

# NHS Test Bed for the West of Scotland

Services and support available to support pre-commercial open innovation with industry, academia and health & social care staff

2023

Decorative wavy lines in various shades of blue and white, flowing across the bottom half of the slide.

# West of Scotland Innovation Hub

## NHS SCOTLAND



Health in Scotland is a devolved power, with policy set by the Scottish Government

Services are delivered through:

14 territorial NHS Boards responsible for the protection and improvement of their population's health and for the delivery of frontline services (primary care, secondary care, tertiary services)

7 national NHS Boards who support the territorial Boards by providing a range of national services

1 national public health body

## WEST OF SCOTLAND



We are 6 Health Boards, with 81,000 staff and 2.7m population (50% of Scottish population)



## OUR HOST BOARD



Largest NHS organisation in Scotland and one of the biggest in the UK

35 hospitals, 6,000 beds, including largest hospital in UK  
Work with 6 local authorities  
Biggest employer in Scotland

Rich innovation ecosystem including iCAIRD and Strength in Places Living Lab partnerships, Health Data Exchange JWA, and typically 1,000 R&I studies/year

### 2019-20 activity:

510,000 emergencies  
215,000 scheduled inpatients  
1,185,000 outpatients  
7.5 million GP attendances  
13,600 babies delivered  
24m prescriptions dispensed

## INNOVATION HUB



One of three NHS Scotland regional test beds funded by SG Chief Scientists Office

Established 2019

In 2021, 57 projects, involving mix of devices, sensors, data, software, Machine Learning / Artificial Intelligence, aided diagnostics and screening

From early stage to late stage innovation, and number scaled to BAU and national

Co-team involving Clinical Leads, Research & Innovation staff, eHealth specialists, wider support services and governance

## WHAT WE DO



Facilitate collaborations and access to NHS infrastructure for pre-commercial open innovation

Co-design, co-develop and co-deliver with NHS, academia and industry

Provide leadership, support, regulation support, leverage funding, and access to NHS teams, healthcare settings, data and governance

Build evidence, allow innovators to refine solutions, inform strategy and develop thinking, support routes to scale-up and mainstreaming, and seek preferential access for NHS Scotland to final products

## OUR TEST BED



Provide access to NHS test bed infrastructure and support



# Our services and support



## SCOPING

- Develop and co-author grant and funding bids (e.g. SBRI, UKRI)
- Reference cost model for NHS R&I, eHealth and clinical services resource as we are required to ensure all subsequent innovation project work is cost-recovered
- Access to clinicians, health and social care settings to explore and scope ideas
- Early consideration of regulatory, ethics and governance approvals required
- Exploring current landscape such as devices, systems, service pressures, data, other ongoing projects and initiatives
- Exploring availability of data, cohorts and linkages



## PROJECT DELIVERY

- Project management
- Contracting
- Governance approvals (including organisational, Information Governance and IT compliance)
- Ethics approvals
- Co-design, co-development and co-delivery of solutions
- Access to eHealth, R&I, data and clinical subject matter experts



## EVALUATION

- Service evaluations
- Clinical studies (e.g. feasibility, evaluation)
- Unregulated clinical trials
- Regulated clinical trials of non-medicinal products (e.g. medical devices such as AI or software which aid clinical decisions)
- Input to academic publications
- Advice on optimisation / refining solution
- Working with specialist partners to undertake
  - Innovative Medical Technology Overviews (IMTO)
  - Medtech briefings
  - Health Economics and Health Technology Assessments (HEHTA)



## SCALE-UP SUPPORT

- Knowledge and know-how for all parties
- Future strategies informed
- Local adoption / scale-up routes
- National adoption / scale-up routes
- Preferential access for NHS Scotland to final products
- Post-market surveillance
- Future collaborations
- Comms and media channels



## TEST BED

Medical Devices Unit

Diagnostics &  
Research Imaging

Safe Haven (data)

Biorepository

Clinical Research  
Facility

Clinical Trials Unit

Research Pharmacy

eHealth, including Health Data Exchange, a secure cloud-based innovation enabling platform which provides a standardised way of managing identity (login) and consented data sharing, integrations with new and existing health and care systems, and hosts industry developed applications based on re-usable components



## PARTNERS

- Our core innovation programmes and partnerships including WoS Regional Test Bed, iCAIRD, Living Laboratory, Health Data Exchange
- Joint working agreements and MoUs including with Astra Zeneca, GSK, Digital Health & Care Innovation Centre
- Academic including most Scottish Universities, and in particular University of Glasgow
- Scottish innovation ecosystem including peer Test Beds in East and North Scotland, InnoScot, HealthCare Improvement Scotland (SHTG), Centre for Sustainable Delivery, Scottish Health and Industry Partnership, Chief Scientists Office, NES Digital, NHS National Services Scotland, Scottish Ambulance Service

# Our core team



**Aileen McIntyre**

•Project Manager (eHealth)



**Alastair Robertson**

•Programme Manager (eHealth)



**Cameron Thomson**

•Living Laboratory Programme Manager (eHealth)



**Craig Bell**

•Industry Collaboration Project Manager (R&I)



**David Coyle**

•Communications Lead



**Dr Ana Talbot**

•Innovation Clinical Fellow (Frailty and Falls)



**Dr Chris Sainsbury**

•Innovation Clinical Fellow (Diabetes and Endocrinology)



**Dr Ioanna Nixon**

•Innovation Clinical Theme Lead (Cancer)



**Dr Nagore Penades**

•Innovation Clinical Theme Lead (Mental Health)



**Dr Neil Patel**

•Innovation Clinical Lead



**Dr Roma Armstrong**

•Innovation Lead (R&I)



**Ela Fergusson**

•Industry Collaboration Project Manager (R&I)



**Elaine O'Neill**

•Industry Collaboration Project Manager (R&I)



**Jacqueline Anderson**

•Project Manager (Clinical Research Facility, R&I)



**James Blackwood**

•iCAIRD Programme Manager (eHealth)



**John Berry**

•Communications Lead



**John Costello**

•HDE Programme Manager and Architect (eHealth)



**Lee Irvine**

•Innovation Financial Accountant



**Linda Conroy**

•Senior Innovation Administrator



**Neil Warbrick**

•Innovation Programme Director (eHealth)



**Professor David Lowe**

•Innovation Clinical Lead



**Professor Steven Lo**

•Innovation Clinical Fellow (Plastic Surgery)



**Ray Syed**

•Industry Collaboration Project Manager (R&I)



**Ruairidh Davison**

•Contracts Manager (R&I)



**Ruchi Lalwani**

•Project Lead (eHealth)



**Scott Hanley**

•Project Manager (eHealth)



**Simon Rae**

•iCAIRD Project Manager (eHealth)



**Wiki Gembalski**

•Interoperability Lead (eHealth)

“The West Scotland Innovation team have led the way in Scotland to collaborate with local and global businesses to rapidly bring new solutions into health and social care. Offering access to patients, clinicians, support staff and pathways of care they have brought to life Test Bedding in Scotland. Through experimental research and development, they have accelerated the pace of innovation processes, navigated regulatory hurdles, interoperability challenges and taken on board external investment to meet the needs of West Scotland citizens. Companies have worked together and commercialised new products and services benefiting the economy and providing much needed jobs in Scotland. They are a national success story- particularly during the response to Covid-19.”

*Andrew Fowlie, Executive Lead for Life Sciences, Chief Scientist Office, Scottish Government*

“Opportunity for health and industry partnership: Lenus Health

Edinburgh-based Lenus Health partnered with one of Europe’s largest healthcare providers, NHS Greater Glasgow and Clyde (NHSGGC), and the Digital Health and Care Institute (DHI) with funding from Innovate UK to deliver a digital COPD Support Service underpinned by the company’s health data-exchange platform. The service aggregates data from wearables, respiratory devices and patient reported outcomes with clinical history data from EHR to provide clinical care teams and patients with a more robust view of their COPD condition. The service has been proven to reduce COPD emergency admissions by 28%, and hospital bed days by 38%. The company is also working in partnership with NHSGGC to operationalise AI risk stratification scores for exacerbation, readmission and mortality within point of care clinical workflows. In November 2021, global health leader ResMed, announced a minority equity investment in Lenus Health to support the international scale out of the company’s technology through a joint go to market strategy.”

*The Campbell Report: A roadmap to investment for health innovation life sciences and health tech in Scotland (2021)*

**Innovations that have scaled following co-development and evaluation:**

<b>3 digitally supported pathways in CfSD ANIA assessment and value case process for national scale-up</b>	COPD Dermatology Early Diagnostic Heart Failure
<b>4 solutions showcased in NHSx Digital Playbooks</b>	Cardiology (Heart Failure) Dermatology Remote monitoring (vCreate) Respiratory (COPD)
<b>3 products available to all NHS Scotland Boards via SoftCat or G-Cloud framework</b>	Lenus asynchronous appointments TraumaApp vCreate
<b>Plus</b>	3 AI related products CA/CE marked COVID-19 Assessment Application made available to all NHS Scotland Boards

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**Hear about us:**

The experience of industry and clinical partners:  
<https://www.youtube.com/watch?v=w-vfoq2M>

Scottish Digital Health and Care Awards 2022

**Industry Collaboration Award**

Dynamic AI

Scottish Digital Health and Care Awards 2022

**Data Driven Innovation Award**

iCAIRD Pathology Digitisation & AI

HSJ Awards 2021  
**Digitising Patient Services Initiative**

Digital Dermatology Assessment

Scottish Digital Health and Care Awards 2021

**COVID-19 Response Award**

vCreate

Scottish Digital Health and Care Awards 2021

**Technology Enabled Independent Living Award**

Dynamic Scot

Scottish Life Sciences Awards 2021

**Innovative Collaboration Award**

iCAIRD

The Scottish Health Awards 2020

**Innovation Award**

vCreate