AI and Healthcare:
Making it happen in Scotland.

Canon Medical in Edinburgh

1994
Company founded

1999
Deal with Toshiba based on Voxar Technology

2009
Acquired by Toshiba Medical R&D

2011
R&D Grant for Multi Modality Solutions

2018
R&D Grant to create Clinical Cockpits

2018
Rebranded as a Canon Medical Company

2018
Canon Medical AI Centre of Excellence

2018
Prof Sotos Tsaftaris AI Collaboration

2019
AI based iCAIRD project started

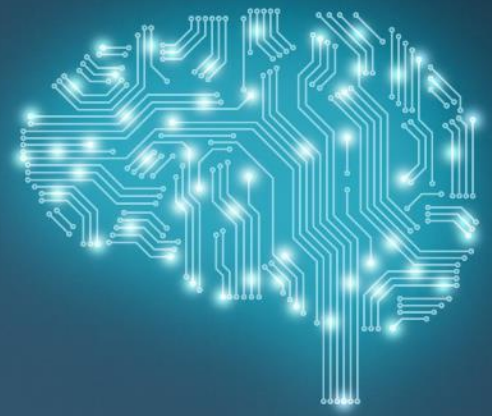
2019
10 Year Anniversary of Acquisition

2021
Our 100th patent is granted

Global illumination Rendering

https://www.vitalimages.com/product-information/global-illumination/

Canon Medical Developing an AI - assisted future



Announcing the
'Canon Medical AI Center of Excellence'
Canon Medical Research Europe, Edinburgh.

"..founded to provide expertise to internal Canon R&D teams as well as to collaborate on healthcare projects with top-tier academic and government organizations, advancing medical research and delivery of next-generation healthcare technologies."

Press release

Artificial Intelligence to help save lives at five new technology centres

The UK's Artificial Intelligence revolution gets new backing, as the Business Secretary announces five new centres of excellence for digital pathology and imaging, including radiology, using AI medical advances.

Published 6 November 2018
From: Department for Business, Energy & Industrial Strategy, UK Research and Innovation, Innovate UK, The Rt Hon Greg Clark, and The Rt Hon Matt Hancock

- Based in Leeds, Oxford, Coventry, Glasgow and London – but each with partners across many parts of the UK – the centres will develop more intelligent analysis of medical imaging, leading to better clinical decisions for patients, and freeing more staff time for direct patient care in the NHS

iCAIRD

£15M NEW ARTIFICIAL INTELLIGENCE CENTRE FOR SCOTLAND TO INNOVATE AND TRANSFORM HEALTHCARE

Issued: Tue, 06 Nov 2018 06:00:00 GMT

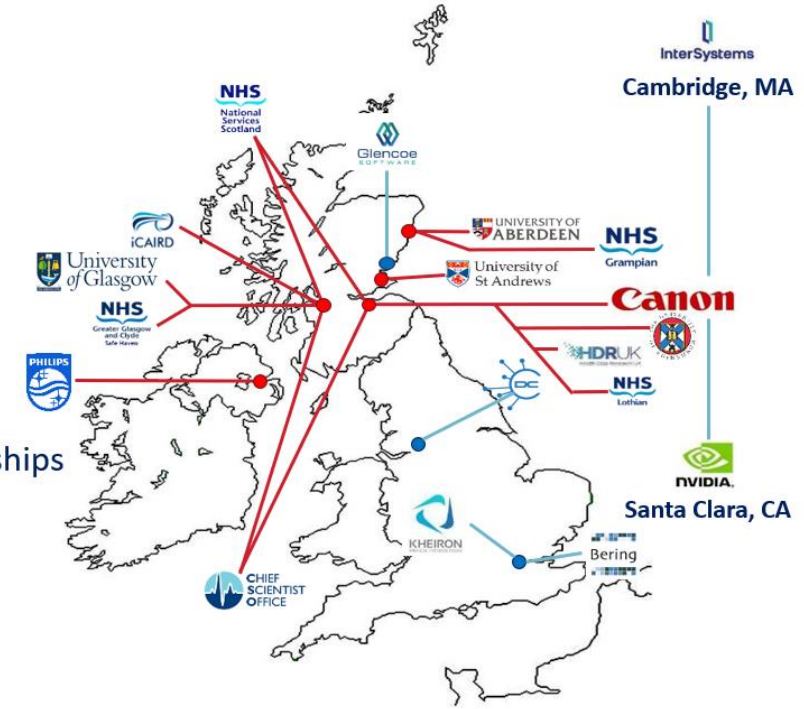
Scotland is to have its own £15.8m artificial intelligence health research centre, which promises to enable better patient diagnosis, treatment and outcomes.

The Industrial Centre for Artificial Intelligence Research in Digital Diagnostics, to be known as iCAIRD, brings together a pan-Scotland collaboration of 15 partners from across academia, the NHS, and industry.

Today (Tuesday 6 November), Greg Clark, UK Secretary of State for Business, Energy and Industrial Strategy (BEIS), will announce that UK Research and Innovation will invest £10million in iCAIRD as part of the Industrial Strategy Challenge Fund.

Key features

- Tried & tested partnerships
- NHS NSS Board
- Safe havens & HDRUK
- SINAPSE
- National PACS
- Direct link to clinicians



iCAIRD

May 2017
Ian Campbell (Innovate UK) speaks at SLA/NHS meeting in Glasgow

sla Scottish Lifesciences Association

NHS / LIFE SCIENCES MEETING 11 MAY 2017

IET Glasgow Teacher Building
14 St Enoch Square GLASGOW G1 4DB

AGENDA

09.00 NHS Registration and Coffee

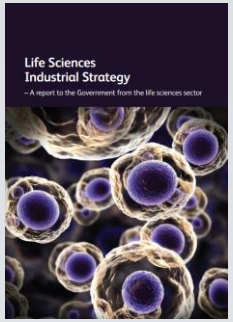
09.30 Welcome
Ken Sutherland SLA Chair and VP Toshiba Medical Visualisation Systems

09.45 The UK Industrial Strategy / Innovate UK Plans, Opportunities and Investment routes
Ian Campbell Director of Health and Innovation Innovate UK

Jul 2017
Ian Campbell presents life sciences industrial strategy

Jul 2017
ILG provides input to Sir John Bell on LS Strategy

Aug 2017
Lifesciences Industrial Strategy published by UK Govt



Oct 2017
Meeting with Ian Campbell and Canon Medical at Edinburgh BioQ

Scottish Enterprise

Dec 2017
Canon Medical CEO approves outline proposal

Dec 2017
UK Govt announces sector deal for Life Sciences

Press release

Government and life sciences sector agree transformative sector deal

Business Secretary Greg Clark and Health Secretary Jeremy Hunt announce a Sector Deal with the life sciences sector.

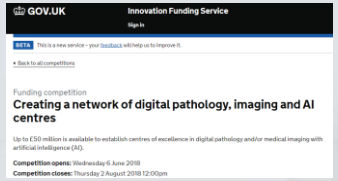
Published 6 December 2017
From: Department for Business, Energy & Industrial Strategy, The Rt Hon Greg Clark MP, and The Rt Hon Jeremy Hunt MP

Feb 2018
Ian Campbell meeting in Edinburgh at NHS Innovation Meeting

Feb 2018
Industrial, NHS/Academic partners dinner

Apr 2018
Canon Medical meeting with Sir John Bell in Oxford

Jun 2018
Funding call opens with Innovate UK for AI centres.


GOV.UK Innovation Funding Service

Funding competition
Creating a network of digital pathology, imaging and AI centres

Up to £50 million is available to establish centres of excellence in digital pathology and/or medical imaging with artificial intelligence (AI).

Competition opens: Wednesday 6 June 2018
Competition closes: Thursday 2 August 2018 12:00pm

Aug 2018
Application completed and submitted.

I-CAIRD: Industrial Centre for AI Research in Digital Diagnostics

Application status

Application submitted

Application number: 20378

Your application for the competition 'Creating a network of digital pathology, imaging and AI centres' was submitted on 1 Aug 2018 at 7:46pm.

View application Print application

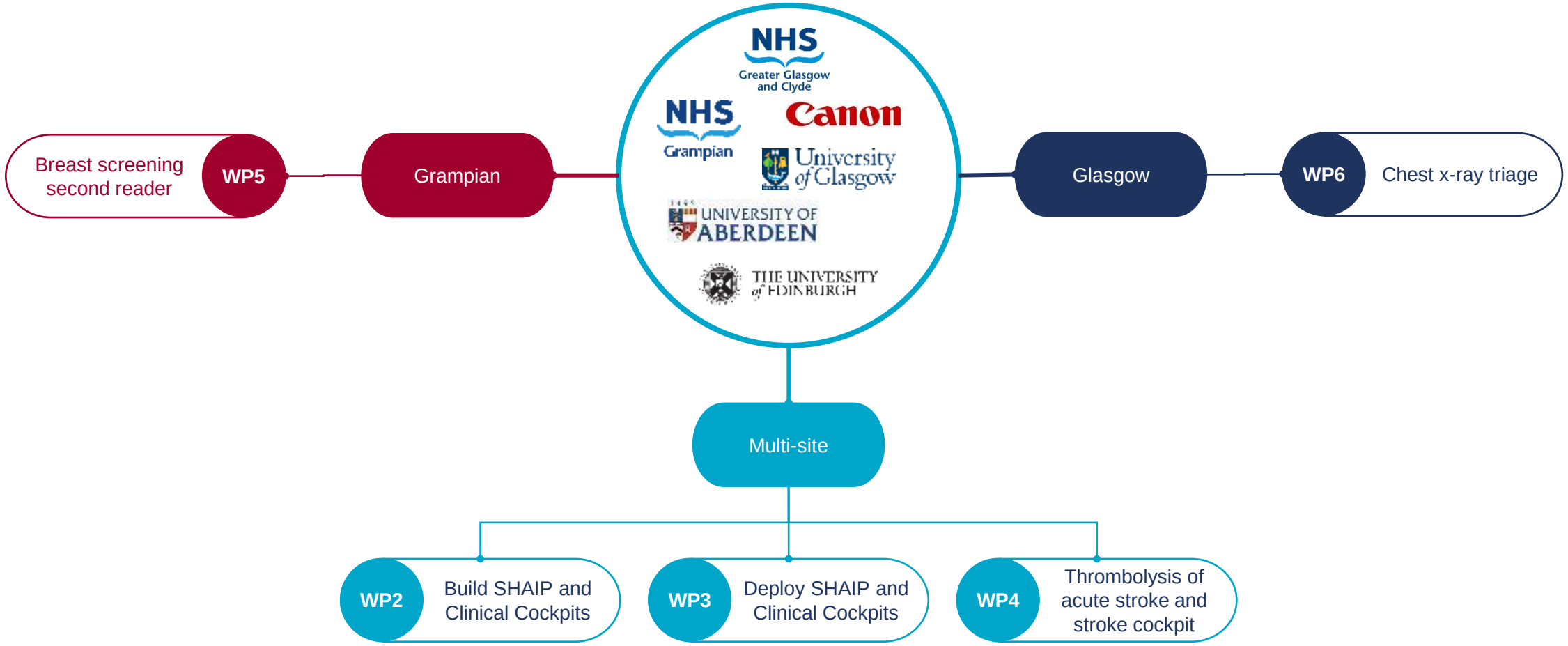
Nov 2018
Five winners announced including iCAIRD

NHS Grampian to teach computers how to diagnose conditions

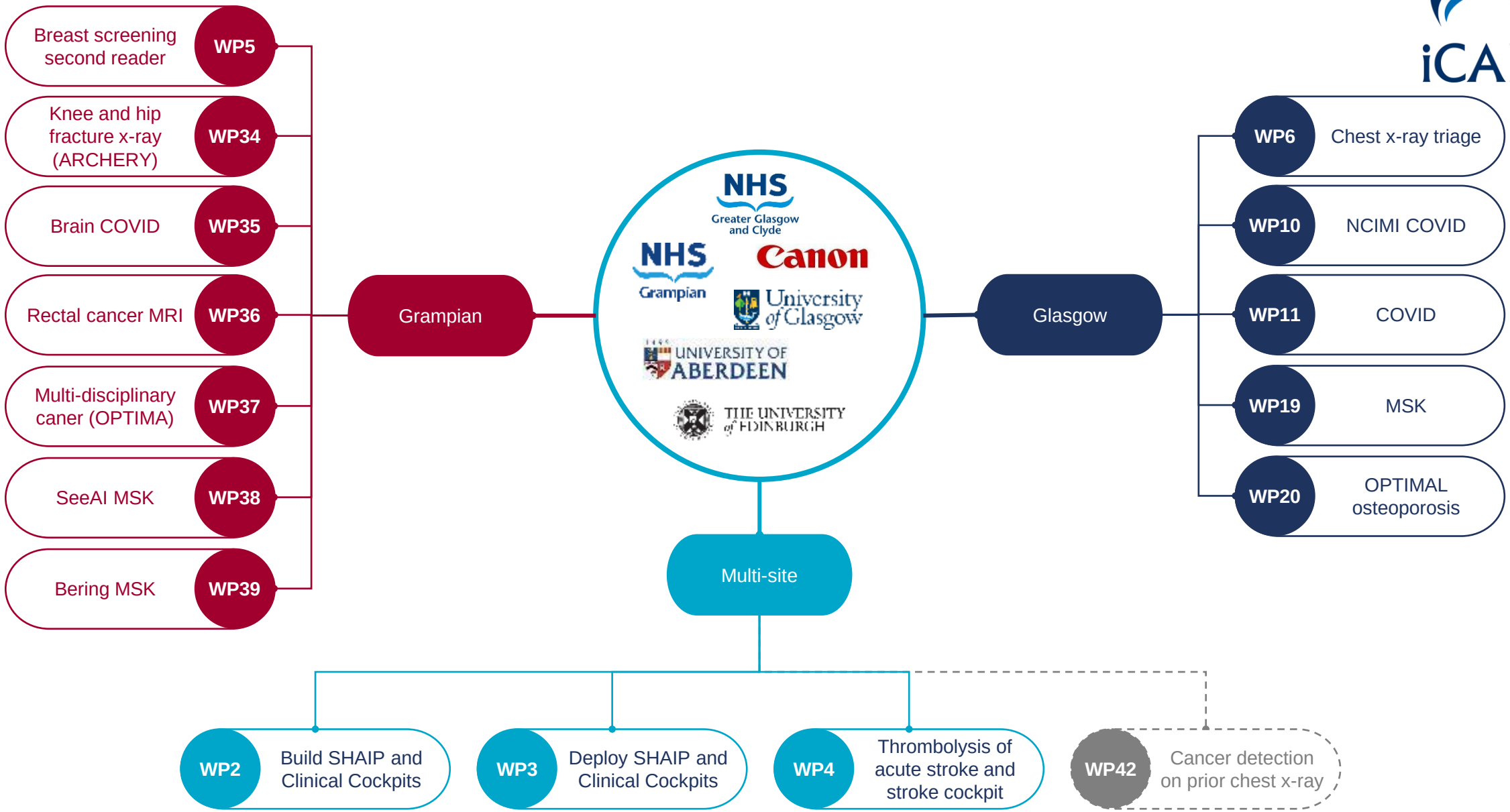
Feb 2019
Official Start of iCAIRD project

iCAIRD

Radiology – start of programme



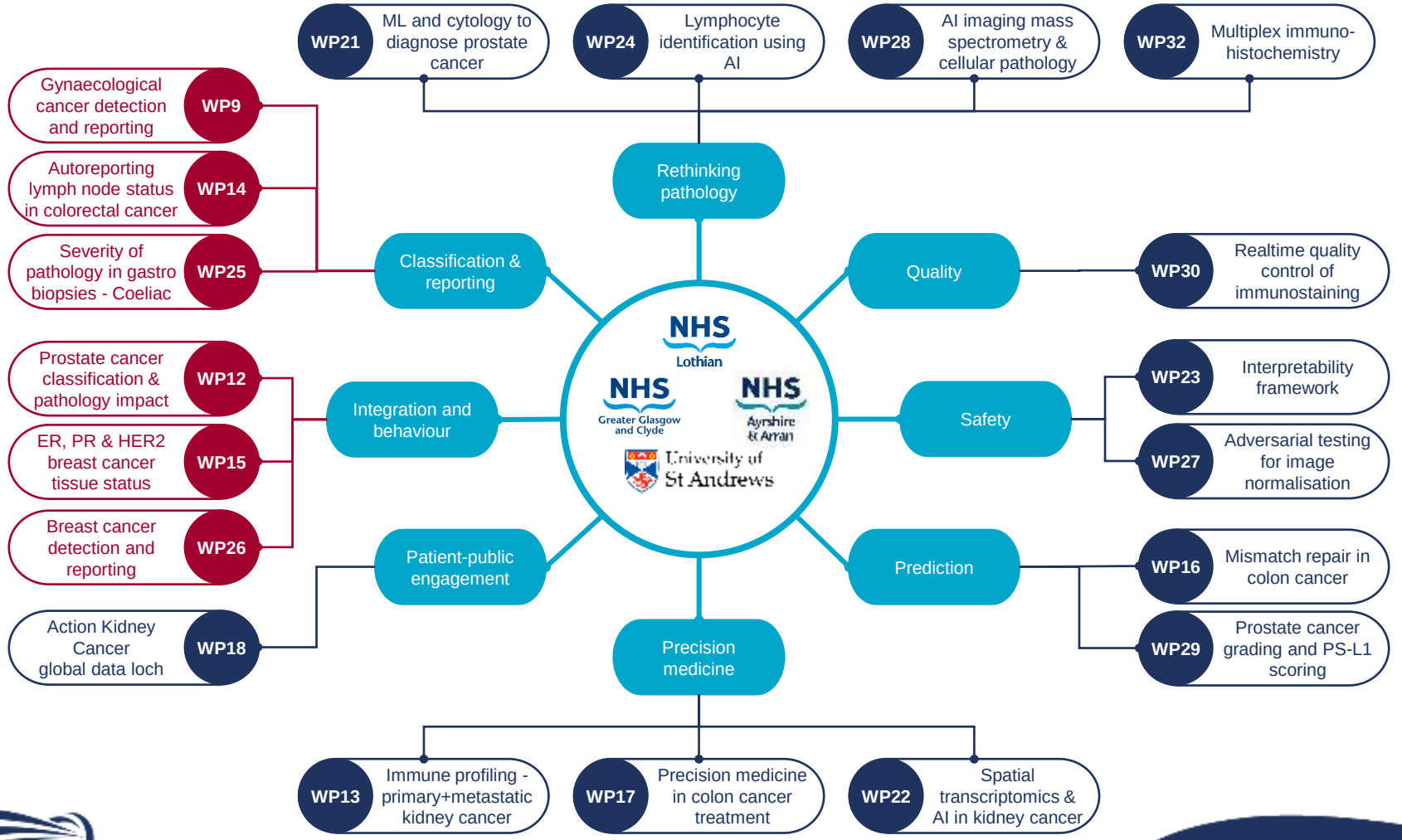
Radiology – actual



Pathology – start of programme

iCAIRD

Pathology – actual



iCAIRD

Core Achievements

Platforms	• **SHAIP** – TRE, imaging integration, rapid deidentification and federated learning • **Pathology Lab** – automated data extraction, dedicated research scanners, AI (or other endpoint) integration • **EMRs** – real-time integration with incumbent systems for key datasets
Data access	• **Imaging** – direct access to national PACS – a first • **Pathology** – bulk data extraction and deidentification of 1.5m whole slide images
People	• **Core team** – know how to do this, have overcome the obstacles, work with the existing teams, experts in artificial intelligence, links into government • **National PACS** – exceptional relationship with the national PACS team • **Partnerships** – including ongoing Philips partnership agreement

iCAIRD

iCAIRD

The Industrial Centre for Artificial Intelligence Research in Digital Diagnostics

50 Projects

40 Partners

450% Growth

2 Platforms

2 Awards

3 Products

3 Scale-ups

£25m Investment

250+ Staff

75 million Medical images

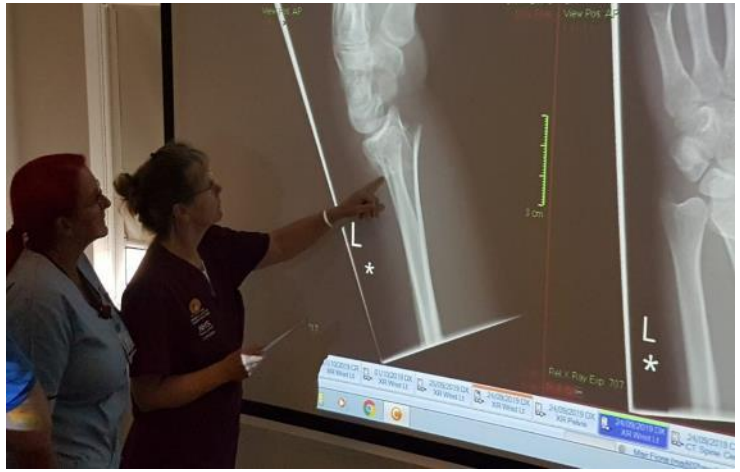
News story

Using AI in NHS diagnosis: apply for funding

Up to £240,000 is available for organisations exploring the use of AI and machine learning in fracture diagnosis.

Published 13 May 2019

From: Innovate UK and UK Research and Innovation



Five organisations announced for share of £240,000 in AI Fracture Diagnosis Programme

Posted On 23rd October 2019 By oneadmin In Life Sciences, News /

Opportunity North East (ONE) and the Scottish Government have announced the five organisations selected for the first stage of a landmark project to develop artificial intelligence (AI) solutions to support fracture diagnosis in hospitals. The project will see up to £240,000 invested in innovative data technology.

Bering Limited, Red Star AI Limited, SeeAI, Jiva.ai Ltd and the Department of Computing Sciences University of Aberdeen, were shortlisted from a field of 40 organisations having applied through a two-phase Small Business Research Initiative (SBRI) competition, supported by Innovate UK, in July of this year.

NHS 75 England

Investing in the future of health research: secure, accessible and life saving

9 December 2022 Dr Claire Bloomfield

Digital Innovation

This blog by Dr Claire Bloomfield looks at the recent progress towards delivering the Data saves lives strategy.

Secure data environments (SDEs) are data storage and access platforms, which uphold the highest standards of privacy and security of NHS health and social care data when used for research and analysis. They allow approved users to access and analyse data without the data leaving the environment. Today we are really excited to announce over £13.5 million investment for teams across England to develop a country-wide network of NHS owned SDEs.

Secure data environments (SDEs) will deliver more rapid and efficient healthtech innovation for England. In line with recommendations included within Ben Goldacre's 'Better, broader, safer' review, our data strategy commits to transparent procurement, acquisition and use of SDEs. Early returns suggest the concept is catching on.

In March we announced up to £200 million of joint funding across NHS England, the Department of Health and Social Care (DHSC) and the Department for Business, Energy and Industrial Strategy (BEIS) to make health data more accessible and linkable. The funding enabled us to begin investing in data-driven clinical trials and secure data environments (SDEs) for research. I'm pleased to provide this update about how we are working towards our vision of a world-leading, NHS-wide, health data research infrastructure that enhances patient care, sustains the NHS, supports innovation, and is understood and well-supported by the public.

Scottish Government

Scotland has a thriving life sciences sector which played an innovative role in our response to the pandemic. In order to support future growth the Scottish Health and Industry Partnership is working to achieve the dual ambitions of meeting health and wellbeing priorities and boosting economic prosperity. This will focus on the development of a roadmap to investment for Life Sciences, the creation of economic opportunities through the Supply Chain development programme, and future opportunities in the use of artificial intelligence in health and social care. To support the new opportunities in artificial intelligence we will provide £20 million to **develop an AI Hub for Life Science, NHS and Social Care** to create AI Innovation and commercialisation capability in Scotland linked to the national AI Strategy and Tech Scalars Programme.

Made For life

For over 100 years, the Canon Medical Systems `Made for Life' philosophy prevails as our ongoing commitment to humanity - generations of inherited passion creates a legacy of medical innovation and service that continues to evolve as we do. By engaging the brilliant minds of many, we continue to set the benchmark, because we believe quality of life should be a given, not the exception.

Canon

CANON MEDICAL SYSTEMS