurement is carried out through its five commissioning groups.

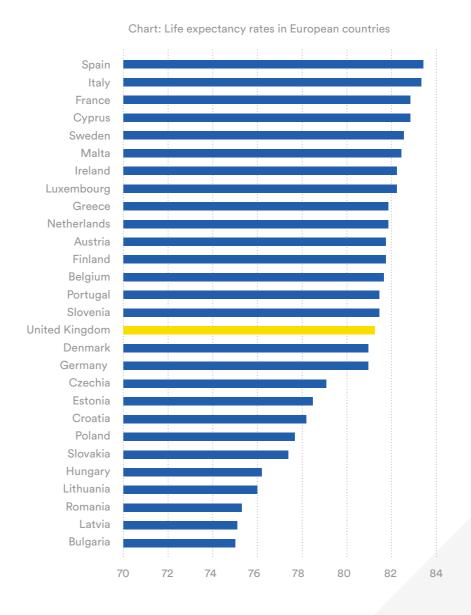
The Procurement and Logistics Service, commonly known as PaLS, is the sole provider of professional supplies services to all public health and social care organisations in Northern Ireland.

PaLS works on the procurement of over half a billion pounds' worth of goods and services spend per annum and this is moving towards £1.2 billion billion in the coming years. For more information see: <a href="www.hscbusiness.hscni.">www.hscbusiness.hscni.</a> net/services/2176.htm

## The impact of Covid-19 on the UK market for medtech

#### Problems with UK healthcare provision which have been highlighted by the pandemic

- People most impacted by the Covid-19 pandemic are generally those who were in poorer health, as well as
  those from ethnic minority communities or those living in deprived areas. This brings into sharp relief the
  relatively poor life expectancy rates in the UK, and the inequalities in healthcare provision.
- Insufficient funding in recent years has been highlighted by the pandemic as the sector struggles to cope. An
  already strained workforce has been pushed to extreme levels of pressure, and at the time of writing there is
  no indication that this is likely to improve in the short term.
- One short term impact of Covid-19 on the sector is the postponement of elective surgery and other non-urgent treatments, pushing improvements in the healthcare of the UK population farther down the line, leading to inevitably greater complications later on.



#### **Demand for medtech during Covid-19**

It's likely that medtech related to remote health management will experience expedited growth as a result of the pandemic. Short term changes in healthcare supply will cause a drop in demand for some products (postponed non-urgent treatments) and an increase in others (PPE, ventilators, and related).

In March 2020, Moody's Investor Services published a report expecting the overall growth of the medical device market to drop to 2-4%, compared previously to 5-6% for the next 12-18 month period: "We expect a pullback in consumption in the first half of the year followed by a moderate recovery, assuming global efforts to arrest the spread of coronavirus are successful."

# Technology changes to healthcare delivery, particularly in primary care, which have been expedited by Covid-19

In July 2020, the UK's Royal College of General Practitioners published a report entitled 'General Practice in the post Covid world'. It outlined three main areas where the Covid experience can help general practice transform to meet future health challenges:

- New ways of working enabled by digital technology.
- Reducing workload by eliminating unnecessary contractual and regulatory compliance activities.
- Developing the public/community health function of general practice.

The report says: Before the crisis, a minority of practices used doctor-led remote triage as the access point for services; within weeks nearly all were doing so. Over 70% of GP consultations in England were carried out face-to-face prior to the Covid outbreak; within weeks the figure was 23%. Digital technology has also enabled new ways of working across organisational boundaries in the health and care sector and has the potential to contribute to remote diagnosis and monitoring of disease.

# \_

#### Some technology advances in healthcare expedited by Covid-19:

- The UK government launched a 'coronavirus chatbot' on WhatsApp: this provides answers to users' questions about the virus and limits misinformation.
- The World Health Organisation has launched a similar messaging service in different regions, using a variety of platforms.
- In the US and Australia governments have agreed to reimburse doctor consultations which take place using video.

#### Operational changes as a result of Covid

The pandemic emergency resulted in some rapid changes to the day to day activities of the NHS, for example:

- All NHS trusts were moved off the national tariff payment policy and put on block contract payments 'on account' – essentially guaranteeing a minimum level of income for providers.
- Contract fines were suspended for all providers.
- CCG mergers that were not already advanced by April 2020 were paused.
- The Powis review of waiting time standards was be delayed.
- The operational planning process for 2020/21 was suspended.
- £35 billion of extra spending was allocated to help health services respond to Covid-19, including £15 billion for personal protective equipment (PPE) for staff alone.

Finally, operational changes increased the NHS' capacity to deal with the initial surge in cases from Covid-19, including the rapid discharge of hospital patients who were medically fit to leave, postponing non-urgent operations and block-buying capacity in independent hospitals.

#### Impact on waiting times

A June 2020 survey of its members by the UK's Royal College of Physicians revealed that the majority expect to be working at less than pre-Covid levels for 12 months. The RCP said: "Specialty leaders in respiratory medicine and gastroenterology expect it to take 2 years to recover from the backlog created by COVID-19, while those in cardiology are expecting it to take 18–21 months."

25,000
20,000
10,000
2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

Source: The King's Fund

#### Recommendations for change from the King's Fund

The healthcare think tank, the King's Fund, makes the following recommendations for the reform of healthcare in the UK, following the lessons from and impact of the pandemic:

- Reduce inequalities in health across socio-economic divides.
- Draw a line in the sand in the poor delivery of social care following the deep impact on this area during Covid, and end neglect in this area.
- Acknowledge and prioritise the importance and appropriate treatment of healthcare workers.
- Develop the potential input of the community to healthcare provision.
- · Acknowledge and promote the leading part that digital technology can play in service delivery and treatment.



#### The AHSNs:

- provide advice and support to companies with innovative products and services
- are a critical delivery partner for the Accelerated Access Pathway helping to identify local NHS needs and enabling evaluations
- work collaboratively looking at what works best locally and then scaling nationally
- signpost to centres of excellence such as the DHSC accredited Academic Health Science Centres, those funded by the National Institute of Health Research (NIHR) and others
- work closely with national initiatives supporting innovation development, delivery and adoption that provide funding open to companies such as the Innovation Accelerator and SBRI Healthcare

# 4. Clusters & Hubs

There are a number of support and liaison organisations throughout the UK. Some provide support for early stage medtech manufacturers – others seek to combine expertise and access to research facilities and other supports.

#### **National Networks**

#### Academic Health Science Networks (AHSN)

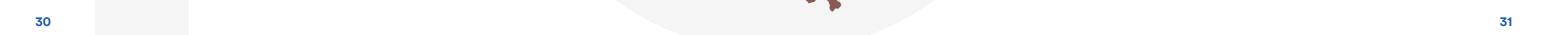
AHSN – set up to spread innovation at pace and scale.

The 15 AHSNs, formed in England in May 2013, each typically serve a population of three to five million people They are licenced to bring together academia, research organisations, local health industries and the NHS. They take the lead in their local areas to support innovation to meet the health priorities of their population.

The AHSN role is to encourage speedier and more efficient adoption of innovation. Although they do not purchase supplies or deliver services they are regarded as important enablers and influencers.

# AHSNs are located in every region in England:

- North East and North Cumbria www.ahsn-nenc.org.uk
- Innovation Agency: Academic Health Science Network for the North West Coast www.innovationagencynwc.nhs.uk
- Health Innovation Manchester (www.healthinnovationmanchester.com
- Yorkshire & Humber
- www.yhahsn.org.uk West Midlands
- www.wmahsn.org
- East Midlands
- East iviluianus
- www.emahsn.org.uk
- West of England
- www.weahsn.net
- Oxford
- www.oxfordahsn.org
- Eastern
- www.easternahsn.org
- Wessex
- www.wessexahsn.org.uk
- Imperial College Health Partners (London) www.imperialcollegehealthpartners.com
- Health Innovation Network (South London)
- www.healthinnovationnetwork.com
- UCL Partners (London)
- www.uclpartners.com
- South West
- www.swahsn.com
- Kent, Surrey and Sussex
- www.kssahsn.net



#### The Catapult Network

This is a network of not-for-profit, independent technology and innovation centres. They connect businesses with the UK's research and academic communities.

Any UK business can use Catapult centres to access technical facilities and expertise, availing of support to help companies take innovative ideas from concept to reality.

There are nine different 'catapults' each focusing on different sectors:

- Cell and Gene Therapy Catapult
- Compound Semiconductor Applications Catapult
- Connected Places Catapult
- Digital Catapult
- Energy Systems Catapult
- High Value Manufacturing Catapult
- Medicines Discovery Catapult
- Offshore Renewable Energy Catapult
- Satellite Applications Catapult

Each of the centres has a business development team that can be contacted by interested parties. Contact details for each centre can be found here: www.catapult.org.uk

The High Value Manufacturing Catapult has seven centres located around the UK. Details can be found here: www.hvm.catapult.org.uk

About the Catapult Network:

- 2,260 academic collaborations
- 12,379 industry collaborations
- Over £1 billion of research & demonstration facilities under management
- 491 international projects
- 4,389 SMEs supported
- 4,100 employees in 2019

#### High Potential Opportunities (HPO) Programme

In October 2020 the UK government announced a second round of bids for the HPO programme, which targets increased investment to the regions from foreign investors, showcasing the opportunities in 177 cities around the world.

The current opportunities are spread around the UK:

- Agri-Tech (Vertical Farming), York, North Yorkshire & Leeds
- Animal Health, M3 corridor
- Applications of Data & Al Analytics, Leeds
- Biomanufacturing, Tees Valley
- Cell & Gene Therapy, Hertfordshire
- Data Driven Healthcare & Technologies, Birmingham & Solihull
- Rehabilitation, Leicester & Leicestershire
- Healthy Ageing, North East
- Medtech Health, Wales (Newport, Cardiff & Swansea corridor)
- Molecular Diagnostics & Early Detection for Healthy Ageing, Greater Manchester, Cheshire & Warrington
- Precision Medicine, Glasgow, Scotland
- CAV Modelling & Simulation, West & East Midlands, South East Midlands, and Oxfordshire
- Compound Semiconductors, Wales
- Automation and Robotics in Food Processing, Lincolnshire
- Marine Autonomy, Heart of the South West, Dorset, Cornwall & IoS
- Smart Aviation, Heart of the South West
- Plant Based Products, North East
- Heat Networks, North East & Tees Valley
- Civil Nuclear Fusion & Supply Chain, Oxfordshire

This programme is coordinated by Department for International Trade (DIT) and is designed to drive investment to the regions by showcasing local strengths.

#### **Local Networks and Innovation Hubs**



#### LONDON Medtech London

MedTech London is a collaboration between the Greater London Authority (GLA), the South East Health Technologies Alliance (SEHTA) and MedCity. Funded primarily by the GLA, MedTech London was established to enable greater collaboration across the sector to spur innovation and bring new medtech products and services to market.

www.growthhub.london/medtechlondon



#### LONDON

#### St Thomas' medtech Hub

By combining King's research expertise with the clinical knowledge of Guy's and St Thomas' NHS Foundation Trust alongside King's Health Partners, industry and healthcare collaborators, St Thomas' MedTech Hub says it has the potential to become the largest community of health tech innovators in Europe.

www.kcl.ac.uk/news/st-thomas-medtech-hub-vision-and-showcase-during-london-tech-week



#### **EAST OF ENGLAND**

#### **Health Enterprise East**

Since its establishment 15 years ago, the Health Enterprise East (HEE) has worked with private companies and NHS organisations to give ideas for new devices the boost they need to reach frontline patient care services. The innovation hub does this by providing initial financial support and industry expertise at an earlier stage of development when innovators may need more support. www.hee.co.uk

The medtech Accelerator is an incubation centre which is part of HEE: www.medtechaccelerator.co.uk



#### **MIDLANDS**

#### **Biocity**

Founded by Nottingham's two universities in 2002, BioCity focuses on making life science innovation nationwide. It defines its mission as 'creating a UK-wide business collective...to help science entrepreneurs tackle global challenges.'

Now BioCity has five sites across the UK – two in Nottingham, two in Glasgow and one in Alderley Park, Cheshire. One of each of the Nottingham and Glasgow sites focuses on medtech specifically – in fact, the Glasgow site is Scotland's primary medtech incubator – and Alderley Park encompasses both biotech and medtech on one site.

www.biocity.co.uk



#### NORTH EAST / NORTH WEST

#### Northern Health Science Alliance

The Northern Health Science Alliance is the North of England's health partnership, across a population of 16 million people, bringing together ten universities, ten research-intensive NHS Trusts and four Academic Health Science Networks.

www.thenhsa.co.uk



#### **NORTH**

#### Northern Powerhouse Investment Champions

The Northern Powerhouse is the name of a plan, first put forward in 2014, to boost the economic power of the North of England. In 2020 DIT announced a new 'investment champions programme, for the Northern Powerhouse involving 10 prominent foreign investors based locally. This was carried out successfully in the past for the Midlands Engine area. Investment champions are: Siemens, Ubisoft, Atom Bank, Westinghouse, Tech Mahindra, McCann Worldgroup, Dentsu Aegis, Schneider Electric, Nippon Electric Glass and Hologic.



#### **NORTH WEST**

#### Grow MedTech

Grow MedTech is a major UK programme providing specialist support for innovation in medical technologies, involving a consortium of six universities across the Leeds and Sheffield City Regions. www.growmed.tech/about



#### **NORTH WEST**

#### The Medtech Centre

A specialist incubator centre for companies developing innovative products and services in the medical devices and diagnostics sector. It is a joint venture between the local NHS trust, Manchester Science Partnerships and TRUSTTECH – The North West NHS innovation service.

www.mspl.co.uk/campuses/manchester-science-park/medtech-centre



#### SCOTLAND

# ND Medical Device Manufacturing Centre, Scotland

The Medical Device Manufacturing Centre (MDMC) provides medtech manufacturers with the advice, technical expertise, and facilities necessary for companies to commercialise their medtech concepts. It provides expert advice on manufacturing, engineering, regulatory issues and funding, as well as access to manufacturing facilities. It aims to assist small and medium sized companies in the translation of medical device concepts through to small batch commercial prototypes. This service is free for Scottish SMEs only.

www.med-technews.com/news/research-centre-for-medical-devices-launched-in-scotland



# 1 Midlands

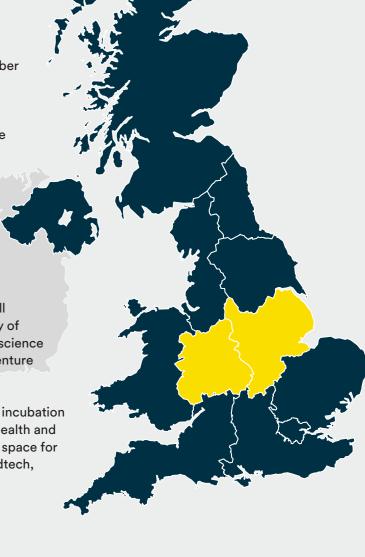
The Midlands regions, East and West, have the largest number of medtech manufacturing businesses in the UK, with 778 located in the area.

Medtech contributes an estimated £1.6 billion in GVA for the Midlands region annually. It is a driver of high productivity, with GVA per worker earning 40% higher than the Midlands average.

Midlands medtech employs 23,600 people – the second highest UK region for employment, according to the OLS.

A £210 million campus for the Midlands was announced in late 2020: The Birmingham Health Innovation Campus will be delivered through a collaboration between the University of Birmingham and the UK's leading property provider for the science and technology sector, Bruntwood SciTech, a 50:50 joint venture between Bruntwood and Legal & General.

The Campus will provide up to 657,000 sq ft lab, office and incubation space providing co-location opportunities for all stages of health and life science businesses. The first phase building will include space for larger, more established SMEs and scaleups working in medtech, precision medicine, diagnostics and digital healthcare.



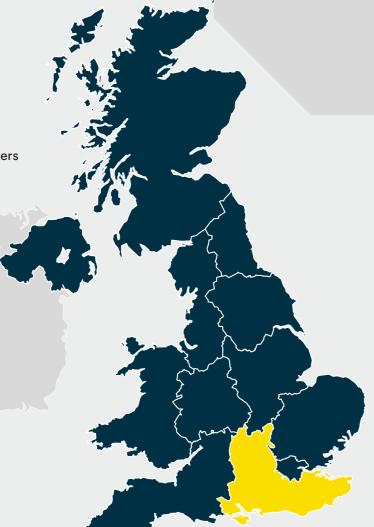
Some leading medtech manufacturers in this region:				
3M Health Care Ltd	www.3m.co.uk			
Advancis Medical	www.advancis.co.uk			
Anaxsys Technology Ltd	www.anaxsys.com			
Biocomposites Ltd	www.biocomposites.com			
BPR Medical Ltd	www.bprmedical.com			
Brightwake Ltd	www.brightwake.co.uk			
Chalice Medical Ltd	www.chalicemedical.com			
Dudley Surgical Appliances Ltd	www.dsa-orthotics.co.uk			
Hill-Rom Ltd	www.hill-rom.co.uk			
Kimal plc	www.kimal.com			
L&R Medical UK Ltd	www.activahealthcare.co.uk			
Locate Bio Ltd	www.locatetherapeutics.com			
McKenna Precision Castings Ltd	www.mckennagroup.co.uk			
ParAid Medical	www.paraid.com			
Pennine Healthcare Ltd	www.penninehealthcare.com			
SureScreen Diagnostics Ltd	www.surescreen.com			
Tomlinson Tube & Instrument Ltd	www.tomlinson-tube.co.uk			
White Medical Ltd	www.white-medical.co.uk			
Wolverson X-Ray Ltd	www.wolverson.uk.com			

# 2 South East

The South East region has 678 medtech businesses.

Oxford in the South East, along with Cambridge (East of England) and London form one of the leading medtech clusters in Europe and globally. Dubbed the 'Golden Triangle', this area houses four of the world's top twenty universities, four of the top ten medical sciences faculties in the world and some of the world's largest research institutes – the Sanger Centre, the Francis Crick Institute and Research Complex at Harwell. It contains substantial science infrastructure and a very large number of small and midsized companies in the life sciences space.

The Reading area also has a large pool of tech talent, including app developers and data analytics experts.





There are 516 medtech businesses located in the London area.

London boasts one of the world's best clusters of medical research facilities, comprising internationally-renowned universities, hospitals and a huge and diverse NHS patient population. All this provides a highly supportive environment for the commercialisation and application of health technology. London hosts some of the most innovative health technology companies with particular excellence in areas such as digital health.

The MedCity cluster organisation was set up in 2014 and is funded by the Greater London Authority and the Higher Education Funding Council for England. This initiative aims to facilitate the cooperation between the top universities in the region, hospitals, private companies and the NHS, and attract further foreign companies and capital.



#### Some leading medtech manufacturers in this region:

	Some leading medtech manufacturer	's in this region:
	Abbott Laboratories Limited	www.abbott.co.uk
	Advanced Healthcare Ltd	www.ahl.uk.com
	Arlington Laboratories Ltd	www.maryharehearingservices.co.uk/ arlington-labs
	Bayer plc	www.bayer.co.uk
	Bioventix PLC	www.bioventix.com
	Burtons Medical Equipment Ltd	www.burtons.uk.com
	Consort Medical Plc	www.consortmedical.com
	Daniels HealthCare Ltd	www.daniels.co.uk
	De Soutter Medical Ltd	www.de-soutter.com
	Eschmann Holdings Ltd	www.eschmann.co.uk
	Intersurgical Ltd.	www.intersurgical.co.uk
	Keeler Ltd	www.keeler.co.uk
	Ortho Europe Ltd	www.ortho-europe.com
	Orthox Ltd	www.orthox.co.uk
	Owen Mumford Ltd	www.owenmumford.com
	Penlon Ltd	www.penlon.com
	Pfizer Consumer Healthcare Ltd	www.pfizer.co.uk
	Rayner Intraocular Lenses Ltd	www.rayner.com
	Talley Group Ltd	www.talleygroup.com

#### Some leading medtech manufacturers in this region:

Bard Ltd www.barduk.com Bioline Reagents Ltd www.bioline.com
Rioline Reagents Ltd. www.bioline.com
bioline Reagents Eta www.bioline.com
Bright Instrument Co Ltd www.brightinstruments.co.uk
Carclo Technical Plastics www.carclo-ctp.co.uk
Cellpath Ltd www.cellpath.co.uk
Central Surgical Co Ltd www.centralsurgical.co.uk
Dan Medica South Ltd www.danmedicasouth.co.uk
LGC Ltd www.lgcgroup.com
Lidco Group Plc www.lidco.com
Purple Surgical International Ltd www.purplesurgical.com
Rocket Medical plc www.rocketmedical.com
Wardray Premise Ltd www.wardray-premise.com

# North East & Yorkshire/The Humber

There are 459 medtech manufacturing businesses located in the North East and Yorkshire/The Humber regions.

This region has fewer large medtech manufacturers. However, some local initiatives have been put into place to drive growth in the industry.

Diagnostics North East is a collaboration between the NHS, academia and the AHSN to help industry partners develop, evaluate and encourage adoption of new diagnostic tests.

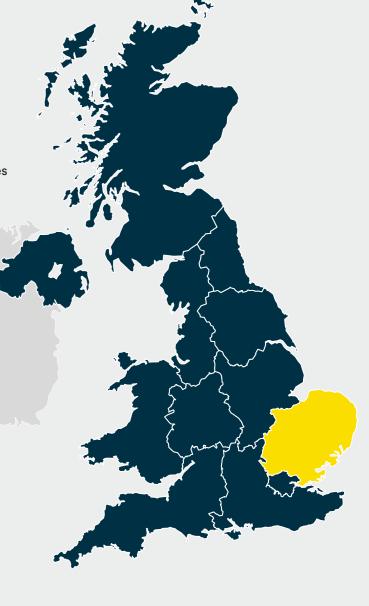
The National Healthcare Photonics Centre in Durham supports the scale-up and commercialisation of medtech products, acting as a hub for businesses of all sizes and academic partners to work on innovative methods of diagnosing disease, imaging systems – including endoscopy – and light-based treatments. This facility has been created to enable SMEs to drive forward innovative products and services at reduced risk and with increased capital efficiencies, and to encourage large companies to undertake more disruptive innovation in the healthcare market.



There are 419 medtech businesses located in the East of England region.

The East of England employs 16% of total national life sciences employees, with particular focus on the Cambridge area.

Health Enterprise East (HEE) recently launched its medtech NAVIGATOR programme. This will deliver a range of events, initiatives and market reports aimed at driving innovation in the East of England and facilitating collaboration and understanding between the region's healthcare system, academic institutions and innovative SMEs.



# Some leading medtech manufacturers in this region:

Brandon Medical Company Ltd	www.brandon-medical.com
Immunodiagnostic Systems Holdings Plc	www.idsplc.com
Implants International Ltd	www.implantsinternational.com
JRI Orthopaedics Ltd	www.jri-ltd.com
Malosa Ltd	www.malosa.com
Neoss Ltd	www.neoss.com
Platts & Nisbett Ltd	www.plattsnisbett.com
Protein Ark Ltd	www.proteinark.com
Sidhil Ltd	www.sidhil.com
Smith & Nephew Plc	www.smith-nephew.com
Surgical Innovations Group Plc	www.sigroupplc.com
Swann-Morton Ltd	www.swann-morton.com
Uniplex (UK) Ltd	www.uniplexuk.com
Xiros Ltd	www.xiros.co.uk

#### Some leading medtech manufacturers in this region:

	Aqix Ltd	www.aqix.com
	Baxter Healthcare	www.baxterhealthcare.co.uk/
	Clement Clarke International Ltd	www.clement-clarke.com
	CN Bio Innovations Ltd	www.cn-bio.com
	Contamac Ltd	www.contamac.com
	Duckworth & Kent Ltd	www.duckworth-and-kent.com
	Incus Surgical Ltd	www.incus-surgical.com
	Lab21 Ltd	www.lab21.com
	Oraldent Ltd	www.oraldent.co.uk
	Oval Medical Technologies Ltd	www.ovalmedical.com
	Probe Scientific Ltd	www.probescientific.com
	Sagentia Ltd	www.sagentia.com
	SDI Group Plc	www.scientificdigitalimaging.com
	Sphere Medical Holding plc	www.spheremedical.com
	TCS Biosciences Ltd	www.tcsbiosciences.co.uk
	Vitalograph Ltd	www.vitalograph.co.uk

# 6 North West

There are 378 medtech businesses located in the North West area.

Manchester is one of the northern cities drawing on regional legacies in manufacturing to develop a thriving medtech sector. It has the flexibility of local control since 2016 of its £6 billion integrated annual health and social care budget from the NHS.

The region is home to the largest clinical academic campus in Europe and to the only fully e-enabled NHS trust in England.

Health Innovation Manchester (HinM) offers an accelerated pathway to deliver adoption of health innovations to patients.

Lancashire features a new Heath Innovation Campus and Digital Health Business Park. These aim to provide a supportive environment for facilitating businesses to undertake R&D, clinical trials, product development, commercialisation and manufacture.

The Lancaster Health Hub at Lancaster University incorporates two major CCGs and five NHS Trusts, providing a platform to help industry collaborate with academia and the NHS.



There are 290 medtech businesses located in Scotland.

In an effort to foster and promote medtech manufacturing in Scotland, the Medical Device Manufacturing Centre (MDMC) was established in 2020. This will provide advice to small and medium sized companies to support them in the advancement and production of medical devices for the clinical care of patients.

The MDMC was launched with £3.7 million funding from the Advancing Manufacturing Challenge Fund, which is managed by Scottish Enterprise, the Edinburgh & South East Scotland City Region Deal, Heriot-Watt University, Robert Gordon University and the Universities of Edinburgh and Glasgow.



	Some leading medtech manufacturers in this region:				
	Advanced Medical Solutions Group Plc	www.admedsol.com			
	BBGR	www.bbgr.co.uk			
	Anetic Aid Ltd	www.aneticaid.com			
	Bailey Instruments Ltd	www.baileyinstruments.co.uk			
	Biofortuna Ltd	www.biofortuna.com			
	Bradfern Care & Mobility Centre	www.care-mobility.co.uk			
	Drew Scientific Co Ltd	www.drew-scientific.com			
	Inovus Ltd	www.inovus.org			
	MEDesign Ltd	www.medesign.co.uk			
	Medical Supplies & Services International	www.mssmedical.co.uk			
	Medtrade Products Ltd	www.medtrade.co.uk			
	Orthoplastics Ltd	www.orthoplastics.com			
	Oxylitre Ltd	www.oxylitre.co.uk			
	Park House Healthcare Ltd	www.parkhouse-hc.com			
	Presspart Manufacturing Ltd	www.presspart.com			
	Prestige Medical Ltd	www.prestigemedical.co.uk			
	W.S. Rothband & Co Ltd	www.rothband.com			

Some leading medtech manufacturers in this region:				
Albyn Medical Ltd	www.albynmedical.com			
Cellexus Ltd	www.cellexus.com			
Collagen Solutions Plc	www.collagensolutions.com			
GM Instruments Ltd	www.gm-instruments.com			
Ocutec Ltd	www.ocutec.com			
Optos Plc	www.optos.com			
Quotient Ltd	www.quotientbd.com			
RUA Life Sciences Plc	www.rualifesciences.com			
Vascutek Ltd (Terumo Vascutek)	www.terumoaortic.com			

# 8 South West

There are 229 medtech businesses located in the South West region.

In 2020 the UK government announced funding to support a number of regional medtech projects, one of which is emPOWER, based in the South West. emPOWER is led by researchers at the University of Bristol, and will receive £6 million to develop artificial robotic muscular assistance to help restore strength in people who have lost muscle capability. This could include patients who have suffered a stroke or are living with degenerative diseases such as sarcopenia and muscular dystrophy.

The University of Southampton is partnering with universities in Edinburgh and Nottingham on another of these funded projects: InlightenUs, which received £5.4 million to use a combination of artificial intelligence (AI) and infra-red lasers to produce high resolution 3D medical images.





There are 195 medtech businesses located in Wales.

Wales has become home to some of the world's leading companies within the life sciences industry. The sector has developed into established clusters of excellence in highgrowth markets including, in vitro diagnostic, single use technology and wound care.

Employment in the Welsh medical technology sector is dominated by some large enterprises, such as GE Healthcare, Siemens Healthcare and Thermo Fisher Scientific

Wales' eight universities are home to 12,000 life sciences students, offering meaningful partnering opportunities for life sciences businesses. In addition, Wales has some state-of-the art facilities in this sector.



# Some leading medtech manufacturers in this region:

Charnwood Healthcare Ltd	www.charnwoodhealthcare.co.uk
Corin Group Ltd	www.coringroup.com
Espiner Medical Ltd	www.espinermedical.com
Kinetik Medical Devices Ltd	www.kinetikwellbeing.com
P3 Medical Ltd	www.p3-medical.com
Prima Medical Ltd	www.prima-medical.com
Vanguard Healthcare Solutions Ltd	www.vanguardhs.com
Xograph Healthcare Ltd	www.xograph.com

# Some leading medtech manufacturers in this region:

Aber Instruments Ltd	www.aber-instruments.co.uk
Arrow Medical Ltd	www.arrowmedical.co.uk
Bee Robotics Ltd	www.beerobotics.com
Dentron Ltd	www.dentron.co.uk
DTR Medical Ltd	www.dtrmedical.com
EKF Diagnostics Holdings Plc	www.ekfdiagnostics.com
Energist Ltd	www.energist.com
Enzyme Research Laboratories Ltd	www.enzymeresearch.co.uk
Flexicare Group Ltd	www.flexicare.com
Nightingale EOS Ltd	www.n-eos.com
Ultrasound Technologies Ltd	www.doppler.co.uk

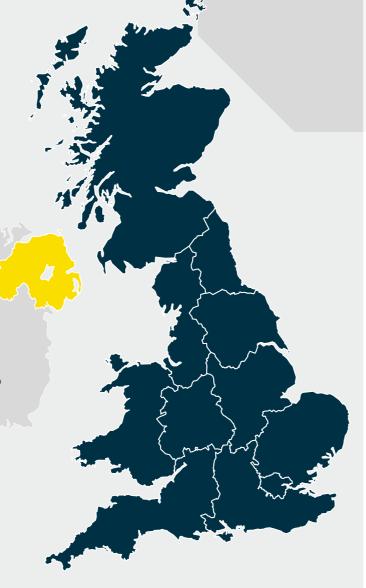
# 10 Northern Ireland

There are 99 medtech businesses located in Northern Ireland.

Ulster University is one of the region's major hubs for medtech and a recent €7 million laboratory will see it offering equipment and expertise for companies developing prototypes within the biomedical sector.

The University's €8.2 million Eastern Corridor Medical Engineering Centre (ECME) was launched in 2018 to develop smart wearable technologies for cardiovascular patients. The centre of research has partners in Republic of Ireland and Scotland, highlighting the cross collaboration that is active across the UK and Ireland.

Northern Ireland-based company Neurovalens – which has developed a fat burning wearable – is a local medtech start-up success story, raising over £5.1 million in funding in 2020.



#### Some leading medtech manufacturers in this region:

Intelesens Ltd www.intelesens.com
Fortress Diagnostics Ltd www.fortressdiagnostics.com
Randox Laboratories Ltd www.randox.com

# References

The report was researched and written in Quarters 2 and 3, 2020, using desk research methodologies and drawing on numerous sources of publicly available information, as well as sources available to El clients from the Market Research Centre at Enterprise Ireland, including:

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- The King's Fund: Technology and innovation for long-term health conditions
- The Manufacturer: Annual Manufacturing Report 2019

For more information on the Market Research Centre see: <a href="www.enterprise-ireland.com/en/Export-Assistance/">www.enterprise-ireland.com/en/Export-Assistance/</a> Market-Research-Centre

# Sample of manufacturers by region

## **East of England**

1St Call Mobility

A J Cope & Son Ltd

Abcam Plc

Ac Cossor & Son (Surgical) Ltd Access Diagnostic Tests Uk Ltd Alcon Laboratories (Uk) Ltd

Apatech Agix Ltd

Axis Shield Diagnostics Ltd B. D. K. Industrial Products Ltd

Baxter Healthcare

Bespak Europe Ltd Biogene Ltd

**Boston Scientific Ltd** 

**Breckland Hygiene & Industrial Supplies** 

Btl Industries Ltd

Cambridge Cognition Ltd

Cambridge Nutritional Sciences Ltd

Cantel (Uk) Ltd Carestream Health

Charpack Medical Ltd **Cmr Surgical Ltd** 

Cn Bio Innovations Ltd

Contamac Ltd Cook (Uk) Ltd

Csr Ltd (Previous Name: Csr Plc) Davis Schottlander & Davis Ltd

Diagenics Ltd

Dixons Surgical Instruments Ltd

Duckworth & Kent Ltd

Equivital Ltd

Essex X-Ray & Medical Equipment Ltd

Evans (Instruments) Ltd Ge Healthcare Ltd Genesis Diagnostics Ltd Goodfellow Cambridge Ltd H W Andersen Products Ltd Health Enterprise East Ltd

Herga Electric

Horizon Diagnostics Ltd Hunter Scientific Ltd Incus Surgical Ltd

Inivata Ltd Keymed Ltd

Kirton Healthcare Group

Map Diagnostics Ltd Medical Device Management Ltd Medical Innovations Group Ltd

Medisafe Uk Ltd Medovate Ltd Medtronic Ltd

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Merck Sharp & Dohme Ltd Mg Electric (Colchester) Ltd Molecular Products Ltd

Mologic Ltd

Nikon Optical U.K. Ltd Olympus Keymed Group Ltd

Olympus Medical Oraldent Ltd

Orbit Biomedical Ltd Outside In (Cambridge) Ltd Owlstone Medical Ltd

Oxford Nanopore Technologies Ltd P W Coole & Son Ltd / Surgical Holdings

Pathology Diagnostics Ltd Pfizer Consumer Healthcare Ltd

Plinth 2000 Ltd Plinth Medical Ltd

Prior Scientific Instruments Ltd

**Purple Surgical** Right Stride Sagentia Ltd Sdi Group Plc Seers Medical Ltd Shamir Uk Ltd

Smith & Nephew Uk Ltd (Uk & Ireland Hq)

Spacelabs Healthcare Ltd Spd Development Company Ltd Spearmark Health Ltd

Sphere Medical Ltd Stanmore Implants Worldwide Starkey Laboratories Ltd

Tcs Biosciences Ltd Thermo Electron Manufacturing Ltd

Timesco Healthcare Ltd

Tj Smith & Nephew Ltd (Endoscopy)

Tristel Plc Twistdx Ltd Unipath Ltd

Unisurge International Ltd Vectura Delivery Devices Ltd

Wesley Coe Ltd Wright Medical Uk Ltd

#### London

Acumedic Ltd

Adelphi Healthcare Packaging

Agilisys Ltd

Allmed Medical Care Holdings Ltd

Apex Medical Ltd April International Uk Ltd

Arthronica

Astell Scientific Ltd

Attends Healthcare Group Ltd

Babylon

Bausch & Lomb U.K. Ltd Baxter Healthcare Ltd Bioline Reagents Ltd **Boston Scientific** Bright Instrument Co Ltd Carclo Technical Plastics

Cellpath Ltd

Central Surgical Co Ltd

Cerner Ltd

Collagen Solutions (Uk) Ltd Crf Health Management Ltd Dan Medica South Ltd

Dansac Ltd

**Desktop Genetics Ltd** Dp Medical Systems Ltd

Dr Foster Ltd Durbin Plc **Evexar Medical Ltd Excel Healthcare** 

Frontier Smart Technologies Group Ltd

Genetic Microdevices Ltd

Gulmay Ltd Healthy.lo Hollister Europe Ltd

Hollister Ltd

Horizon Optical Company Ltd Huma Therapeutics Ltd

Ixico

Joint Replacement Instrumentation Ltd

Kainos

Kimal Holdings Ltd

Lgc Ltd

Lidco Group Plc

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Linkline Telecare Service

Livanova Plc Lumiradx Group Ltd Matz Medical Ltd Medema Ltd

Medeguip Assistive Technology Medivance Instruments Ltd

Mediworld Ltd Medopad Ltd

Medoroux Medical Ltd

Medtronic Ltd

Moorfields Pharmaceuticals

Novusci Ltd Olm Systems Ltd **Optum Health Solutions** Orion Health Ltd Prime Pharmacare Ltd

Randox Laboratories Ltd (London)

S.L.E. Ltd S4 Capital Plc Scala Surgical Ltd

Schuco International (London) Ltd

Sigmacon (Uk) Ltd Signant Health

Signifier Medical Technology Ltd Single Use Instruments Ltd Sirius Analytical Instruments Ltd

Sle Ltd

Smith & Nephew Plc Spectranetics Uk Ssl International Plc Synlab Uk Ltd Td Tom Davies Ltd

The Female Health Company Ltd

**Ultravision Clpl** 

Vinters Engineering Ltd

Vision (In Practice Systems Ltd)

Vision Rt

Vitalograph (Uk) Ltd Volta Technology Ltd Wardray Premise Ltd

#### **Midlands**

3M Health Care Ltd Abbott Medical U.K. Ltd

Abilitynet Accutronics Acedag

Advancis Medical (Brightwake Ltd)

Air Liquide (Homecare) Ltd

Akw Medicare Ltd Albert Browne Ltd Alliance Medical Uk Allocate Software Ltd

Almac

Analox Instruments Ltd Archform 2000 Ltd

Arco Ltd

Atlas Copco Medical Ltd B Braun Sharing Expertise

Baker Hughes
Baxter Healthcare Ltd
Beaconmedaes Uk Ltd

Beaver-Visitec International Ltd Berendsen Healthcare Ltd (T/A Elis)

Bibby Scientific Biocomposites Ltd Biosil Ltd

Birmingham Optical Group

Bpr Medical Ltd Brightwake Ltd

C. & L.E. Attenborough Ltd Carl Zeiss Vision Uk Ltd

Cel

Central Laundry Ltd Chalice Medical Ltd

Chaneco
Chesapeake Plc
Chunc Wheelchairs
Cobra Biologics
Cole-Parmer

Countrywide Supplies Ltd Devilbiss Healthcare Ltd Dexcom (Uk) Distribution Ltd Donald Wardle And Son Ltd

Envigo Research Ltd Eschmann Holdings Ltd Eumar Technology Ltd

Evac+Chair International Ltd

Exco Intouch Ltd

Fittleworth Medical Ltd (Nottingham)

Fresenius Medical Care (Uk)

Fujifilm (Uk) Ltd

Gainsborough Healthcare Group

Ge Sensing Gellaw 199 Ltd

Getinge Uk Infection Control & Life Science

Haigh Engineering Co. Ltd Handicare Accessibility Ltd Harvest Healthcare Ltd

Healthcare Software Solutions Ltd Helping Hand Co (Ledbury) Ltd

Hill-Rom Ltd

Horiba Uk Ltd T/A Horiba Medical

Hydro Physio Ihelp Innovations Inspiration Healthcare

Instem Plc Isopharm Ltd Jobskin Ltd Joerns Healthcare Inc. Oxford Hoist

Ken Hall Ltd

Kimal Plc (Distribution)

L E E C Ltd Lbg Medical Ltd Leec Holdings Ltd Locate Bio Ltd Lucideon Ltd

Mckenna Precision Castings Ltd Mckesson Information Solutions Uk Ltd

Med-El Uk Medigas Medstrom Ltd

Morgan Advanced Ceramics (Rugby)

Nasmyth lec Ltd

North 51

Nottingham Rehab Ltd (T/A Nrs Healthcare)

Nova Laboratories Ltd Ontex Healthcare Uk Ltd

Orchid Orthopedic Solutions Sheffield Ltd

Oswestry Dental Laboratory Otto Bock Heartlands

Panasonic Biomedical Sales Europe

Paraid Medical

Pennine Healthcare Ltd Perceptive Informatics Uk Ltd

Percurra

Performance Health International Ltd

Prestige Medical Ltd

R82 Uk Ltd

Recticel Midlands

Renfrew Group International Ltd

Rgk Wheelchairs Ltd

Riverside Medical Packaging Company Ltd

Rompa Ltd

S.F.T Dental Laboratory

Sallis Healthcare

Salts Healthcare Ltd (Birmingham)

Sarstedt Ltd Sirus Automotive Ltd Smith & Nephew

Smiths Medical International Ltd Specialised Orthotic Services Ltd Speciality Fibres And Materials Ltd

Static Systems Group Plc Sterigenics Uk Ltd

Steris

Suez Water Conditioning Services Ltd

Sunrise Medical Ltd Swiss Precision Diagnostics Symmetry Medical Sheffield Ltd. Syspal Ltd T/A Hydro Physio

Teledyne E 2 V

The Binding Site Group Ltd

The Helping Hand Company (Ledbury) Ltd

Thea Pharmaceuticals

Tj Smith & Nephew Ltd (Orthopaedics)

Tpg Disable Aids Ltd Urgo Medical T/A Altimed Vision Technologies Ltd Vivo Smart Medical Devices Weiss Gallenkamp Ltd White Medical Ltd William Smith & Son

Wsp

Wybone Ltd

# Yorkshire & the Humber, North East

Abingdon Health

Acorn Mobility Services Ltd Acorn Mobility Services Ltd

Active Medicine Acutus Medical

Advanced Digital Institute

Airdale International Air Conditioning

Alliance Medical Ltd Ansell (Uk) Ltd Apex 4D Arthrex Ltd Authentix

B Braun Medical Ltd
B. Braun Medical Ltd
Beaucare Medical Ltd

Bestmedonline Bioclad

Blatchfords (Customer Services)

Bolton Bros Ltd Brandon Group Ltd Brandon Medical Co Ltd Bsn Medical Ltd (Willerby)

Bvi Malosa Cardiologic Ltd Cizzle Biotechnology Clark And Partners Ltd Claro Precision Engineering

Commfizz

Countrywide Healthcare Supplies Ltd

Depuy Synthes
Diagnostic Healthcare
Don Whitley Scientific Ltd
Drive Devillbiss Sidhil Ltd
Edenbridge Healthcare
Egton Medical Info Systems

Emis Health Extract Technology Ferno (Uk) Ltd

Fittleworth Medical Ltd (Barnsley)
Focus Product Developments
Forensic Testing Services

Forteq Uk

Globus Medical Uk Ltd Harvest Healthcare Hugh Steeper Ltd Icentia

Imhotep Diagnostics Inomedhealth

Instco Ltd

Integrated Laboratory Services

Interfurn

Interweave Textiles Ltd
J Marston Engineers

James Heal Jj Thompson Jri Manufacturing Ltd

Jri Orthopaedics Ltd Kirklees Biosciences Konnectis

Kromek Ltd Labplant Uk Ltd

Leica Biosystems Newcastle Ltd Life Technologies Bpd Uk Ltd

Liquid Logic Malosa Ltd Maquet Uk

Mass Spec Instruments

Med-El

Medical Technologies Ikc

Metrodent Ltd

Mie Medical Research Mss Clean Technology

Mss Medical N-Cyte Nafic Namsa

National Physical Laboratory Neoss Ltd

140033 Eta

Non-Woven Innovation Research Institute

Organ Preservation Solutions

Ortho-Care (Uk) Ltd

Paneltex T/A Csc (Specialised Vehicles)

Pcti Solutions

Peacocks Medical Group
Platinum Stairlifts Ltd
Prism Medical Uk
Prism Uk Medical Ltd
Protein Ark Ltd
Quantumdx Group Ltd
Quick Straight Teeth

Reliance Precision

Rex Scientific Rocket Medical Royston Lead

Rsl Steeper (Hugh Steeper Ltd)

Safeguard Biosystems

Saffron Scientific Equipment

Selles Medical Ltd

Servelec Aura Ltd

Sidhil Ltd Simomics

Smith & Nephew

Smith & Nephew Uk Ltd

Steeper

Sun Dental Laboratories Surgical Innovations Ltd Swann Morton Ltd Swann-Morton Ltd Symmetry Medical

Systagenix Wound Management

Taycare Medical Ltd The Eyebag Company Thyssenkrupp Access Ltd Tissue Regenix Group Tj Smith & Nephew Ltd

Tpp Trulife

Trycare Ltd (Div Of Medident)
Tunstall Healthcare (Uk) Ltd

Viamed

W And W Medsystems Wassenburg Ltd

Wright Health Group Ltd

Xiros Ltd Xiros Plc

XI Precision Technologies Ltd

Ypsomed

#### **North West**

Swift Analytical

A. Algeo Ltd

Abbott Rapid Diagnostics Ltd

Able2 Uk Ltd

**Advanced Medical Solutions** 

Aflex Hose Ltd

Aidapt Bathrooms Ltd

Allscripts Uk Hq Amazon Medical Ltd

Amplifon Ltd

Ascribe

Baxter Healthcare Ltd

Bbgr

Beagle Orthopaedic Ltd

Bio-Amd Inc Biocomposites Ltd

Bolton Medical (Vascutek Terumo) Bradfern Care & Mobility Centre

**Brooks Automation Ltd** 

Bunzl Healthcare T/A Care Shop

Chester Medical Solutions
Chester Medical Solutions
Cme Medical Uk Ltd
Cole-Parmer Ltd

Convatec Ltd Cook (Uk) Ltd

Crawford Woundcare Ltd

Crest Medical Depuy Synthes Digital Dental Ltd Edge Medical Ferno (Uk) Ltd

Genedrive Diagnostics

Globus Healthcare (Haika)

Health Intelligence

Hologic Ltd

Imagen Therapeutics Ltd

Inovus Ltd

Invibio Device Component Manufacturing Ltd

Lantor (Uk) Ltd T/A Nonwovenn

Lte Scientific Ltd Lynton Lasers Ltd

Medical Equipment Supplies & Management

Medical Supplies & Services Intl

Medlock Medical Ltd Medtrade Products Ltd Molnlycke Health Care Ltd Optimum Coatings Ltd Orthoplastics Ltd

Р3

Park House Healthcare Ltd

Paul Hartmann Ltd

**Peak Service** 

Pharmaserve Northwest Ltd

Phenomenex Uk Ltd

Phoenix Medical Supplies Ltd

Precision Parts Uk Ltd

Presspart Manufacturing Ltd Primary Healthcare Services Ltd Promedics Orthopaedics Ltd Qiagen Manchester Ltd

Qualiti

Robert Bailey & Son Public Ltd Co

S G & P Payne Ltd

Sabre Instrument Valves Ltd

Scapa Medical Scilabware Ltd

Shandon Diagnostics Ltd Sinclair Pharmaceuticals Ltd

Sonova Uk Ltd

Starkey Laboratories (Uk) Ltd Technical Service Consultants Ltd

Terry Group Ltd

Terumo Uk Ltd (Liverpool)

The Bullen Healthcare Group Ltd

The Royal Oldham Hospital

Thermo Fisher Diagnostics Ltd Thermo Shandon Ltd

Verna Group Equityco Ltd

Vernacare

Vernon-Carus Ltd

Viamed Ltd Widex Uk Ltd

Woodley Equipment Co Ltd

Yourgene Health Plc

#### **Northern Ireland**

Ams U.K. (Ni) Ltd

Andor Technology Ltd Armstrong Medical Ltd

Bemis Healthcare Packaging Ltd

Catalyst Ni

Cathedral Eye Clinic Ltd Causeway Sensors Ltd

Cet Cryospas Ltd Cirdan Imaging Ltd

Elite Electronic Systems Ltd

Endosim Ltd Fireflyfriends Ltd

Go Walk Talk Ltd Heartsine Technologies Inc James Leckey Design Ltd Lifesciencehub Uk Ltd

Mamamigo Ltd

Marturion Electronics Ltd

Medidesign Ltd

Northern Cryogenics Ltd Ohi International Ltd

Pill Pack + Ltd

Praxis Care

Quintess Denta Ltd

Randox Laboratories Ltd

Re-Vanna Ltd
Sfx Ray Ltd
T G Eakin Ltd
Terumo Bct Ltd
Tg Eakin Ltd
Trip-Ability Ltd

Trucorp Ltd Vivomed Ltd

#### **Scotland**

1Nhaler

**4Front Medical Solutions** 

Alceli

Alerta Medical

Ametek Chandler Engineering Arjo Med Aktiebolag Ltd

Aseptium

**Avanticell Science** 

Axis-Shield Diagnostics Ltd

**BDG** Ceramics

Bio-Images Drug Delivery Ltd

Biofilm Ltd Biosil Ltd

Buchanan Orthotics Ltd
Campbell Medical Supplies

Capital Hplc
Cellexus Ltd
Charles River
Circa Connect Ltd
Coherent Scotland Ltd.

Collagen Solutions Plc

Coloplast

Concept Life Sciences

Corporate Health International

Crawford Scientific Ltd.

Cutitronics
Daysoft Ltd
Dc Biosciences
Dentherapy

Dolby Medical Ltd Edinburgh Biosciences

Elcomatic Ltd

Environmental Hygiene Products Ltd.

Eosurgical Ltd
Fibre Photonics Ltd.

Guardian Surgical

Herboreal

**Highland Biosciences** 

Highland Innovation Centre Ltd

Hollister Europe Ltd

Hologic Lt Hyaltech Ltd Imv Imaging (Uk) Ltd Insignia Technologies Ltd

Integrated Dna Technologies, Bvba John Preston Healthcare Group Johnson & Johnson Medical Ltd

K.I.D.S. Iq Project

Karl Storz Endoscopy (Uk) Ltd (Dundee)

Key-Tech (Scotland) Ltd Laboratory Specialist Services Lamellar Biomedical Licecomb Engineering Ltd. Lifescan Scotland Ltd

Lumiradx Techology Ltd Microsphere Technology Ltd

Mortara Dolby
Odx Innovations Ltd
Omega Diagnostics Ltd

Optos Plc Oticon Ltd

Pal Technologies Ltd

Paragise Ltd

Plexus Corp (Uk) Ltd

Promedics Orthopaedic Ltd

Quantilyte Quotient Bd

Rua Life Sciences Plc Salts Healthcare Ltd

Sansible Ltd

Scientific & Chemical Ltd

Scotia Biologics

Scottish National Blood Transfusion Service

Shamir Uk Ltd Shore Design

Siemens Medical Solutions Stannah Lift Services Ltd

Taragenyx Ltd Technival Ltd Terumo Aortic Tmyse

Tunstall Healthcare (Uk) Ltd (Stirling)

Vascutek Ltd (Paisley) T Vicarey Davidson Ltd W Munro (Rehab) Ltd Wallace Cameron Group

Wideblue Ltd

Wright Health Group Ltd

#### **South East**

Abbott Diabetes Care (Witney) Ability Matters Group Ltd Accel Heal Technologies Ltd

Adelie Health Ltd Alcon Eye Care Uk Ltd Alere Toxicology Plc Allergy Therapeutics Ltd Alpha Laboratories Ltd

Amo United Kingdom Ltd (Abbott)
Aguilant Ltd (T/A Aguilant Orthopaedics)

Arlington Laboratories Ltd Bard Ltd T/A Bardcare Baxter Healthcare Ltd Bayer Plc

Beaver-Visitec International Ltd

Beckman Coulter (Uk) Ltd Becton Dickinson And Company

Berendsen Plc
Bespak Europe Ltd
Biogen Idec Ltd
Biomerieux Uk Ltd
Bioventix Plc
Bray Group Ltd

Burtons Medical Equipment Ltd

Canon Medical Systems
Cardinal Health Uk & Ireland

Careline Uk Monitoring Ltd T/A Appello

Ceramtec Uk Ltd Clinimed Ltd Clinipak Ltd

Cochlear Europe Ltd Conmed Linvatec Uk Ltd

Coopervision Manufacturing Ltd

Cyber Medical Ltd
Daniels Healthcare Ltd
Dc Surgical Supplies Ltd
De Soutter Medical Ltd
Deltex Medical Ltd

Djo Uk Ltd

Dorset Orthopaedic Company Ltd

Dynamx Medical

**Edwards Lifesciences Ltd** 

Elekta Ltd

Eschmann Holdings Ltd Fisher & Paykel Healthcare Ltd

Fittleworth Medical Ltd (Littlehampton)

Forbes Mobility

Ge Healthcare Life Sciences

Ge Healthcare Uk - Diagnostic Imaging Services

Ge Medical Systems Ltd Graphnet Health Ltd Healthcode Ltd

Hidden Hearing International Plc

Hollister Ltd

Hologic Ltd - Formerly Cytyc Uk Ltd

Hospedia Ltd

Inspiration Healthcare Ltd Integrated Technologies Ltd

Intersurgical Ltd Irhythm Technologies Johnson & Johnson Vision

K2M Uk Ltd

Karl Storz Endoscopy (Uk) Ltd

Keeler Ltd Labcold Ltd

Leica Microsystems (Uk) Ltd

Lifescan (Johnson & Johnson Medical)

Linet Uk Ltd Link Medical Ltd Masimo Europe Ltd Materialise

Materialise
Matortho Ltd
Matortho Ltd
Medica Group Plc
Medica Reporting Ltd
Mediline Scientific Ltd
Menarini Diagnostics
Microlink Pc Uk
Microport Crm
Mirada Medical Ltd

Obn Uk Ltd Opcare

Optegra Surrey Eye Hospital

Ortho Europe Ltd

Ortho-Clinical Diagnostics (Bucks)

Otto Bock Healthcare Plc Owen Mumford Ltd Oxford Immunotec Ltd Oxford Lasers Ltd

Oxford Nanopore Technologies Ltd

Pall Medical
Pbb Devices Ltd
Penlon Ltd

Perkinelmer Las (Uk) Ltd Perspectum Diagnostics Ltd Pfizer Consumer Healthcare Ltd

Philips Electronics T/A Philips Healthcare

Philips Healthcare Qiagen Ltd Radiometer Ltd

Rayner Intraocular Lenses Ltd Rdt, A Philips Company Recor Medical Uk

Rehabilitation Manufacturing Services Ltd

Resmed (Uk) Ltd Roche Diagnostics Ltd Rodenstock (U.K.) Ltd Sekisui Diagnostics Sekisui Diagnostics Uk Ltd Sensium Healthcare Ltd

Sivantos Ltd

Smiths Medical International Ltd (Hq)

Spineart Uk Ltd Stannah Lifts Ltd Steris Solutions Ltd Stryker Uk Ltd Symbios Uk Ltd

System C Healthcare Ltd Systemc Healthcare Ltd

Talley Group Ltd Thames Medical Ltd

Thermo Fisher Diagnostics Ltd Varian Medical Systems Uk Ltd

Wealden And Eastbourne Lifeline (Welbeing)

Welland Medical Wessex Lift Co. Ltd

# South West

Aidcall (Tynetec Ltd) Arjo Uk And Ireland

Bbgr Ltd

Becton Dickinson And Company (Plymouth)
Becton Dickinson And Company (Swindon)

Biomet Uk Ltd (Swindon)

Bioquell Ltd

Bloom Hearing Specialists Ltd

British Mobility Cardio Analytics Ltd Charnwood Healthcare Ltd

Coacs Ltd Corin Group Ltd Ddc Dolphin

Defence Science & Technology Laboratory

Dorset Nursing Supplies Ltd

Dycem Ltd
Essilor Ltd
Gb Medical Ltd
Health Edge Solutions Ltd

Hospital Metal Craft Ltd T/A Bristol Maid

Imaging Equipment Ltd

imaging Equipment Eta

Kci Medical Products (An Acelity Co)

Kinetik Medical Devices Ltd

Medical Wire & Equipment Co (Bath) Ltd

Medicare Systems Medvivo Group Ltd

Memo Clinical Engineering

Pall Manufacturing Uk Ltd (Ilfracombe)

Pan Globus Ltd

Pearsalls Ltd

Prima Dental Group

Prism Medical Healthcare Ltd

Renishaw Medical

Research Instruments Ltd S R A Developments Ltd Signet Armorlite Europe Ltd

Silvalea Ltd

Spectrum Medical Ltd Sra Developments Ltd Summit Medical Ltd

Surgical Specialties Uk Holdings Ltd

Symmetry Medical Cheltenham Ltd Synergy Health Sterilisation Uk Ltd

Technicam Ltd

**Unwin Safety Systems** 

Vacsax Ltd

Vanguard Healthcare Solutions Ltd

Video South Ltd Vygon (Uk) Ltd Watson-Marlow Ltd Westfield Medical Ltd Xograph Imaging Systems Ltd

Zimmer Biomet Uk Ltd

#### .....

#### Wales

Bb International (Bbi Solutions)

Biomet Uk Healthcare Ltd

Biomet Uk Ltd Cellnovo Ltd Convatec Ltd Cyden Ltd Dacey Ltd

Eurocaps Ltd

Freudenberg Performance Materials

Frontier Medical Group Ltd

Frontier Plastics Ltd Frontier Therapeutics Ltd

Ge Healthcare Ltd Hoya Lens Uk Ltd

Huntleigh Healthcare

Invacare (Uk) Ltd

Ipulse Ltd

Mangar International Niagara Healthcare Ltd

Olympus (Gyrus Medical) Surgical Technologies

Ortho-Clinical Diagnostics Pelican Healthcare Ltd

Prism Medical Manufacturing Centre

Qioptiq Ltd Rocialle Ltd

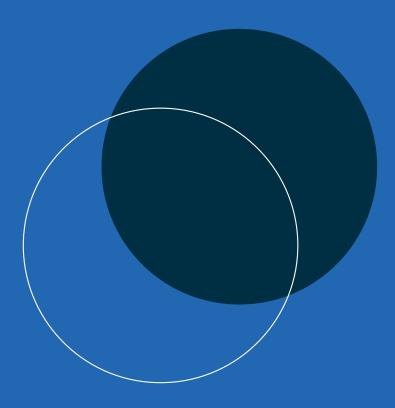
Rsr Ltd

Siemens Healthcare Diagnostics Ltd

Sterilin Ltd

Synlab Laboratory Services Ltd The Magstim Company Ltd







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Enterprise Ireland has commissioned Roisin Bell of KnowledgeWorks, a market intelligence firm, to produce this report.

For more information on KnowledgeWorks see: www.knowledgeworks.ie

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