



Digital Health & Care
Innovation Centre



Digital Mental Health Innovation Cluster

Annual Report 2022-2023



Scottish Government
Riaghaltas na h-Alba

dhi-scotland.com

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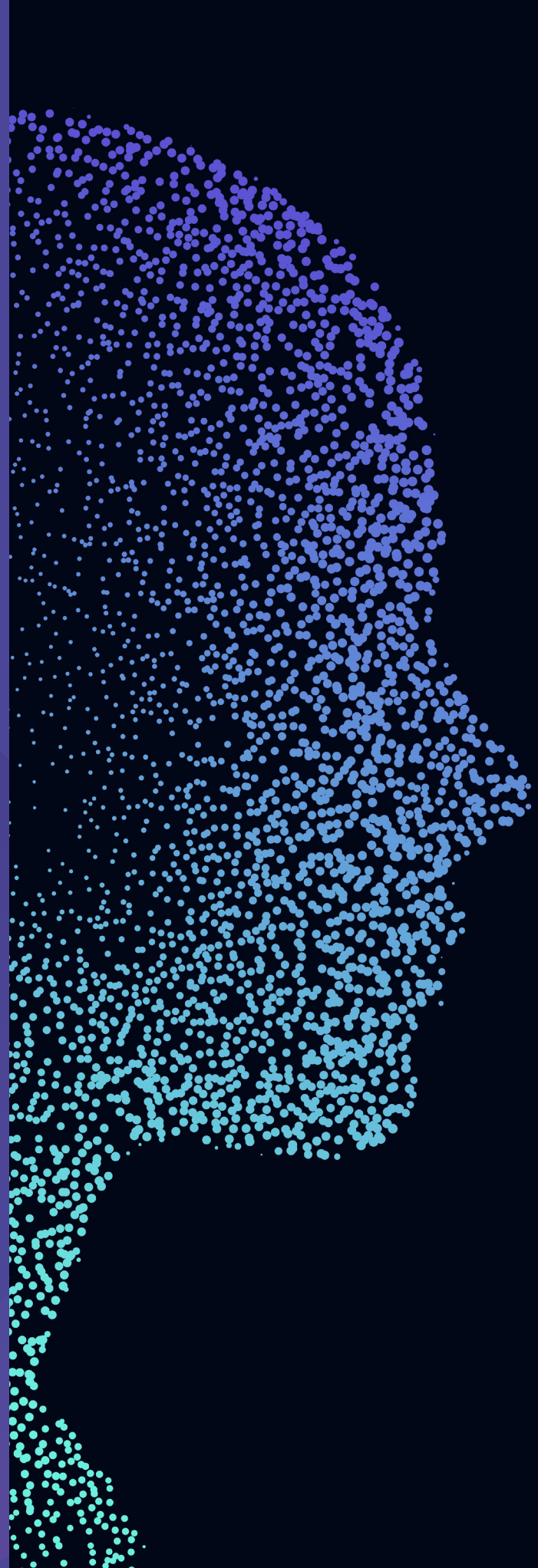
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DHI is a world-leading collaboration, hosted by the University of Strathclyde in partnership with the Glasgow School of Art (GSA). It is part of the Scottish Funding Council's Innovation Centre Programme and has been co-funded by the Scottish Government Digital Health and Care Directorate to secure alignment with health and social care policy and strategic priorities. DHI supports innovation between academia, the public and third sectors, and businesses in the area of health and care



Executive Summary

The Scottish Government's Digital Mental Health Programme contains six workstreams including innovation.

The Digital Health and Care Innovation Centre (DHI) was commissioned to establish, develop and administer a Digital Mental Health Innovation Cluster for a two-year period to support the innovation workstream. This report covers the first year of the DMHIC 2022-23.

Purpose of the Cluster:

Several key functions are evident within Innovation Clusters:

- **Connectivity:** they provide a dedicated space for interaction with the local ecosystem. These spaces can be virtual and physical and should attract a wide range of actors from within each innovation community and beyond.
- **Knowledge management:** they function as consistent points for knowledge exchange (within Scotland and between and across international partners)
- **Activity management:** they act as a centre for mobilising and progressing specific innovation activities.

To date:

- DMHIC Membership has grown exponentially in the first year with over 950 members.
- DHI has written and published two Digital Mental Health Innovation Reports and provided further insight analysis to inform the focus and direction of the cluster.
- DHI developed a positive working relationship with UKRI to support the Scottish launch of a £3m funded challenge for Digital Mental Health.
- DHI was invited to present DMHIC at the inaugural Digital Mental Health conference in Belfast in June 2023.
- DHI secured a £47k commission from UKRI to undertake a scoping review of the potential of a “Test and trial a platform for the distribution and procurement of mental health and wellbeing XR experiences, products and solutions¹”. The full report is available - [MINDSET Workstream](#) . This provided additional insights which were shared with the innovation cluster to support knowledge exchange

All cluster sessions have been recorded and can be accessed on demand on the specially created virtual hub on [Scotland's Digital Mental Health Innovation Cluster | Digital Health & Care Innovation Centre](#).

¹ XR has been defined by UKRI as referring to “Extended Reality and covers Augmented Reality (AR), Mixed Reality (MR), Virtual Reality (VR), haptics, interfaces, platforms and software and will often be referred to as immersive technologies

Background

The Digital Mental Health Innovation Cluster (DMHIC) was formally launched in March 2022 to provide a ‘hub’ in support of action 15.7 of Mental Health – Scotland’s Transition and Recovery Plan within the context of Digital Innovation.

Action 15.7: to explore the use of an innovation hub model to encourage identification, development and evaluation of technologies focused on the needs of the population. Developing Innovation Hubs will help support individuals, organisations, academics, and commercial companies to work together to identify, design and develop innovative digital solutions while being guided by expertise within the mental health field including people with lived experience.

DMHIC was also anticipated to contribute to;

- wider mental health ambitions as set out in the plan,
- to inform future Scottish Government digital mental health policy priorities,
- and to enable appropriate local digital mental health innovations to become scaled and/or adopted nationally. As such it requires to integrate with mechanisms such as ANIA to support transitions.

Although the DMHIC necessarily connects with a range of other innovation agencies and activities, it’s work aligns primarily with the jointly agreed priorities of the Mental Health and Digital Health and Care Directorates in Scottish Government and is accountable to the Digital Mental Health Programme Board. An advisory group which meets bi- monthly has been established to inform strategic direction and content for the innovation cluster meetings. This group includes innovation leads from all three test bed areas and the programme manager from the Chief Scientist’s Office Innovation team leading on mental health. SAMH has recently been invited onto the group to represent third organisations.

The Scottish Government’s Digital Mental Health Programme contains six workstreams including innovation (as depicted in Fig 1) DHI was commissioned to establish, develop and administer a Digital Mental Health Innovation Cluster for an initial two-year period to support the innovation workstream.

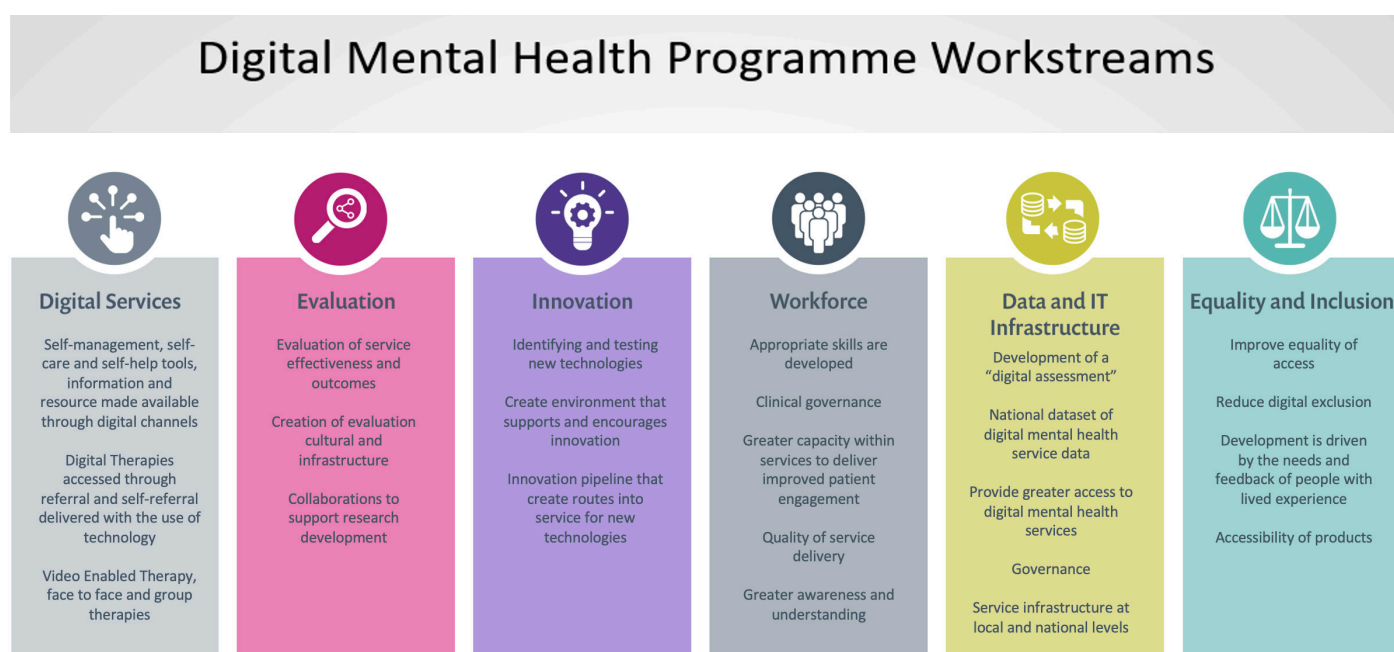


Figure 1. Scottish Government Digital Mental Programme workstreams (including innovation)

Innovation Cluster Purpose & Functions

Innovation clusters focus on gathering insights and developing innovative products, services and training in a specific area of interest, building expertise, providing focus, and progressing targeted actions together to help overcome key challenges in a specific field.

They are an instrument for managing activities and multi-directional knowledge flow. Innovation “hubs” can build on the existing work of the innovation community members and serve as a clustering mechanism for a particular region, discipline, or task.

They bring together people and teams for collaborative ideation, projects, and other initiatives. To be successful in their capacity and potential impact, the innovation cluster must be greater than the individual and organisational strengths.

Essentially innovation clusters represent a powerful collaboration of shared strategic interests, expertise and skills from policy, health and care, education, research, and commercial partners, centred around a common purpose.

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Outcome Based Approach

The DMHIC launch event took place on 10th March 2022 and can be viewed [here](#). To instil an outcome-based approach from the outset of the cluster, DHI commissioned Matter of Focus), a Scottish SME (Small/Medium Enterprise) and the use of their software tool Outnav.

The launch event involved all stakeholders in an initial outcome mapping exercise, which sought to identify what difference they sought from the cluster. Forty participants co-developed the baseline summative outcome map illustrated in Fig 2.

Following the event, the live outcome map was also made available online for viewing and to elicit further input. Website analysis evidenced over 250 views of this resource.

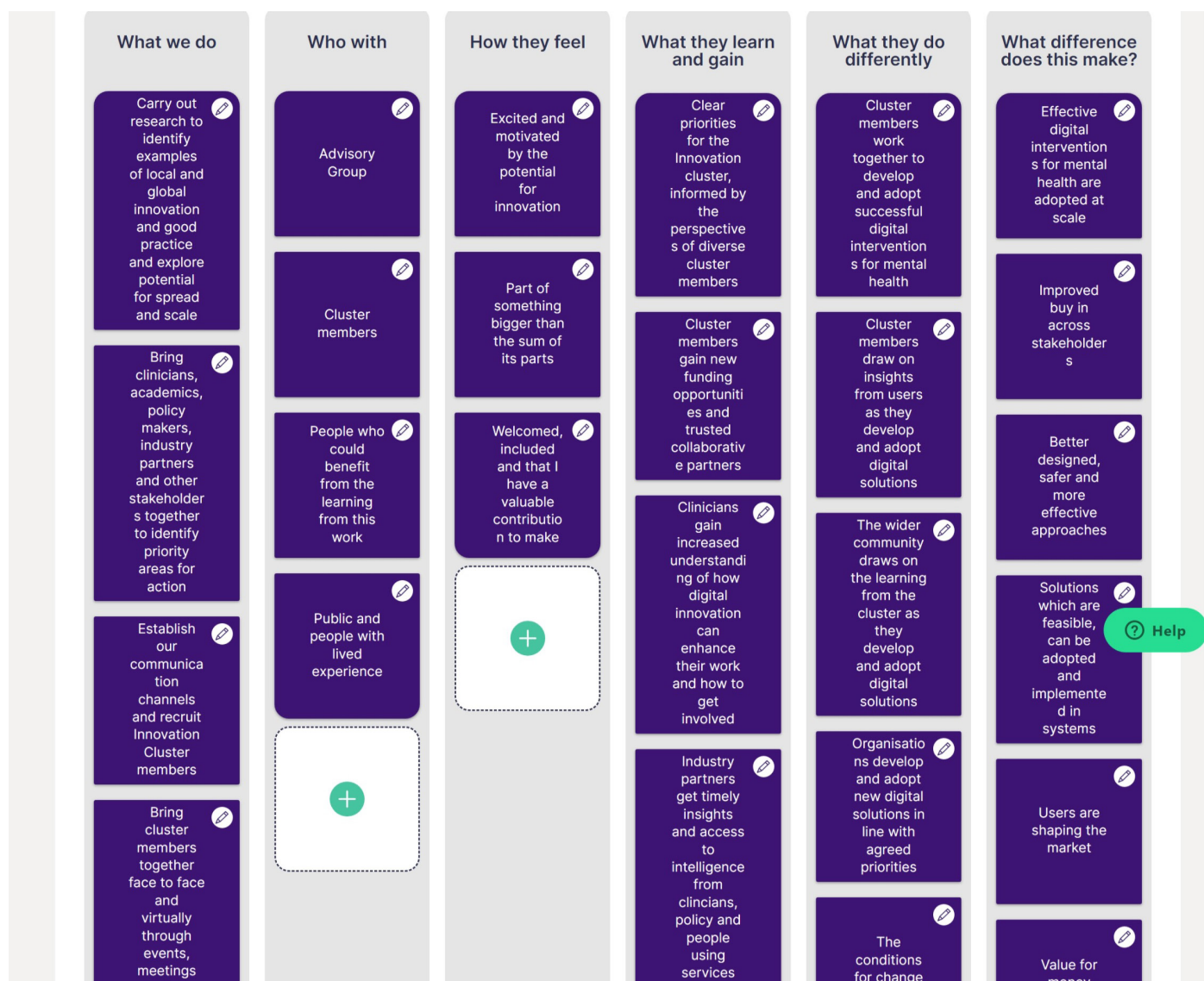


Fig 2. Outcome Map for Digital Mental Health Cluster

The identified outcomes were then further divided down into pathways to plot progress and act as a dashboard for monitoring and evaluation of specific outcomes. The pathway detail is captured in the interactive Outnav software tool which also enables the collection and storage of supporting forms of evidence of achievement in one place. Visually, it provides a barometer of progress against the specified outcomes/objectives and assists in identifying the contribution of the innovation cluster and gaps for development.

The pathways were divided to consider progress in the following two initial areas;

- **Outcome 1:** Cluster members work together to develop and adopt digital interventions for mental health.
- **Outcome 2:** Establish and share learning from the Innovation Cluster.

Within these outcomes there are short, medium and longer-term time frames for achievement. A summary of progress within these 2 areas is set out below. Excellent progress is particularly evident in the shorter term second pathway (share learning) where the following events, reports, insights and digital engagements have been deployed.

Outcome 2: Share Learning - Events

June 28th 2022 – Meeting 2

This follow up online session provided a national update on the digital mental health programme, an overview of a particular mental health challenge, and a review of the outcome mapping completed in the first session. Thirty-seven people took part and the session can be viewed on Social Isolation and Loneliness <https://vimeo.com/726724818>

Contents included

- National updates
- Review of the Outcome Map
- Presentation from mPower Interreg Project
- SHIP challenge funding opportunities

September 1st 2022 – Meeting 3

This session focussed on highlighting a funded challenge opportunity in partnership with UKRI. The Mindset challenge is worth £20m in total and UKRI approached DHI to help launch the first tranche of £3m research development funding in Scotland. Twenty-five people attended this online session which can be viewed on Mindset Challenge Launch <https://vimeo.com/745374915>

December 13th 2022 – Meeting 4

This session brought together researchers, service providers and clinicians to focus on the area of Young Persons Mental Health and featured an excellent presentation from the winners of the 2022 [#DigiInventors Challenge](#). Forty-two people attended this online session which can be viewed on Young Persons Mental Health <https://vimeo.com/752461444>

Contents included

- National & SHIP updates
- Kooth Project work in Scotland
- Mental Health Foundation Presentation
- Key Trends and Demand Led Challenges
- Global Practice – Chatbot Example

March 21st 2023 – Meeting 5

The first in-person meeting of the Digital Mental Health Cluster was held in Edinburgh and was attended by forty people. This included participants from Portugal and Northern Ireland. The self-management focussed programme provided the opportunity to share national and regional innovation updates, link with other national innovation programmes including [Near Me About Near Me](#) – NHSS National Video Conferencing Service (scot.nhs.uk) and [Chief Scientist Office Scotland](#). As the event took place one year after the first meeting it provided an opportunity to reflect on achievements to date. The session can be viewed on Self-Management and Regional updates <https://vimeo.com/812735697> This event also provided an excellent opportunity to informally network over lunch, which is often where collaboration opportunities emerge.

Contents included

- National and Local Updates
- SHIP funding update
- Digital Mental Health Inclusion Update
- Mindset Challenge Update

In all, the videos have been viewed over 148 times, the DMHIC webpages have been visited over 787 times with an average view of over 2 minutes².

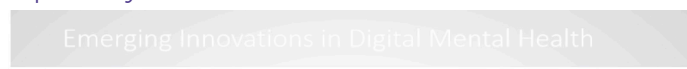
Outcome 2: Share Learning - Reports

DHI carried out research to identify and learn from global practice in digital mental health and to inform the activity of DMHIC. The first provided a [Review of Current Use of Digital Solutions for Mental Health | Digital Health & Care Innovation Centre](#). This report has been downloaded 425 times from Strathclyde repository.



² As at August 2023

The second report undertook a deeper dive into “Emerging Innovations within Digital Mental Health” <https://strathprints.strath.ac.uk/81236/> (June 2022) with 4 key areas being identified for further exploration. The report sought to better understand these emerging innovations in digital mental health and identified key organisations, stakeholders etc. that are progressing these fields; what countries are leading this progress; case study examples and relevant research literature. This report has been downloaded 340 times from the repository.



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Focus on 4 areas of Innovation



1. Artificial Intelligence,
2. Virtual Reality,
3. Gamification,
4. Digital Phenotyping.

Prior to the publication of the Scottish Government’s Mental Health and Wellbeing strategy, DHI also reviewed all relevant policies and papers relating to this area and extrapolated emerging challenges/priority areas to create a frame of reference for DMHIC, and to provide focus for collaboration effort (Figure 3). These challenges align well with the ambitions set out in the now published strategy (June 23) <https://www.gov.scot/publications/mental-health-wellbeing-strategy/>



Fig. 3 Demand Led challenge areas

Scottish Government has confirmed that the initial challenge for the innovation cluster should be on self-management.

Outcome 2: Share Learning - Digital Engagement



Fig.4 DMHIC Digital Assets

DMHIC webpages have been created on the DHI website <https://www.dhi-scotland.com/innovation/innovation-clusters/dmhc/> These have been viewed around 750 times (Aug 23) and provide access to resources including,

- Previous meeting presentations and videos
- Reports
- Funding opportunities
- Research and articles of interest.
- Newsletters

Analysis shows the meeting videos are particularly popular and expand the event outreach to those unable to attend scheduled events.

A breakdown of DMHIC membership as at July 2023 is shown in Figure 4, with members receiving 5 DMHIC newsletters to share information and learning between events.

A specific Digital Mental Health Innovation Cluster Linked In group has also been created as a space to explore collaboration interests <https://www.linkedin.com/groups/12721162/>

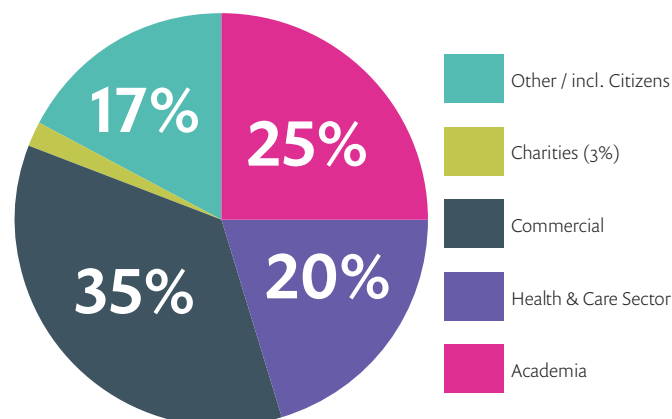


Figure 5: DMHIC Membership by Sector (July 23)

Outcome 1: Adoption of Digital interventions in Mental Health

This pathway covers the development and adoption of digital interventions in mental health and has been identified as a longer-term outcome for the DMHIC. Some progress is already evident with DHI representing DMHIC as an assessment panel member on the Scottish Health and Industry Partnership (SHIP) challenge call for mental health. This supported the SG Chief Scientist's Office in an award of Small Business Research Initiative (SBRI) grants to three companies working with the NHS Test bed areas in Scotland to develop innovative responses. Two Scottish finalists in the Mindset challenge were successful in securing an award of circa £200k.



Summary of Achievements

- DMHIC membership base of around 950 members has been achieved in the first year.
- 5 innovation cluster events have been delivered with recordings available to view on-demand on the dedicated DMHIC webpages with supporting research, materials and literature.
- Two Digital Mental Health reports published identifying global exemplars and 4 emerging technological areas.
- DHI has distilled insights to identify 8 grand challenges for digital mental health research & innovation to help focus collaboration opportunities.
- DHI was approached by UKRI to work in partnership to share the initial £3m Mindset Challenge Fund opportunity with DMHIC membership. This resulted in positive engagement from Scotland and 2 successful bids worth circa £200k.
- DHI was invited to present an overview of the Scottish DMHIC at the inaugural Digital Mental Health conference in Belfast June 2023.
- DHI secured a £47k commission from UKRI to undertake a scoping review of the potential of a “Test and trial a platform for the distribution and procurement of mental health and wellbeing XR³ experiences, products and solutions”. The full report is available - [MINDSET Workstream 2 | Digital Health & Care Innovation Centre](#) (dhi-scotland.com) This provided additional insights which were shared with the innovation cluster innovation cluster meeting.

Next Steps

- After presenting in Belfast the DHI were approached to provide guidance to the development of Northern Ireland Digital Mental Health Forum. An initial meeting has been arranged to support collaboration, shared learning and further promote Scotland as an exemplar for digital mental health.
- DHI is progressing recruitment of a Project Co-ordinator post to provide additional dedicated resource for the DMHIC.
- Further work will be undertaken to curate additional content and resources for the DMHIC webpages, including marketing and communication materials.
- To enable further progress on Outcome 1 - ‘develop and adopt digital interventions for mental health’ a specific event is being designed and run in September 23 to prepare providers for market and business readiness.
- Identify and support a further DMHIC cluster member collaboration to submit a high value funding application to progress Outcome 1.



³ XR has been defined by UKRI as referring to “Extended Reality and covers Augmented Reality (AR), Mixed Reality (MR), Virtual Reality (VR), haptics, interfaces, platforms and software and will often be referred to as immersive technologies