



SUPPORT PROGRAMMES FOR SMES AND STARTUPS



WHAT IS A CATAPULT?

The Catapult Network supports businesses in transforming great ideas into valuable products and services. We are a network of world-leading technology and innovation centres established by Innovate UK. We deliver impact across the UK economy, enabling businesses to thrive in global markets.

Catapults accelerate the application of research, they are where new technologies are further developed, scaled up and realised, across a range of sectors. Catapults provide businesses with access to their expertise and facilities, enabling them to test, demonstrate and improve their ideas. By fostering collaborations between industry, government, research organisations, academia and many others, Catapults are helping to create the best environments for innovation. Catapults work with small, medium and large businesses, to understand the challenges they face and support them in the development of innovative solutions that will help improve their business performance.

Catapults are established and funded by Innovate UK

SUPPORT PROGRAMMES FOR SMES AND STARTUPS

Since their establishment, Catapults have tailored their offerings to be best suited to the SME and start-up communities they serve. In addition to helping SMEs through direct provision of cutting-edge infrastructure, technical expertise and through participation in collaborative R&D programmes across multiple sectors to develop their innovation capability, a variety of support approaches are being applied across the network.

Some examples below:

- Toolkits and transferable methodologies to investigate, evaluate, develop and demonstrate technology, improve products, processes and technologies, working with end users and supply chain for readiness
- Rapid commercialisation, growth accelerator and incubator programmes that support early stage, start-ups and scale-ups to utilise the Catapult assets, capabilities and expertise
- Expert advice, independent diligence of programmes, analysis and insights, market analysis, cost modelling, business-case support, creation of industry-relevant R&D project plans, achievable IP estates
- Signposting, support in partnering, access to knowledge sharing networks, including routes to other Catapults and supply chain organisations
- Support in developing routes to funding (identifying opportunities, consortia building, application process), routes to finance by developing ideas further and strengthening proposals to investors. Catapults engagement with businesses helps to breed investor confidence.
- Regulatory and compliance guidance
- Advice on workforce development
- Where relevant, routes to international expertise

Find out more





SME Support Approaches

Technology and Process Innovation

- Process development
- Analytical development
- Manufacturing systems
- Supply chain

Regulatory Affairs and Clinical Development

- Regulatory Affairs
- Non-clinical safety
- Clinical Delivery
- Programme management

Engagement

- Collaboration formation
- Intellectual property
- Health economics & Market Access
- Reimbursement

Commercial Readiness Advice Clinics

- SMEs can access commercial support in the form of advice, meetings or access to advisory panels.
- Small companies and spin outs in the UK can receive funding through programmes such as Innovate UK EDGE.

Support to potential university spin-outs

Our Academic Liaison team engages with Technology Transfer Officers (TTOs) at universities to identify potential technologies, support spin-outs and secure investment.



Capabilities & Assets

Technology and Process Innovation Labs (London Stevenage, Edinburgh)

- Industrialisation and scale up of cell and gene therapy processes
- Analytical Characterisation and Process Development
- Bioprocessing Technology Innovation
- Purpose built collaboration laboratories

Manufacturing Innovation Centres (Stevenage, Braintree)

- Manufacturing innovation centres designed specifically for cell and gene therapies processes
- MHRA licensed facilities with segregated large Good Manufacturing Practices (GMP) cleanroom modules
- Stevenage Manufacturing Innovation Centre has been central to the development of the third largest cell and gene therapy cluster globally

Advanced Therapy Treatment Centres Network

- Building systems and frameworks for routine clinical adoption and reimbursement of cell and gene therapies
- NA-ATTC, iMATCH, MW-ATTC

Advanced Therapies Medicinal Products (ATMP) skills and training development

- ATAC – Advanced Therapies Apprenticeship Community providing industry led training, mentoring and assessment ensuring a suitable workforce for a rapidly expanding industry
- ATSTN – Advanced Therapies Skills Training Network on-site and online training platforms aimed to attract talent from other industries

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SME Support Approaches

Collaborative CR&D

Working with universities and companies on CR&D projects to support the entire compound semiconductor supply chain in key technical areas of Power Electronics, Photonics, and RF. Alongside the core technology areas, we can support CR&D bid writing, market intelligence, and project management across multiple companies.

Design & Development

This includes technical design services, contracted R&D, EVM analysis, for example, analysis of technical feasibility IP development, and led by our technical team.

Market intelligence: Market ability for new product ideas. Benchmarking of existing and planned products against competitors to guide product development decisions and roadmaps.

Training & Skills

Regular workshops in a range of specific topics which offer a significant potential impact or companies developing new products, which relate to 'how to design with' and 'how to optimise system performance' using compound semiconductors.

Facilities & Testing

The Catapult has significant in high-end equipment, including, equipment/lab hire, testing & failure analysis, including in-house capability to explore higher temperature, humidity, and frequency ranges for their product designs, and modelling, simulation, characterisation, validation & integration.

Capabilities & Assets



Power electronics laboratory

- 300kV test & verification capability
- Chip/device/module characterisation & modelling
- Simulation
- Access to 0.5MW of power
- Power device/module lifetime tests (HTS, LTS, HTRB, HTGB, H3TRB)
- Vibration, thermal & mechanical shock
- Device/Module power cycling and thermal lifetime

Photonics & sensors laboratory

- Linewidth narrowing reference designs
- Spectroscopic techniques
- Die preparation & hybrid integration
- Environmental testing
- Reliability and HALT/HAST
- Failure analysis

Advanced Packaging laboratory

- Prototyping
- Class 10K clean room
- Precision engineering
- Thermal management
- Sintering
- Die/Wire Bond & test

RF/microwave laboratory

- Device characterisation
- 5G

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SME Support Approaches

Universal

- Access to a wide network of businesses (small, medium & large) and government organisations
- Signposting to other support organisations & networks
- Access to newsletters, information guides, case studies and educational materials
- Notifications and invitations to general industry events, competitions and opportunities

Targeted

- Comprehensive Business Needs Assessment (1:1)
- Invitation to speak at our Connections Café
- Access to the Innovation Leaders Forum
- Exclusive and tailored notice of opportunities, tenders and competitions
- Introductions to potential customers, collaborators, investors
- Support for Entrepreneurs Network (SfEN) Clinics
- Invitation to tradeshows

Specialist

- Mentoring & technical advice and market insight from industry experts
- Collaborative Project Exploration Workshops
- Business Modelling Clinics
- Masterclasses (IP, Skills/Team Development, Business Development, Pitch Perfect)
- Promotional showcase of business and technology on our featured hub
- Pitch days with commercial partners & investors

Partnership

- CR&D projects
- Commercial projects
- Access to Accelerator Programmes (and 3rd Party Programmes)
- Access to facilities and premises
- Knowledge Transfer Partnerships (KTP) projects



Capabilities & Assets

- Planners
- Market Analysis
- Graphic & Urban Designers
- Connected & Autonomous Vehicle Experts
- Human Factors and Anthropologists
- Bid, Communication and Dissemination
- Urban Internet of Things (IoT) Experts
- Standards Experts
- Drone and Aviation Specialists
- Customer Insight Experts
- Freight Logistics Experts and Transportation Planning
- Data Scientists
- Visual Designers and Software Developers
- Academic Engage and Deep Academic Alliances
- Accelerator and Incubator Programme
- Supply Chain Innovation
- Insight Experts
- Engineers, Architects and Economists
- Business and Economist Modelling
- Air Quality and Pollution
- Stakeholder Engagement and Experts
- Strategists
- Systems Architects and Data Specialists
- Systems Development
- Geospatial Analysis and Modelling

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SME Support Approaches

Collaborative research & development

Working with digital first companies, academics and companies on CR&D projects to transform research into successful products and services, promoting the application and use of future networks, artificial intelligence, distributed ledger and immersive technologies within the manufacturing and creative sectors.

Acceleration programmes

Digital Catapult runs world-leading accelerator programmes to help startups develop innovative and successful advanced digital technology products, services, experiences and business models for UK industry to emulate. We support innovative small businesses with the resources, facilities, mentorship, collaboration and tools for success.

Innovation Sprints

Startups and scaleups are invited to participate in innovation activities designed to accelerate the growth of new ideas and the adoption of new technologies in response to specific industry challenges.

International Engagement

Digital Catapult helps to create new international opportunities for advanced digital technology companies: supporting startups and scaleups by facilitating and showcasing UK innovation, attracting overseas investment, and driving the UK's global leadership and collaboration with other markets.

Capabilities & Assets

5G Facilities

Innovation in 5G depends on access to expensive and complex infrastructure and relevant expertise. Digital Catapult is removing barriers to market and helping startups to develop leading edge solutions by providing access to 5G testbeds across the country.

The Immersive Labs

Built to encourage and support the UK's growing immersive community in developing commercially viable immersive content and applications, the labs provide an ideal place to test and demonstrate immersive experiences.

Machine Intelligence Garage

Digital Catapult's flagship Artificial Intelligence (AI) programme, Machine Intelligence Garage, is an acceleration programme that addresses the challenges faced by today's artificial intelligence and machine learning startups. The programme provides the computation power and expertise needed to develop and build responsible and sustainable machine learning and artificial intelligence solutions.

Virtual Production Test Stage

Independent production companies that cannot access larger commercial facilities and early stage innovation companies will be able to access this fast start facility to develop new tools and applications.

Future Networks Lab

The Future Networks labs help companies of all sizes access the latest networks technologies, development opportunities and advice for practical adoption, all to help de-risk innovation and show how these technologies can be rolled out in practice, not just in theory.

Field Labs

Distributed Ledger Technology (DLT) Field Labs offer businesses the opportunity to explore how distributed ledger technologies can address commercial and operational challenges.

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SME Support Approaches

Energy Launchpad (3-tiered support)

1. Universal

Standardised support for all SMEs, helping start-ups gain insight about the UK energy system and Energy Systems Catapult. Find partners, access events and workshops, plus sign-posting for funding calls, investors and international opportunities.

2. Incubation

Tailored support for selected start-ups, including business model development, system integration consumer insights, digital fitness, market testing and validation, and investor readiness.

3. Acceleration

Scale-up support for selected high-impact potential SMEs, including incubation support plus access to test and demonstration environments such as our Living Lab, engagement with potential corporate clients and investors, and links to international opportunities.

Global challenges & pitchbooks

Solving challenges in other countries (e.g. India, South Africa) through competitions and representing companies to international stakeholders through pitchbooks.

Supply Chain Network & Landscapes

Insight into the UK supply chain, including landscapes for sector areas (e.g. digital, Electric Vehicles, hydrogen, heating & cooling). A detailed database of UK SMEs that wish to be notified of international opportunities and stay up to date with Energy Systems Catapult's and its partners service offers.

Energy Launchpad Innovator Portal

A digital portal linking innovators to investors, international opportunities and Universal Support as well as new opportunities, calls and collaboration spaces. energylaunchpad.energy/login

Collaborative research and development

Work with academics and companies on CR&D projects.



Capabilities & Assets

Living Lab

Over 500 digitally connected real homes and consumers spread across the UK to support innovators to rapidly design, market-test and launch smart energy products and services.

Consumer Insight

Offering in-depth consumer research, cutting-edge data science, user-experience design thinking and real-world consumer trials.

Home Truths

An online panel of 8,000 UK households that can provide rapid and cost effective consumer feedback on a product or service.

Digital & Data Science

Offering a range of expertise, tools and labs, including digital strategy, data science, artificial intelligence for energy systems, developing Digital Twins, and modernising energy data.

Systems Engineering

Offering systems engineering to help define and deliver the future energy system to unlock and integrate innovation.

Clean Tech Engineering

Independent and technology-agnostic, approach to accelerating Net Zero innovation across Bioenergy, Carbon Capture, & Storage, Energy Storage, Hydrogen, Industry Decarbonisation, Networks, Nuclear, Renewables and Transport.

Markets, Policy and Regulation

Offering energy policy, regulatory, and market design expertise that combines deep understanding of technology, economics, and policy, informed by cutting-edge modelling and evidence-based analysis.

Modelling

World-class whole systems modelling including national and local energy systems, storage and flexibility, and building energy systems.

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SME Support Approaches

What we offer

High Value Manufacturing Catapult is here to help turn great ideas into commercial realities by providing access to world-class research, development facilities and expertise that would otherwise be out of reach for most businesses in the UK.

Expertise

Access to 3,500 of the UK's best engineers, scientists and technicians ready to help solve your business challenges.

Equipment

Access to the specialist equipment and technology you need to develop and test your ideas.

Capability

Spanning material technologies, processing and formulation through to high integrity product assembly and validation.

Connections

A magnet for conversations and collaborations that will shape tomorrow. We connect SMEs to the UK's leading supply chains and with government and academic support.

Insight

Deep industry understanding and experience allows us to guide your business towards the best outcomes in a fast-changing and competitive world.

Workforce development

Business success starts from within. We are experienced in reskilling and upskilling your current workforce. We also offer access to apprenticeships, knowledge transfer partnerships, training courses and student placements to help build and maintain the high-level skills needed to transform your business.

Walk the line

We can arrange a walkthrough (virtual or otherwise) of your facility, meet your engineers and production staff and look at your business processes to help you to identify areas where gains could be made.

Consultation

We offer bespoke support and can talk through your idea in detail, drawing on expertise from across the whole High Value Manufacturing Catapult.

Technology Workshops

We offer access to seminars and workshops to help you decide whether new technologies could offer solutions to the business challenges you face.

Innovation Workshops

We can work with your team to explore how innovation could unlock the potential of your business and identify how you can bring your ideas to reality.

Funding Advice

We can make recommendations on where to find finance and the best funding direction for your project.

27 technologies include

Advanced Assembly, Automation, Biologistics, Biotechnology, Casting, Composites, Design, Digital Manufacturing, Electronics, Flexible Manufacturing, Formulation, High Temperature Processing, Joining, Machining, Polymers, Materials Characterisation, Metal Forming and Forging, Metrology, Modelling and Simulation, Netshape and Additive Manufacturing, Powder Technology, Power and Energy Storage, Resource Efficient and Sustainable Manufacturing, Printable Electronics, Surface Engineering, Toolings and Fixtures, VR and Virtualisation.

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SME Support Approaches

Connecting and catalysing

- **Discovery Syndicates:** A new collaborative R&D model for patient-focussed, drug discovery, anchored to patient needs and assets via translational medical research charities
- **National Discovery Services network of drug discovery experts and capability:** Access to industry-grade skills, advice and services
- **Collaborative grants:** Engage with companies and academics on grant applications where our capabilities are key to success
- Expert-led workshops and webinars on today's topics
- **Regional events:** 1:1 sessions with drug discovery and informatics experts

Services (through a range collaborative or commercial approaches):

- Championing innovative technology and new approaches
- Providing extensive experience for our partners and SMEs in industrial medicines discovery and informatics
- Providing access to innovative technologies, platforms and outsourced, multiparty R&D
- Presenting a clear path to successful medicines discovery
- Championing collaboration to find the best solution for our partners
- Adopting an impartial approach to medicines discovery
- Providing an unrivalled network on R&D partners spanning both the public and private sector

Capabilities & Assets

Cell Model Analysis and Validation

We can test molecules in our suite of human, in-vitro cell models to demonstrate efficacy in healthy and disease models or evaluate potential toxicity.

Key technologies include:

- Organ-on-a-chip platforms
- Mass spectrometry and mass spectrometry imaging
- Advanced microscopy
- Transcriptomics and biomarker signatures

Target and pathway engagement

We build a platform of evidence linking drug molecules to modulation of its target protein and downstream biological effect, in relevant in-vitro and in-vivo assay systems.

Key technologies include:

- Advanced microscopy
- Mass spectrometry and mass spectrometry imaging
- Transcriptomics and biomarker signatures
- Preclinical Imaging



Drug Delivery and Biodistribution

We help our partners understand their lead molecules or by applying in-vivo imaging to measure the biodistribution of labelled molecules in real-time. This can assess the impact of different delivery methods on biodistribution and biological effects. We can also apply mass spectrometry imaging and multiphoton imaging to measure the distribution of unlabelled molecules in tissue sections.

Biomarkers

We can identify novel biomarkers to track the impact of proposed new lead molecules, or test known biomarkers to support the translation of potential therapeutics.

Key assay platforms include:

- Spatial biomarker analysis using molecular pathology
- Spatial transcriptomics within tissue sections
- Experience in advanced diagnostic screening in the Lighthouse Lab
- Mass spectrometry imaging
- Bulk analysis of samples using transcriptomics and mass spectrometry

Technology Innovation

We have established a suite of 'hard-to-access' technologies that can be applied to address project challenges.

Key platforms include:

- Preclinical small animal imaging including PET
- Mass spectrometry
- Advanced microscopy
- Molecular pathology

Informatics skills and data assets

Application of advanced machine learning to modern drug discovery problems. Analysis and interpretation: applying expert interpretation to find, index, classify chemical and biological data.

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Office Locations

Aberdeen, Levenmouth (Fife), Glasgow, Blyth (North East England), Humber, East Anglia, Cornwall, South West England, Wales

Centres of Excellence

Testing and Validation, Operations and Maintenance, Floating Offshore Wind, Marine Energy Engineering

Launch Academy

Offshore wind-focussed technology accelerator, removing barriers to commercialising new products and services.

Fit for Offshore Renewables

Supply chain readiness support targeting enhanced competitiveness.

Offshore Wind Growth Partnership

Funded by industry support for increasing supply chain competitiveness, capability, and capacity.

TUS Offshore Renewable Energy Research Centre

Market entry and incubation for UK businesses in China.

Capabilities & Assets

Blades

100m and 50m Blade Test Halls, Blade Erosion Test Rig, Blade Modelling, Advanced Materials and Manufacture

Powertrains

1MW, 3MW, 15MW Powertrain Facilities, Wind Turbine Bearing Test Facility, eGrid Grid Compliance Testing, Reliability and Health Monitoring, New Components

Electrical Infrastructure

HV and Materials Labs, Pre-qualification bays, Dynamic Cable Test Rig, Fault Diagnostics, Reliability, Future Energy Systems & Hydrogen

Data and Digital

Data Analytics, Power Performance Assessment, Dashboarding, Data Benchmarking, Access to Operational Data

Operations and Maintenance

Benchmarking against current technologies, Inspection, Intervention, Planning/Optimisation, Cable Insights

Robotics and Autonomous Systems

Subsea Docks, Training Tower, Blade Sections, Robotics and Autonomous Systems Testing

Floating Offshore Wind

Novel substructures, Technical & Commercial Risk, Ports and Logistics, O&M

Foundations and Substructures

Condition Monitoring, Novel Foundations, Survey & Inspections, Dock Facilities and Simulated Seabed

Marine Energy

Simulation and Modelling, Array Optimisation, Wake Effects, Nacelle Testing, Cost Modelling, Technology Assessment, Resource Modelling

Additional Facilities

7MW R&D turbine, Met Mast, ROV Zone, Access to Operational wind farms

SME Support Approaches

Research, Development & Innovation

- Live Innovation Calls
- Insights & Analysis
- Collaborative R&D
- Test & Validation
- Academic Engagement

Commercialisation

- Accelerator Programmes
- Investor Engagement
- Business Case Development
- Market Entry Information

Company Growth

- Supply Chain Readiness
- Improving Competitiveness
- Cross Sector Transfer
- Export Opportunities

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SME Support Approaches

Universal – standardised support available to all SMEs

- Introduction to Space Sector
- Market intelligence reports
- Short-burst business/technical advice
- Networking Opportunities
- Partnering
- Funding information and guidance
- Access to the Catapult Network
- International opportunities

Capability Catalogue

Bitesize view of organisations working in the UK space sector that is shared with international companies and primed to increase uptake of products/services and unlock partnership opportunities.

Sprint Programme

Tailored business design sprints aimed at various segments of the ecosystem. Sprints are a 1-2 day workshops that guide companies who are at an inflection point. Sprint sessions typically involve a business strategist, technical specialist and user centred designer working with the company to deliver an agreed set of deliverables (e.g. investor deck, commercialisation roadmap, user requirements/stories, service blueprints etc). The types of Sprint we currently offer: Early Stage Start-up Sprints, Mature Start-up Sprints, Academic Sprints, Inward Investment Sprints.

Westcott Incubator

Focus on drones, 5G and propulsion start-ups. Office space, business support, technical support, networking, partnering and access to finance form part of the offer.

Space Commercialisation Engine

Combination of business design and technical Sprints aimed at non-space companies who could benefit from space-based data services.

Scaleup Programme

Scaleup support services to companies who are scaling/have scaled.

In-Orbit Demonstration Programme

Supports companies with novel space-based service concepts by dramatically reducing the cost to develop and launch a satellite. Companies contribute typically ~20% of the cost of doing a similar demonstration commercially.

Capabilities & Assets

Hot desking

Flexible desk space for companies wishing to locate in Harwell, at the heart of the space cluster.

Data Access & Storage

Services include cloud processing, local large image stores, access to free satellite images including new SAR data sets.



DISC

Innovation for Space. Use of design and test tools that are needed for Space Travel (and for other harsh environments). Collaborative environment and facilities for design, manufacture and testing of products for deployment into complex environments. Including: Cleanrooms, Vibration Table, Thermal Cycle testing, Prototype and low volume production facility.

Living Lab

Focus on Health applications and digitisation of the UK's healthcare system.

Westcott 5G Testbed

Step-out Centre to test communications technologies. Full spectrum of licences: 700-420Mhz, integration of satellite and terrestrial communications, lab facilities, cloud computing.

Antenna Testing Facilities

Testing facilities for satellite communications devices.

National Operations and On Orbit Services Centre

A fully equipped mission control centre that can be used to control satellites on orbit.

Goonhilly Ground Segment

An operational S and X band tracking dish antenna that receives data gathered via satellites. The facility provides a 'bring-your-own solution', where equipment can be installed.

Contact

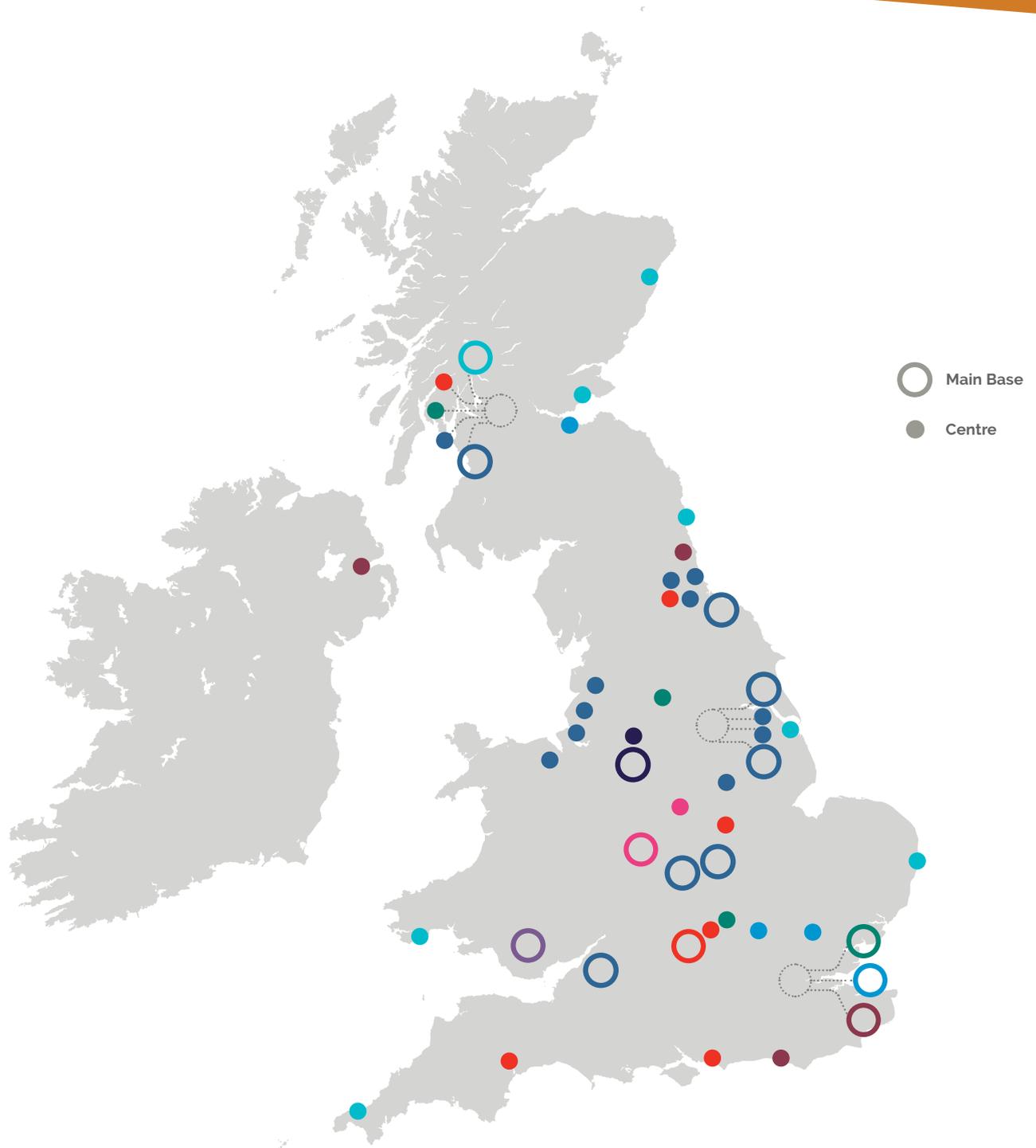
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| Cell and Gene Therapy | Digital | Medicines Discovery |
| Connected Places | Energy Systems | Offshore Renewable Energy |
| Compound Semiconductor Applications | High Value Manufacturing | Satellite Applications |