

# DIGITAL HEALTH & CARE IN SCOTLAND



**#SCOTLAND|SNOW**

# WELCOME TO SCOTLAND FÀILTE GU ALBA

The small country making a big impact on the global landscape.

Scotland is where you will find excellence in education, a flair for invention and a penchant for research.

It's a place where great minds connect, and where health, happiness, equality and sustainability come together to produce a dynamic life sciences environment with global impact.

You'll find us progressive and pioneering. Scotland hosts one of the biggest life sciences clusters in Europe, with over 41,000 people working in over 770 organisations covering medical technologies and pharmaceutical services, precision medicine, advanced therapies, digital health and care, industrial biotechnology, animal health and agritech.

And with one of the largest ICT and technology communities in Europe, Scotland has an exciting future as a location for innovative digital health and care projects.

The shining jewel in our crown is our people. By locating in Scotland, you'll access a highly educated, loyal workforce with a strong work ethic. We will work with you to meet your business and workforce needs and you'll be connected to a culture of research, innovation and creativity.

Scotland is a land of great natural beauty and strong heritage and our warmth and generosity are world renowned. Collective wellbeing is at the heart of our economic policy and we believe that long-term growth will come from prioritising our people and our planet.

Many global businesses which share our values have already chosen to locate, operate and grow in Scotland and we'd love you to join them.

We're here for you throughout the journey – you will be supported before, during and after you locate in Scotland.

**Now is the time to invest in Scotland. So come on in; be part of Scotland's continuing success story.**



Fair Work



Net Zero



Inclusive Economic Growth



## SCOTLAND'S OPPORTUNITY

When it comes to digital healthcare, Scotland is leading the way. We have extensive digital health records, a strong company base with expertise in informatics and the drive and determination to rise to the challenges of a rapidly changing global health climate.

The investment opportunity in Scotland focuses on development opportunities for healthcare based around informatics, big data and patient stratification.

### Prototype development and marketing

There are opportunities for companies seeking to develop and market new prototypes in digital health and care. Companies investing in this area will have access to a strong academic and commercial base and will be supported by the Digital Health & Care Innovation Centre (DHI), which can help you develop your prototype and take it to market.

### Test bed environment

Scotland can replicate almost every environment in the world, from city-related problems with low life expectancy to rural and remote island healthcare challenges. There is an opportunity for companies seeking to work in a system with a proven track record of innovation management to reduce risk, cost and the time for agile development, testing and validation.

There is also a current opportunity for companies to work with DHI's unique Demonstration and Simulation Environment (DSE) – a unique physical space to experience, explore and test innovative digital capabilities and infrastructures in support of sustainable health and care transformation, with the focus on placing the person at the centre of care.

### Innovation partners

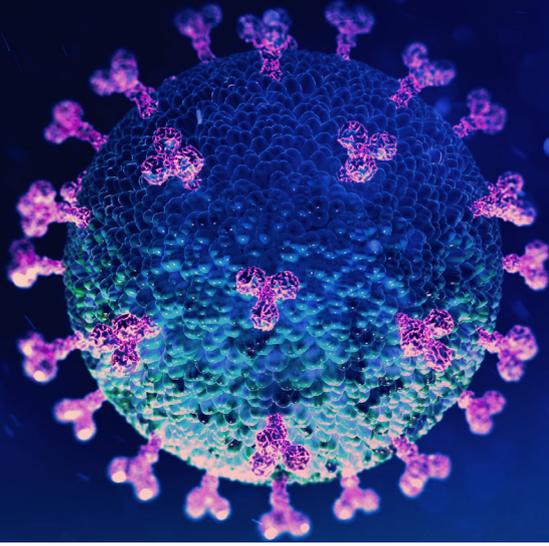
We are seeking companies active in digital health and care, big data and sensors and imaging to work with DHI, the Data Lab and CENSIS respectively.

Companies that focus on solutions in the following areas are of particular interest: preventative & proactive care, reforming urgent care, chronic pain management, home first, management of patients with long wait times for treatment and demand & capacity modelling to support scenario planning and resource utilisation across the whole system.

### Healthcare and informatics

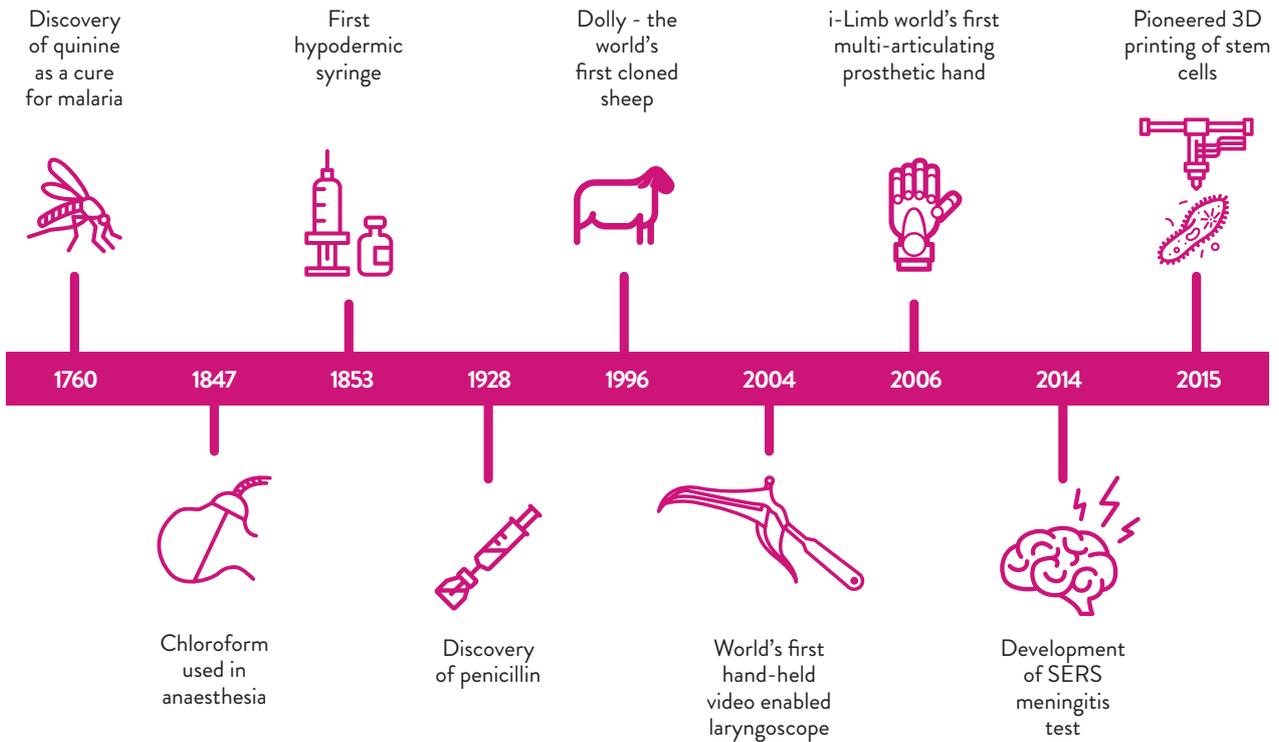
In comparison to rest of UK and US, Scotland has an incredibly stable population, with cradle to grave patient records underpinned by a unique patient identifier assigned to everyone registered with a GP practice. We also have a centralised healthcare system (including a national Picture Archiving System) and a high incidence of morbidity in common disease areas such as diabetes, COPD, obesity and CVD.

Consequently, Scotland has developed a uniquely strong offering around informatics research and there are exciting opportunities for companies to work with us to maximise this research and co-create new healthcare solutions.



## A POWERHOUSE OF INNOVATION & INVENTION

For more than 200 years, Scotland's scientific discoveries have served as critical stepping stones for the advancement of modern medicine. We've been at the forefront of pioneering medical innovations such as:



Today, smart, profitable ideas flow from our company base, and from the diverse business, academic and technology communities that support them, as we continue to foster innovation and inspire novel developments which address global healthcare needs.

### INNOVATION INFRASTRUCTURE

When you invest in Scotland, you're choosing a location which combines R&D excellence with the right environment for scale-up product testing in a real-life setting.

As well as capability in product design and development, you'll access a comprehensive supply chain offering professional support for product development, design and prototyping, through to manufacture, supply and distribution.

## CENTRES OF EXCELLENCE

We're investing in the development of innovation and excellence centres to enhance collaboration between industry and academia and facilitate the rapid translation of solutions to industrial and scientific challenges, creating even greater value for companies like yours.



DHI aims to support transformational collaboration between universities and businesses to enable 'clinical' trials in health and care environments. It is currently supporting the Scottish Government's response to the Covid-19 pandemic and has initiated six new Covid-19 projects to produce high quality products that are being deployed into a live service to support patients and health & social care staff in Scotland.



The Usher Institute at the University of Edinburgh works with people, populations and their data to understand and advance the health of individuals and populations through innovative collaborations in a global community.



Fraunhofer UK Research Limited in Glasgow is the first UK Fraunhofer research centre and aims to build on the strong photonics and quantum technology clusters in Scotland and other parts of the UK, for the benefit of the UK and EU. Its research efforts are geared entirely to people's needs: health, security, communication, energy and the environment.



An industrial research centre for AI research in digital diagnostics. With established research sites, iCaird offers access to state-of-the-art AI infrastructure, clinical technology and healthcare data, and connects industry with clinicians, health planners and academic partners to solve healthcare challenges.

## CANON – TAKING SCOTTISH INNOVATION TO THE GLOBAL MARKET

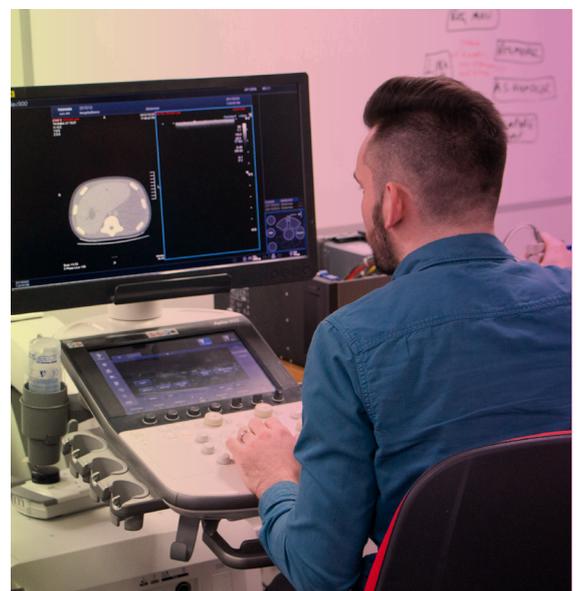
Canon Medical's European R&D Centre in Edinburgh traces its heritage back to a pioneering medical imaging start-up, Voxar Ltd. Now with over 120 engineers, scientists and clinical experts, the team in Edinburgh delivers world-leading software and technology to its parent company in Japan.

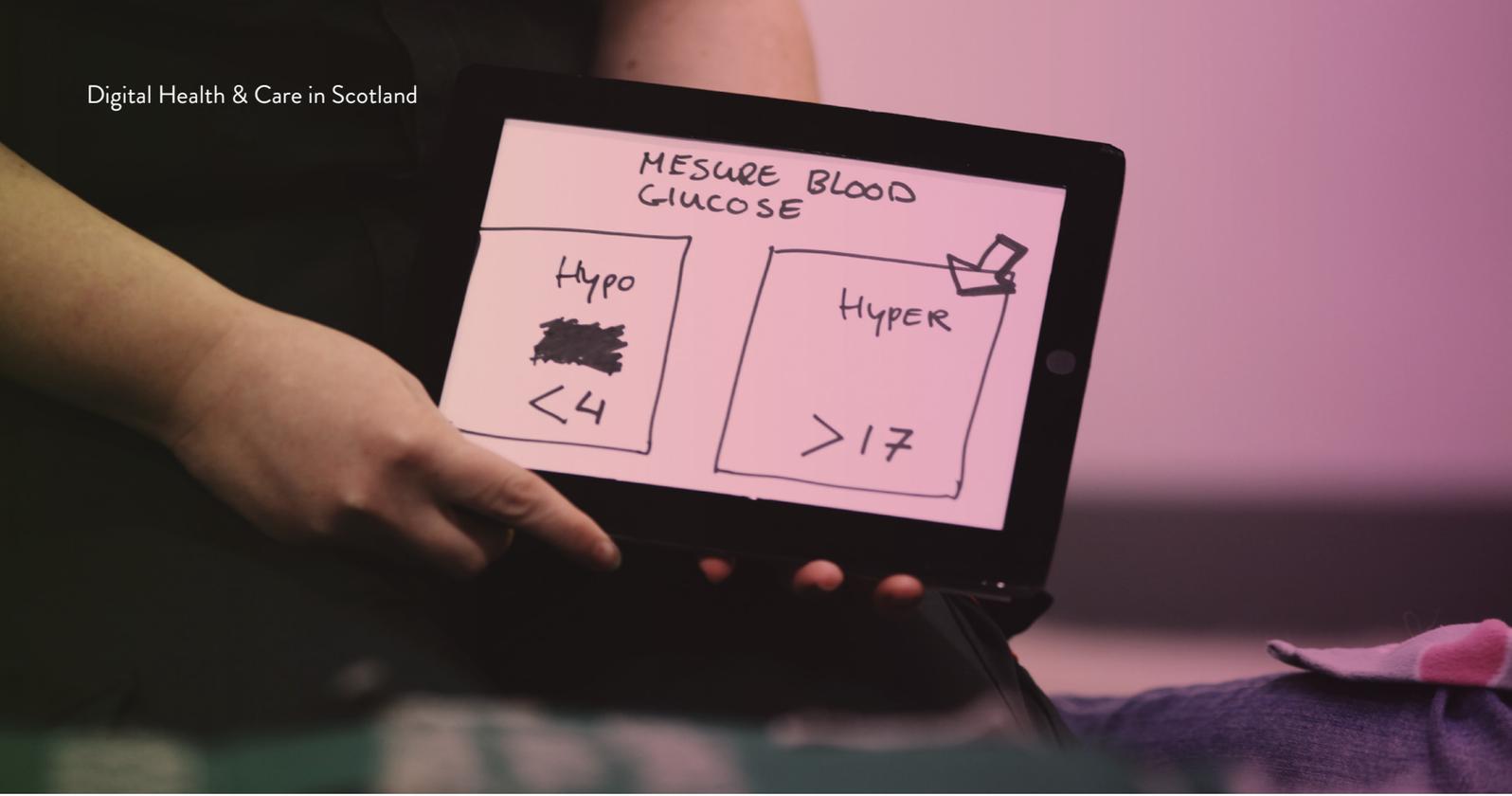
The Edinburgh team is in near constant contact with external clinical experts and Canon's own global R&D and clinical teams. The R&D planning process identifies new clinical needs and the team in Edinburgh then works with clinical experts from the UK and Europe to create innovations at the proof of concept level.

From then on, the focus moves to Japan and the integration of Scottish innovation into the products and solutions that are built in Japan. This delivery model means that the innovative technology created in Scotland quickly finds its way into everyday clinical practice in hospitals all over the world.

## Canon

CANON MEDICAL RESEARCH EUROPE LTD.





## TECHNOLOGY EXPERTISE

Scotland's ability to develop new solutions for healthcare based around informatics, big data and patient stratification is almost unrivalled, as an outstanding level of academic and industry collaboration has created a truly open innovation environment.

### Your company will benefit from:

- A strong academic and commercial base in informatics to develop world-class infrastructure supporting the continuing move towards a connected and personalised data-driven healthcare environment.
- A stable population with some of the best longitudinal health data in the world, with an informatics capability that exploits electronic patient records, linkable through a unique NHS patient identifier, enabling clinical trials, stratified medicine and genetic studies.
- One of the most highly-developed health informatics systems in the world, featuring picture archiving and a Community Health Index (CHI) register of every patient recording their entire medical history from cradle to grave.
- An informatics system with a long tradition of using linked health service data for research including evaluating interventions to deliver patient benefit, measuring long-term outcomes in clinical trials, assessing the safety of new medical interventions and supporting understanding of patterns of health and illness across the whole population.

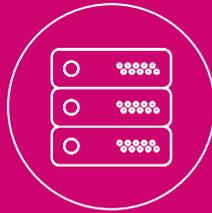
And when you choose to locate in Scotland, you'll benefit from a designated Safe Haven platform for the use of NHS electronic data in research feasibility, delivery and pharmacovigilance. This means you'll be assured of a secure environment supported by trained staff and agreed processes, whereby health data can be processed and linked with other data and made available in a de-identified form for analysis to facilitate research.

## OUR CONNECTED TECHNOLOGY INFRASTRUCTURE WILL TAKE YOUR R&D TO THE NEXT LEVEL



### ARTIFICIAL INTELLIGENCE APPLICATIONS INSTITUTE (AIAI)

Specialises in Intelligent Systems; systems making use of the knowledge of experts, or systems that learn. Innovative applications are created using AI technologies



### THE DATA LAB

Enables industry, public sector and world-class university researchers to innovate and develop new data science capabilities in a collaborative environment



### THE DIGITAL HEALTH & CARE INNOVATION CENTRE (DHI)

A purpose-built demonstration environment which allows innovators to quickly demonstrate service model and technical and digital innovation capabilities to support service redesign



### SCOTTISH CENTRE FOR TELEHEALTH AND TELECARE

Supporting the development of technology-enabled health and care services in Scotland such as supported self management, home and mobile health monitoring, telecare, digital services and apps, video enabled health and care and provision of computerised CBT services



### CENSIS

Industry-led innovation centre for Sensor and Imaging Systems (SIS) which enables collaboration at the forefront of market-focused SIS innovation, developing products and services for global markets



### PRECISION MEDICINE SCOTLAND INNOVATION CENTRE

Linking Scotland's domain expertise, data assets and delivery capability to accelerate the adoption of precision medicine





## THE RIGHT TALENT FOR YOUR BUSINESS

Want to attract and retain the right talent to maintain your competitive edge?  
Come in – we've been waiting for you.

We often say that people are our greatest asset and in fact, our workforce is internationally recognised as one of the best trained, most reliable and cost-competitive labour forces in the world. This, combined with our famous work ethic, means that your company will benefit from a hard-working, dependable and diverse workforce, which in turn means stability and reassurance for your business.



### Diverse Talent Pool

In Scotland, you'll find a rich talent pool featuring almost 200,000 health staff and a similar number of social care staff, in addition to:

- Over 96,000 people currently working in digital technology
- More than 7000 people working within the digital health and care technology companies
- An industry supplemented annually by 70,000 graduates and a pipeline of 17,000 graduates with digital health expertise.



### Futureproofing the skills pipeline

A Skills Investment Plan developed by industry sets out a vision for Scotland to be the location for ambitious life sciences employers to develop, invest and grow. As part of this plan, we're future-proofing the skills pipeline to meet the needs of the sector through work-based learning and education awareness, such as funded apprenticeships covering areas such as data sciences, digital and software and a life & chemical sciences workforce development portal, which offers a range of learning pathways.



### Excellence in education

Scotland ranks worldwide among the top three for research productivity and impact, with 19 universities and higher education institutions and world-leading research centres that attract some of the brightest international scientists.

By choosing Scotland for your life sciences project, you'll find a cohort of ambitious, passionate and globally connected leaders across academia and industry, not to mention:

- **15 Scottish Universities performing world-leading research** within life sciences, healthcare and related disciplines
- The **School of Life Sciences at the University of Dundee** with more than 900 staff from over 60 countries, ranked as the top university in biological sciences
- A range of taught **Digital Health & Care Master's and MRes** courses
- A dedicated **Digital Health Doctoral Training Centre** at the University of Edinburgh
- Funded **scholarships in Digital Health & Care Master's**, ensuring an inclusive approach to developing the talent pipeline.

**We will listen to your business, giving you the opportunity to influence skills, education and training provision to get the most out of your people.**

## A SUPPORTIVE BUSINESS ENVIRONMENT

With a compact geography, engaged and connected industry leaders and active support from the Scottish Government, Scotland is one of the most accessible, well-connected and collaborative life sciences clusters in Europe.

Life Sciences Scotland (LSS) is the industry leadership group for Scotland's life sciences sector. Its members include leaders from across the industry, government ministers, academia, trade bodies, the NHS and our enterprise agencies. The group meets regularly to discuss key issues and opportunities affecting the life sciences sector, and to work on ensuring the industry's continued success in Scotland.

You'll benefit from a connected life sciences community where patient-centred care, academic institutions & research capabilities are aligned and there is a strong overlap across data, devices, diagnostics, digital health & precision medicine.



**NHS SCOTLAND** is a publicly funded system serving the healthcare needs of the Scottish population of approximately 5.4m.

**NHS RESEARCH SCOTLAND** aims to ensure that NHS Scotland provides the best environment to support clinical research and offers access to Scotland as a single clinical research site.

**SCOTLAND'S DIGITAL HEALTH & CARE STRATEGY** focuses on how Scotland will use technology to reshape and improve services, support person-centred care and improve outcomes.

### WELL CONNECTED

The Scottish digital health and care cluster is made up of over 200 core companies from innovative homegrown operators such as AxSys Technology, Aridhia and Sitekit to large multinationals such as LifeScan, Lockheed Martin, Selex, and Canon Medical Research Europe.

You'll also benefit from the presence of the Healthy Ageing Innovation Cluster; a collaboration with a shared strategic interest covering policy, health, housing and care and enterprise, with representation from across Scotland and further afield.

### WORLD-CLASS FACILITIES

We often say that Scotland is a global leader in digital health and care delivery, thanks to our integrated health and care system and access to markets across the UK and Europe. But you don't have to take our word for it. In fact, Scotland has been named by the EU as a European Innovation Partnership on Active and Healthy Ageing Reference Site with a 4-star rating for health and care innovation.

### GOVERNMENT SUPPORT

In Scotland, our people expect technology and information systems to be part of how health and care services are delivered, so the digital health and care sector has the backing of a defined Scottish Government strategy to support the growth of this industry.

This strategy recognises that there is a real opportunity for healthcare delivery and innovation researchers and businesses in Scotland, so you can be assured of a warm welcome and government support when you choose Scotland for your project.

## STRATEGICALLY LOCATED AND WELL CONNECTED

Discover the ideal environment for growth in Scotland's network of business incubators and science parks, which help make Scotland one of the most cost-effective manufacturing locations in Europe.

### Connected for business

Scotland's four main city regions provide the majority of property for rent or land available for development, however opportunities exist all over Scotland.

From the renowned Edinburgh BioQuarter, to facilities including Dundee Medipark, BioCity and the Glasgow Clinical Innovation Zone which is located alongside one of the largest acute hospitals in Europe, or the 100 acre Enterprise Park at Forres in the Highlands, Scotland offers your company a broad and flexible range of commercial property, incubation and development options to consider.

And the work to expand Scotland's life sciences clusters is ongoing, with exciting developments across the country, including the new £56m Medicines Manufacturing Innovation Centre and £65m National Manufacturing Institute Scotland in Renfrewshire, a new Precision Medicine Living Lab in Glasgow, a £25m investment to grow the Tayside Biomedical Cluster and a £40m BioHub in Aberdeen, to a range of test beds and living labs which will provide even more available space to host companies like yours.

### Connected for health

Wherever you choose to locate in Scotland, you'll be within touching distance of over 300 NHS hospitals and a number of private hospitals too. Where else can you access four major Scottish university hospitals within 3 hours?

**Raigmore Hospital, Inverness**  
(452 beds)

**Dr Gray's Innovation Hospital, Moray** (160 beds)

**Ninewells Hospital, Dundee**  
(862 beds)

**Forth Valley Royal Hospital, Larbert** (860 beds)

**Queen Elizabeth University Hospital (QEUH), Glasgow**  
(1677 beds)

**Edinburgh Royal Infirmary**  
(900 beds)

**Royal Hospital for Children (RHC), Glasgow** (256 beds)



# CONNECTED TO THE WORLD

Invest in Scotland and you'll be close to some huge markets. Whether you're heading to London, Europe or the rest of the world, Scotland is well-connected for business travel.



## 6 AIRPORTS

connecting Europe, Middle East and North America



## FAST AND FREQUENT

rail links to all parts of the UK



## FERRY PORTS AND 2 CONTAINER PORTS

connect to mainland Europe



Daily **DIRECT FLIGHTS\*** TO 150 **DESTINATIONS** worldwide



**130 FLIGHTS\*** PER DAY TO LONDON with a 1hr flight time



**4 MAJOR UNIVERSITY HOSPITALS** which are easily accessible

Our **INTERNET OF THINGS NETWORK** has reached almost **100 PER CENT COVERAGE** in Glasgow and Edinburgh, offering businesses access to smart technologies.

**95.5 PER CENT FIBRE BROADBAND COVERAGE**, including all major cities in Scotland.

Our future-proofed fibre network makes Scotland one of the **BEST-CONNECTED PLACES** anywhere in Europe.

Scotland is ranked among the **TOP 30 COUNTRIES** and cities for digital connectivity.

\*In ordinary times



# GET IN TOUCH

## WE'D LOVE TO WELCOME YOU

Connected business support from Scotland's enterprise agencies will ensure that you are supported before, during and after you locate in Scotland.

We aim to make it quick and easy for your business to settle in Scotland so we will help you identify premises, academic partners and investment opportunities, recruit staff and access funding to upskill your staff, develop new products and services and access growth capital.

Working together, everyone from national government and local authorities to the NHS, universities and advisors, will make the connections which ensure your investment goes smoothly, so that you can focus on growing your business.

To find out why #SCOTLANDISNOW for your company or to experience Scotland for yourself, get in touch and we will be happy to arrange this for you.

NOW IS THE TIME TO INVEST IN SCOTLAND.  
WE'D LOVE TO WELCOME YOU.



[www.sdi.co.uk](http://www.sdi.co.uk)



[investment@scotent.co.uk](mailto:investment@scotent.co.uk)



+44 300 013 2734



[www.linkedin.com/company/scottish-development-international](https://www.linkedin.com/company/scottish-development-international)



[@ScotDevInt](https://twitter.com/ScotDevInt)



[www.youtube.com/user/SDItv](https://www.youtube.com/user/SDItv)

