

Accelerating Research and Innovation in Greater Manchester

Celebrating the successes of partnership and
collaboration

ERDF Research and Innovation Health Accelerator

2020 - 2023



Health
Innovation
Manchester



European Union
European Regional
Development Fund



University of
Manchester
**Innovation
Factory**



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Foreword

“In Greater Manchester, we have a proven track record in fostering industry partnerships to deliver population health improvements, from start-ups to global players.

Through partnership and collaboration across Greater Manchester, innovators have been supported through projects including the ERDF R&I Health Accelerator and PDRA funding awards.

The R&I Health Accelerator is an ERDF part-funded project, that aimed to get innovators and SMEs to collaborate with Greater Manchester’s research and innovation institutions, to accelerate development and improve commercialisation of innovative healthcare products and services, while also generating economic growth.

Innovators have been provided with wide ranging support, including information about navigating the health and care system, developing value propositions, and access to university-wide expertise with the ambition to build lasting research collaborations.

As the ERDF R&I Health Accelerator comes to an end, we celebrate the successes of working with innovators across Greater Manchester. This report demonstrates how collaborations formed will continue to be used to share knowledge, address the barriers to adoption and co-develop further proposals for research and development projects. Finally, we can reflect how through partnership and collaboration we are improving the care of citizens across Greater Manchester.”

Richard Deed
Former Associate Commercial Director, Health Innovation Manchester



The Research and Innovation (R&I) Health Accelerator is a new ERDF (European Regional Development Fund) part-funded project delivered by Health Innovation Manchester, The University of Manchester, The University of Manchester Innovation Factory, Manchester City Council and Bionow.

The project invites SMEs to collaborate with Greater Manchester’s research and innovation institutions to accelerate development and improve commercialisation of innovative healthcare products and services within life sciences. SMEs will be able to access expertise and support including information about navigating the health and care system, developing value propositions, ethics & regulatory advice and access to university-wide expertise.



Overview of the R&I Health Accelerator



Supported 63 companies



Delivered events



At least 10 jobs created in local economy



↑32 research collaborations

Acceleration of 11 products & services becoming ready for market



21 companies accessed Innovation Catalysts

12 new products introduced to business



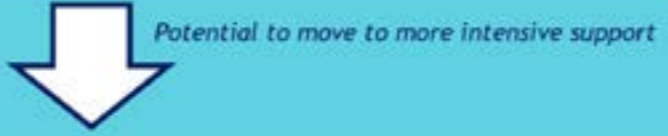
The project has been delivered by:



Level 1: Support zone

SMEs had access to 12 hours of advice and support to help progress their products and services towards adoption in the health and care system and explore the potential for deeper engagement

- Navigating the health and care system
- Developing value propositions
- Matching innovations to healthcare needs
- Ethics and regulatory Advice
- Signposting HEI collaboration ops
- Access to university expertise
- Brokering, networking and events
- Collaboration workshops
- Co-designing bespoke support package



Level 2: Collaboration zone

SMEs with potential to introduce products to market or new products/processes to the SME were provided with opportunities for in-depth collaboration with researchers and other stakeholders in the health and care system to further accelerate progress towards commercialisation.

Collaboration Zone - Accelerating commercialisation

- Co-developing R&D proposals
- Brokering partnerships
- Facilitation patient and public engagement
- Supporting commercialisation
- Supporting the Real-World Evaluation
- Collaborative R&D project
- Bespoke events
- Ethics & regulatory support
- Health Economics analysts
- Supporting study design & costing
- Access to university facilities
- Networking & Peer-Peer support

Innovation Catalysts

Within level 2, SMEs were also able to access three collaborative support mechanisms in the form of Innovation Catalysts

- Small innovation vouchers of £2,499**
 To support market insights, contract research services, clinical and applied health research advice, expertise in NICE processes, where this would support progress towards adoption and commercialisation - including the design of follow-on collaborative projects.
- Follow-on vouchers of £20,000**
 To support more substantial developments, wholly or partially funding collaborative projects to progress towards key adoption and commercialisation milestones.
- PDRA Award**
 Allowing projects co-developed with University of Manchester academics to move innovative products or services closer to adoption, supported by 4-5 months of researcher time and access to University facilities.



“Research collaborations have been crucial to the success of the R&I Health Accelerator Project, allowing SMEs to access academic and teaching hospital expertise to help develop and commercialise their products and services. In many cases this has catalysed ongoing relationships that will continue to drive health and care innovation.”

Prof Chris Taylor
Associate Vice President of digital strategy & innovation,
University of Manchester



“The R&I Accelerator project has created new and developed existing collaborations between healthcare, academic and industry partners and we look forward to continuing these collaborations after the ERDF funded project closes this year.”

Daniel Zamora
Commercial Programme Manager, Health Innovation
Manchester

Level 2: Collaboration Zone



Level 2: Collaboration Zone

At Level 2, SMEs with potential to introduce products to market or new products/processes to the SME were provided with opportunities for in-depth collaboration with researchers and other stakeholders in the health and care system to further accelerate progress towards commercialisation. This could include:

- Co-designing research and development (R&D) proposals
- Collaborative R&D proposals
- Access to University facilities
- Supporting Real-World evaluation
- Supporting study design and costing
- Supporting commercialisation
- Health economics analysis
- Facilitating Patient and Public Engagement
- Ethics and Regulator support
- Brokering partnerships
- Bespoke events
- Networking and peer-to-peer support
- Innovation Catalysts

SMEs were also able to access three collaborative support mechanisms in the form of Innovation Catalysts:

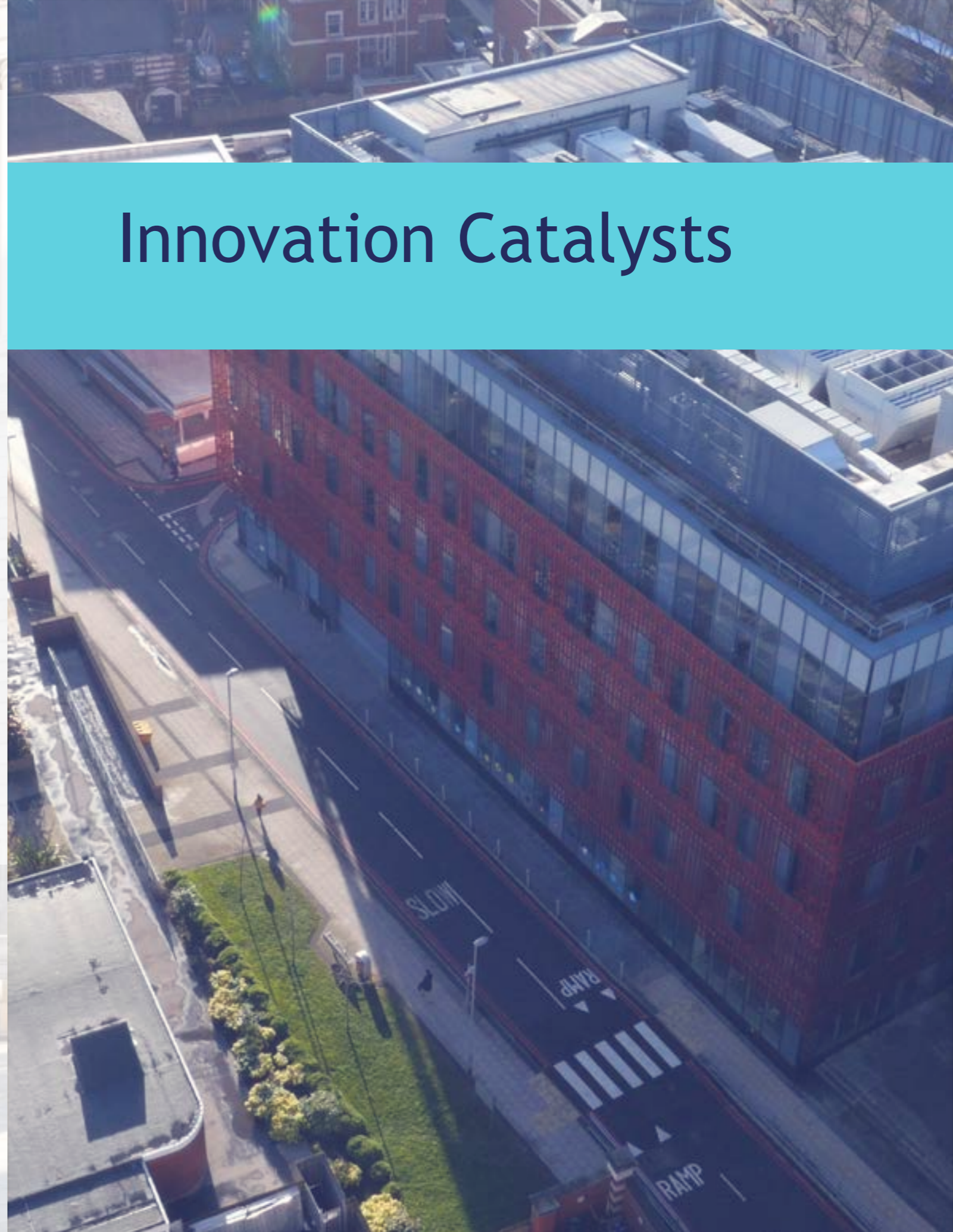
- Small innovation vouchers of £2,499 to support market insights, contract research services, clinical and applied health research advice, expertise in NICE processes, where this would support progress towards adoption and commercialisation - including the design of follow-on collaborative projects.
- Follow-on Innovation Vouchers of £20,000 to support more substantial developments, wholly or partially funding collaborative projects to progress towards key adoption and commercialisation milestones.
- PDRA Award allowing projects co-developed with University of Manchester academics to move innovative products or services closer to adoption, supported by 4-5 months of researcher time and access to University facilities.

Impact

Health Innovation Manchester has supported the development of 16 research collaborations as part of the ERDF Research and Innovation Health Accelerator. SMEs enrolled on the programme have been supported to collaborate with research institutions across Greater Manchester, including Greater Manchester universities, NHS organisations and the broader health innovation community.

The University of Manchester has supported 16 research collaborations, allowing supported companies the opportunity to work with Researchers to develop their products.

Innovation Catalysts



Innovation Catalysts: Small Innovation Voucher case studies

Re:course AI

Re:course

Re:course AI is a leading AI-powered learning and assessment platform for healthcare. The platform provides instant feedback on clinical and interpersonal skills across patient scenarios, with competency-based insights available in an educator dashboard to visualise performance.

Re:course AI formed a collaboration with the University of Salford. The partnership was set up to support the development of a workforce training evaluation protocol, with the company awarded a Small Innovation Voucher to harness the academic expertise available within the University of Salford to design the protocol.

Healthcheck Services Ltd



Healthcheck Services Ltd supply clinically approved Health Kiosks to doctors' surgeries and hospitals across the UK for use by the public.

A collaboration was formed between Healthcheck Services Ltd and Manchester Metropolitan University. The company were awarded a Small Innovation Voucher to support a package of work with Dr Tim Collins, Senior Lecturer and Programme Leader, Electrical and Electronic Engineering at Manchester Metropolitan University, to produce a feasibility report summarising findings and recommendations.

"We have really enjoyed being part of the Health Innovation Project. We have been introduced to the right people with a great wealth of knowledge and are grateful of the opportunity to work with such a professional and caring Team. Our time working with Tim Collins was invaluable and we will be sure to keep in contact with him moving forward." Gillian Clarke, Head of Projects, Healthcheck Services.

Front Foot MI Ltd



Front Foot Consulting creates and delivers flexible training with the aim of releasing management time and increasing team time efficiency to solve a common problem within the NHS; the lack of time to improve methods/'wasting' time on inefficient practices.

A collaboration was formed between Front Foot MI Ltd, Dr George Kitsaras, Independent Researcher, and Manchester University NHS Foundation Trust, acting through Health Innovation Manchester. The overarching aim of this partnership was to collaborate on a pilot project that collected and analysed verbal interviews, quantitative and qualitative data from two participant groups undertaking Front Foot's consultancy services and time efficiency training. Front Foot was awarded a Small Innovation Voucher to support an evaluation of the training by Dr George Kitsaras including the production of an analysis report.

MyHelp



MyHelp is a new integrated digital platform encouraging collaboration between clinicians and carers to support individuals' mental health and facilitate self-management through a suite of tools allowing the creation of personalised resources.

MyHelp formed a collaboration with Dr Michael Townend, Consultant Cognitive Behavioural Psychotherapist and Independent Researcher, to evaluate the use of the MyHelp platform in a 'real world' setting and identify ways of improving the MyHelp platform to enhance the therapy provided to patients. MyHelp was awarded a Small Innovation Voucher to support the design and conduct of an evaluation of the MyHelp platform to inform the further development of the system to enable it to be used by therapists and people who use services (clients).

Virtual Guardian



Virtual Guardian is a virtual aid support for use within social care to encourage independent living amongst citizens with a wide range of conditions and disabilities.

Virtual Guardian formed a collaboration with Autism@Manchester, a community of academics, clinicians, practitioners, autistic adults, parents of autistic children and family members working together to achieve quality research. The aim of the partnership was to develop a plan for public input into the Virtual Guardian app design and recruitment for focus groups. Virtual Guardian were awarded a Small Innovation Voucher to develop a focus group to collect feedback from participants on the app to enter the next phase of development.

Pure O2 Ltd



Pure O2 is a specialist provider of medical and portable oxygen equipment solutions.

A collaboration was formed between Pure O2 Ltd and PrintCity, a 3D additive and digital manufacturing centre, and part of Manchester Metropolitan University. The overarching aim was to design a Source Model for a concept developed by Pure O2, resulting in visual files to inform further concept design.

"We were delighted to be part of the ERDF R&I Health Accelerator programme. Our collaboration with MMU Print City was invaluable and provided the opportunity to access expertise and facilities to support our innovation. We have thoroughly enjoyed the opportunity to work with such a professional and supportive team." Richard Blackhurst, Managing Director, Pure O2.



Bipolar Buddy Ltd



Bipolar Buddy was created to help patients with bipolar disorder achieve and sustain remission using artificial intelligence and machine learning to support mood tracking and pattern recognition to discover underlying causes of mood changes.

A collaboration was formed between Bipolar Buddy and Pennine Care NHS Foundation Trust. The aim of the partnership was to collaborate to create a pilot study plan with clinical and academic input for the testing of the Bipolar Buddy app and establish clinical and academic connections for participation within a large grant application. Bipolar Buddy was awarded a Small Innovation Voucher to support the development of a clinical protocol.

"I had a fantastic experience with Health Innovation Manchester. We received support in drafting a grant application with Innovate UK, looked into acquiring participants for our clinical trial, achieved £1000 funding via the small innovation voucher and had great in person and remote experiences throughout the duration. The support was consistent, valuable and very insightful. I'm very grateful." Anish Suri, Founder & CEO, Bipolar Buddy.

Healum Ltd



Healum provides healthcare professionals with a patient management system that connects to a suite of patient facing digital services, that have been designed to improve health outcomes, improve access to care, and to improve the efficiency of delivering care to patients with one or more long term conditions. Its software is used by multidisciplinary teams in primary care and secondary care settings to create personalised plans of care and support for patients at risk of Cardiovascular disease.

"We were able to tap into the clinical and AI talent in Greater Manchester and successfully find an academic partner to play a role in our R&D efforts over the next 2 years and join our consortium." Jonathan Abraham CEO & Founder.

Innovation Catalysts: Follow-on Innovation Voucher Case studies

Sarah Denise Studios (Kuppd)

Kuppd is a service which provides more choice for those who have been affected by mastectomy or lumpectomy. They create fashion forward, sustainable 3D printed external breast prostheses, using 3D mapping. Kuppd collects data that enables a prosthesis to be printed and perfectly fit the patient's chest wall curve.

A collaboration was formed between Kuppd and Manchester Institute of Fashion at Manchester Metropolitan University. The collaborative project was established to utilise MIF's 3D body scanning equipment and related knowledge to provide a test scan (and subsequent participant scans) that is of suitable quality to apply to a 3D printing machine to 3D print a breast prosthesis made of novel materials.

Kuppd received a Small Innovation Voucher to utilise the 3D body scanning equipment and software within the Manchester Institute of Fashion and the knowledge of Jayne Mehan, Senior Lecturer in Fashion Technology, Manchester Metropolitan University, around body scanning and image processing to produce suitable technical files, generated from a sample of post-mastectomy women, that could be used as an input file for a 3D printer.

The Follow-on Innovation Voucher further supported work with Manchester Fashion Institute and Print City at Manchester Metropolitan University to design, prototype, and gain participant feedback.



Sarah Cordery, Founder of Kuppd



Watch the Kuppd case study video [here](#)

Sarah Cordery, Founder of Kuppd, said: *"At Kuppd our mission is to help bridge the difficult period after breast surgery with comfortable intimates that make you look and feel great. The funding received through ERDF and Health Innovation Manchester is being used for external breast prosthesis prototype refinement and participant advisory focus groups in collaboration with Print City and Manchester Fashion Institute. This will help provide proof of concept for the product and support further investment."*


Balance App

The Balance menopause app was created by Dr Louise Newson to make menopause support inclusive and accessible to everyone. It is tailored for perimenopausal and menopausal people to improve their knowledge around the menopause. It can also be used by health professionals in the treatment pathway to reach a quick diagnosis through using a health report. The app provides general information, resources and activities to the public, patients or clinicians allowing people to self-manage their condition by monitoring symptoms and behaviour change techniques.

Balance collaborated with Manchester University NHS Foundation Trust, acting through Health Innovation Manchester. The aim of the collaboration was to develop a steering group of GPs and academics to support the design of the parameters and best methods of data collection to support a research study.

Balance was awarded a Small Innovation Voucher to prove the value of the balance app for perimenopausal and menopausal people, with regards to design, outcomes, experience, and cost by supporting primary care colleagues to understand the burden of the current care pathway.

The Follow-on Innovation Voucher allowed 'Balance' to explore the added value of implementing the app within the current care pathway and service provision working with three primary care networks.

 Watch the Balance App case study [here](#)



Gaele Lalphy, Chief Operating Officer of Balance App

balance
the menopause support app


Gaele Lalphy, Chief Operating Officer of the Balance App said: *“We are absolutely thrilled to be a successful awardee of the ERDF R&I Accelerator. The funding is enabling us to understand the added value of using the balance menopause app in Manchester primary care pathways. We believe that it will make significant financial savings across the system, free-up scarce resources and allow women to not only better manage their menopausal symptoms but also access the right care and treatment in a timely way.”*

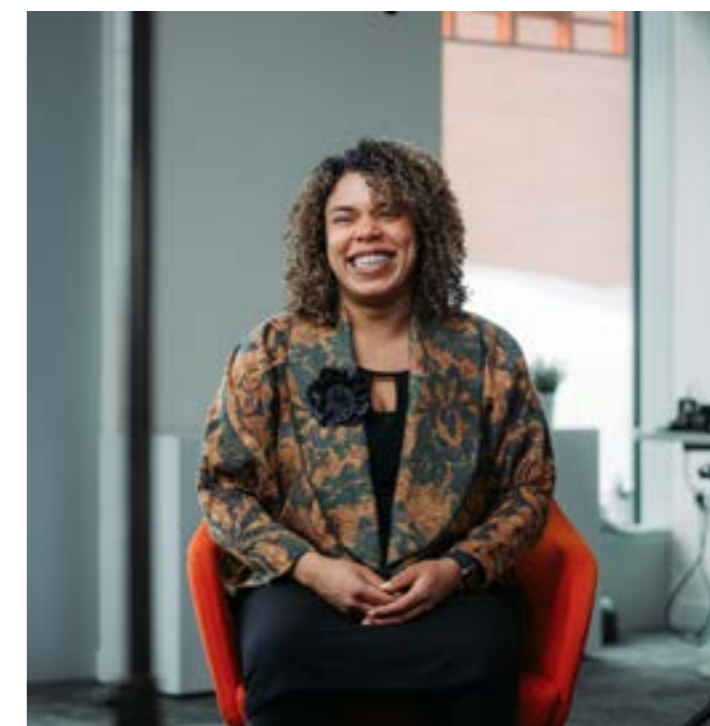
Clinical Neuropsychology Services (CNS)

Goal Manager® is a cloud-based application designed to automate core processes in rehabilitation goal setting, facilitating collaborative working for multi-disciplinary teams in remote locations, and streamlining gold-standard processes into one system. Goal Manager® is a combined workflow management and reporting tool for rehabilitation and a product of Clinical Neuropsychology Services Ltd, owned and developed by Project Lead Dr Penny Trayner (Paediatric Clinical Neuropsychologist).

CNS was awarded a Small Innovation Voucher that funded the delivery of three discussion groups, with information gathered used to inform the next stage of the Patient Portal for the Goal Manager® platform. CNS collaborated with Manchester University NHS Foundation Trust, acting through Health Innovation Manchester.

The Follow-on Innovation voucher award supported the evaluation of the use of Goal Manager® within the Northern Care Alliance (NCA) and support the development of a Patient Portal and Data Dashboard and integration into the existing Goal Manager® platform.

 Watch the Clinical Neuropsychology Services (CNS) case study [here](#)



Dr Penny Trayner, Clinical Neuropsychology Services

 **Goal Manager®**
goalmanager.co.uk

Dr Penny Trayner, Clinical Neuropsychology Services, said: *“Goal Manager is a system designed to simplify and speed up key administrative processes in rehabilitation, with a potential to benefit thousands of people in Greater Manchester who are affected by conditions requiring rehabilitation each year, including those affected by stroke, acquired brain injury, major trauma, cardiac problems, orthopaedics and respiratory difficulties. Nationally such conditions affect millions of people every year. So far, the product demonstrated successful application within the private sector, and it is right that the public sector should benefit in the same way. The voucher is allowing us to try out the software within the NHS to ensure that it works effectively within community and inpatient services, with a view to it being rolled out more widely, locally and nationally, benefiting thousands to millions of people by providing them faster and more coordinated healthcare and enabling them to recover faster from their serious conditions and illnesses.”*

BBL Protect

The collaboration between BBL Protect and the Manchester University NHS Foundation Trust has supported the Company in developing Personal Isolation Devices for use within the NHS and Global Healthcare services.

The Company has now completed development and is currently rolling the product out and running awareness sessions to the HCID Units around the country to make them aware of the product they may come into contact with.

The Small Innovation Voucher allowed the company to explore the possibility of developing a Monitoring device for the AeroPod to monitor pressure and the internal environment.

The Follow-on Innovation voucher award supported the development of the pressure monitor and patient monitoring device which can attach easily to the AeroPod and provide a real time display of the Pod internal conditions and monitor the patient for their time within it.

The Company has progressed this now to a fully working prototype and has demonstrated it to a number of clinicians and paramedics and others where it has been well received. Alongside other innovations developed by the Company and its UK manufacturers, the Company offers the highest level of protection for attending healthcare staff.

Russell Clifton, Managing Director at BBL Protect, said: *“BBL Protect approached HInM with an idea and no previous experience of medtech, NHS or the wider market. The programme has been like a parachute of support, providing knowledge, insight, contacts and assistance where needed, which has enabled us to land with final product into the Global medtech market”*



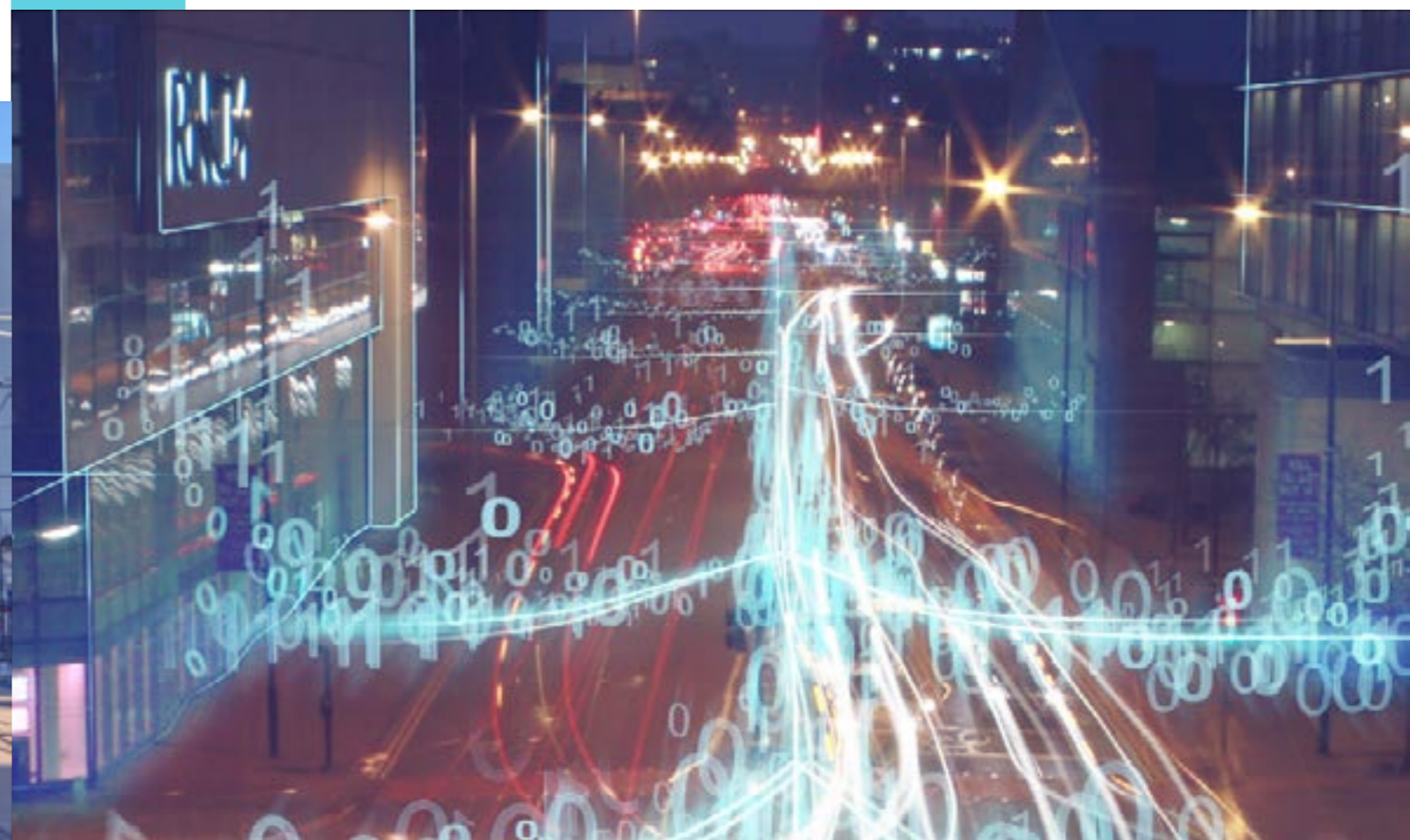
PDRA Award

The programme aim was to deliver collaborative R&D that addressed a problem or opportunity facing the SME in commercialising products or services, bringing to bear multidisciplinary expertise from within the University of Manchester.

This engagement contributed directly to commercialisation by accelerating the development of new products and services to market. These projects were able to draw on academic expertise across a broad range of disciplines including: clinical medicine, data science and AI, medical devices, biosensors, genomics & precision medicine, diagnostics, biopharmaceuticals, advanced materials, health economics, study design, and applied health research.

Each SME was offered a bespoke support package:

- Co-developing R&D Proposals. Where the project team supported SME-researcher teams to work up R&D proposals co-developed in Level 1 collaboration workshops to be pitched to an Expert Review Panel for access to UoM research resource. The support focussed on developing robust value propositions and achievable project plans.
- Collaborative R&D Project. SME-led, co-developed, collaborative R&D projects supported by a substantial commitment of ERDF-funded UoM research staff (typically 4-6 months of post-doctoral research assistant (PDRA) time) plus a consumables budget up to an award of up to £24,000.
- Access to University Facilities. Where it would add value, SMEs had access to UoM research facilities in the context of a supported R&D project.
- Health Economic Analysis. SMEs were offered bespoke health economics analysis as a key input to developing robust value propositions, together with advice on cost-effectiveness analysis, and commercialisation plans. The Health Economists also provided self-evaluation materials to participating SMEs, allowing them to embed health economic thinking in their product/service development pipeline.



PDRA collaborations

Viscgo



Viscgo is a MedTech based in Manchester founded specifically to address an unmet need in the management of dysphagia (swallowing difficulty) and to develop practical ways to ensure that food and drink are modified to the correct prescribed texture for each person with dysphagia. Viscgo's patented Drink Thickness Test Sticks are on the market and are the quickest, easiest, most practical way to test that drinks thickened for people with dysphagia are at the prescribed consistency. Viscgo seeks prescription status for its Test Sticks and sells directly via its website but seeks distributors/licensees in UK and abroad.

The collaboration with Dr Sorrel Burden from UoM Healthy Aging department, is a real-world validation study to assess how the Sticks compare against the current gold standard and to test the reliability of the Sticks when used within and between health care workers. The main deliverable of this project is the real-world evaluation of the Sticks assessing the validity and reliability with healthcare professionals in a real-world environment. There will be a published manuscript submitted to a peer review journal.

The published results of this project will increase confidence in the product leading to increased sales, repeat sales and supply contracts with NHS Trusts and private care providers such as care home chains. The published results will be used to support an application to NHS Subscription Service to get the Sticks prescribed with the thickener. If successful, this will have a significant impact on the commercialisation of the product. Increased traction in the UK will attract distributors and perhaps licensees and make it significantly easier for Viscgo to enter foreign markets.



Watch the Viscgo case study [here](#):

Optasia Medical



Optasia Medical is based in Stockport, developers and provides technology for Fracture Liaison Services and bone health teams to support clinicians and patients in the secondary fracture prevention pathway for patients diagnosed with osteoporosis following a fragility fracture. The collaboration with Professor Tim Cootes and Dr Paul Bromley focussed on Improving classification of vertebral fractures from CT images. Optasia's novel software Aspire was integrated with the University's recently developed new system (VertFinder3D) and enabled automation of a key part of the analysis pipeline - that of finding each vertebral fracture.

Innovate Pharmaceuticals



Innovate Pharmaceuticals, based in Manchester is an early-stage pharmaceutical development company that has developed a unique platform to fully solubilise previously difficult to solubilise pharmaceutical molecules. The collaboration with Professor Jayne Lawrence and Dr Sam Butterworth was focussed on improving the formulations of liquid Omeprazole and Sildenafil and to look at the current formulations and discover what the degradation products that were reducing the shelf life.

Chromition



Chromition is based in Manchester and specialises in research, development and validation with a focus on immunofluorescence, companion diagnostics and healthcare. The company markets a range of patented immunofluorescent biomarkers, Luminspheres. Luminspheres can detect multiple biomarkers in a single sample.

The collaboration with Dr Holly Shiels focussed on detection of low concentrations of multiple stem cell biomarkers simultaneously in a novel shark model and human stem IPC using Chromition's novel Luminspheres™ technology.

The validation of Chromition's technology enabled the company to progress towards inclusion in a major distributor's catalogue and generate revenues from the sale of 'Multicoloured Luminspheres™ Bioconjugation Kits'. The project results contributed to the company's pipeline development in identifying new commercial opportunities for the technology and the utility of the labelling kit in diverse cell types and different species.

GrafMed Limited



GrafMed is based in Greater Manchester and is developing a new generation of materials for the diabetic foot ulcer market. Current state of the art products are only able to sense when there is a potential formation of a diabetic foot ulcer. GrafMed materials can prevent formation of such ulcers by using a preventative garment able to shape-change to prevent the early formation of diabetic foot ulcers. Diabetic foot ulcers costs the UK NHS over £1bn annually due to amputation and extensive consultative care. Current prototypes are TRL 4/5.

The collaboration with Professor Prasad Potluri and Dr Anura Fernando and Dr Haseeb Arshad conducted a Feasibility study on integrating memory polymer soles to GrafMed antimicrobial filament integrated low pressure compression stockings.

The successful integration of materials will facilitate the opportunity to work with the NHS in providing clinical feedback and evaluation by both healthcare workers and patients. This is supportive to the earlier work where an NHS questionnaire from respondents indicated that 98% of ex-diabetic foot ulcer patients would consider and try this device. The commercialisation will continue into 2023 to produce a pre-manufacture garment and then into production. GrafMed has several commercial contacts interested in stocking this device to sell into the sector.

Graphene Trace



Graphene Trace is based in GM and is developing a smart fabric capable of mapping pressure across its surface. The technology can be embedded into any seat. When connected to a smartphone pressure will be continuously monitored, display live data, and alert the user to risk with smart notifications.

The collaboration with Dr Alex Casson researched multiplexed capacitive sensing for large area e-textiles and developed a working prototype of the seat sized e-textile pressure sensor. The collaboration project was designed to bring the technology to prototype, ready to take to trade shows and to investors. This project facilitated R&D to prototype level enabling demonstration for further fundraising for scaled manufacture and clinical trials.

Rinicare Limited



Rinicare is based in GM and is a digital health technology company specialising in clinical risk prediction. Rinicare market STABILITY, a machine-learning powered software platform to provide clinicians with early warning of patient deterioration. The first platform module is STABILITYUO for the dynamic prediction of acute kidney injury onset following cardiac surgery. STABILITYUO is in use clinically in a trial (TRL level 8/9).

The collaboration with Dr Gabriel Rogers will develop a Cost-Utility analysis for STABILITYUO. Using the data provided and published literature, a prototype model will be produced.

The project outputs added significantly to Stability's evidence portfolio and allowed Rinicare to develop and submit an application to NICE for a MedTech Guidance (MTG) or Digital Health Tech (DHT) appraisal to formalise the healthcare economics evidence base. Very few AI-powered technologies have achieved this level of appraisal, and this will help Rinicare stand out commercially. Obtaining a positive MTG or DG from NICE, which is only possible with prototype modelling support provided by this Level 2 support, will put the company in an extremely strong commercial position to scale the deployment of STABILITYUO i.e. increased sales. It is highly likely to also lead to further investment in the company to accelerate the hire plan.

AI Nostics Limited



AINOSTICS is an artificial intelligence (AI) enabled analytics and diagnostics company based in Manchester, commercialising over two decades of world-leading research by our founding team and globally renowned scientific advisors into the diagnosis of various neurological conditions, such as dementia, multiple sclerosis (MS), stroke, brain tumours, traumatic brain injury (TBI). AINOSTICS has just received FDA Breakthrough Device Designation status for providing outcome prognosis in dementia, achieving TRL5.

The current implementation of CL[AI]R is limited to analysing a finite number of patient derived statistics, such as the volume of anatomical brain regions (derived from structural MRI scans). The aim to extend this methodology such that it can utilise a wider array of patient derived information, such as genomics derived statistics, data from wearables and other imaging modalities (e.g., PET). However, the inclusion of additional biomarker data leads to overlapping information and a known machine learning challenge, known as the curse of dimensionality.

To overcome this the collaboration with Dr Hamied Haroon and Dr Andrew Jerrison focussed on implementation of a robust feature selection algorithm, which filtered out uninformative and repetitive information in patient-derived information. The remaining features can then be used as multimodal inputs to a new variant of CL[AI]R, which will directly address the needs highlighted by the company's Pharmaceutical company collaborators.



Watch the AINOSTICS case study [here](#)

TaBriX Ltd



TaBriX is a new spin-out company from The University of Manchester (UoM) with the mission to create novel anti-virulence drugs to fight difficult-to-treat infections. TaBriX's focus is on the treatment of drug-resistant TB and infections by Non-Tuberculous Mycobacteria (NTM), which cause serious pulmonary and skin infections on the rise worldwide, specifically in high-income countries where TB is declining. The project established which combinations of antibiotics and TaBriX compounds resulted in highest efficacy in reducing infection in macrophages, and in the G. mellonella model. The outcome of these studies defined the key treatments to test in animal models of TB/NTM infection in the next stages of preclinical development.

Careloop Health Ltd.



Careloop is a Manchester based company who specialise in the development and deployment of digital health therapeutics for severe mental health conditions such as schizophrenia. Careloop work with patients and clinicians to demonstrate the value of digital technology in the treatment and management of psychosis/ schizophrenia. Using proprietary clinically validated assessment questionnaires, CareLoop collects real time symptom data for use by patients and health care workers. Insights inform patient self-management and healthcare decision making, including safer and more effective medication management.

The collaboration focussed on two main study areas: Health economics led by Dr Alex Thompson to develop a value-based pricing strategy for CareLoop DTx product and a Just In Time Adaptive Intervention (JITAI) Prototype with Dr James Cunningham and Professor Moulton, to develop a proof-of-concept implementation of JITAI approach for CareLoop DTx NG.

The project was of direct benefit to CareLoop Health Ltd. The first version of the DTx product (CLH-006) is due to launch in 2024, when software as a medical device certification has been completed. The health economics study will directly inform the company's pricing strategy and value proposition to NHS customers.

The development of the next generation of DTx product (CLH-006-NG), containing the adaptive approach to personalisation of intervention, will commence in 2024, after the first generation is on the market. A patent application to protect the IP will be able to be submitted in 2023 and clinical evaluation of the next generation DTx can commence in 2025, followed by medical device certification in 2027.

Innovators we have supported



Innovators we have supported through the ERDF R&I Health Accelerator

- Advanced Bioinformatics Ltd
- AINOSTICS
- Antimicrobial Materials
- ATMPS Ltd
- Balance
- BBL Protect
- Bipolar Buddy
- Careloop
- Chromition Ltd
- Clinical Neuropsychology Services Ltd
- Clyz Labs
- Connect care
- CPNSair Ltd
- Decently
- DIGNIO LIMITED
- Flush-Tech
- Front Foot MI Ltd
- Gendius
- GrafMed
- Graphene Trace
- Groundwow
- Healthcheck Services Ltd
- Healum
- IDNS Ltd
- Inform People Limited
- Innovate Pharmaceuticals
- KOKU Health
- Manchester Imaging
- MD healthcare
- MEDOWS LTD
- Metis Health
- MIND Healthcare
- Monk Technologies
- Music In Mind
- My Happy Mind
- MyHelp
- Myota
- Novus Health Technologies
- Optasia
- Ouris Health
- Promake
- Pure O2 Ltd
- Recourse AI
- Renephra Ltd.
- Reva App
- Riixo
- Rinicare
- Rohme
- S 12 solutions
- Safe Steps
- Sarah Denise Studio
- Social Sense Group
- Songbirds
- Surgical Pouch
- Tabrix
- Taymed
- Televeda
- Virtual Guardian
- Viscgo Limited
- VR Evo
- Whats My Injury
- Wilbo's Blends
- Zuntold

Further Information





Further information

For further information on the ERDF Research and Innovation (R&I) Health Accelerator, click [here](#).

