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Healthy Ageing Challenge Evaluation

Executive Summary

The Healthy Ageing Challenge and its activities

People in the UK today can expect to live longer than any generation before. Ensuring these extra years are spent in good health is a social and economic imperative. Maximising the opportunity for 'healthy ageing' requires actions from society and individuals to prevent age-related mental and physical decline and help people to adapt to age-related changes through various innovative products and services.

The rewards for making progress in these areas are substantial, including more efficient use of public services, particularly from reducing pressure on health and social care services, and enhanced societal wellbeing. Another major goal of healthy ageing is to improve health equity across socio-economic groups and regions. In addition to these societal benefits, advances in healthy ageing present a major market opportunity. There is need for innovative, affordable goods and services for older adults, as the UK and global markets are currently under-served.

In this context, the Healthy Ageing Challenge (HAC) was created to promote ageing well, not just living longer. It aims to turn the UK's demographic challenge into an opportunity for societal and economic benefits. With a £98M investment from UK Research and Innovation (UKRI), HAC was aimed at supporting businesses and social enterprises in developing and scaling healthy ageing (HA) products to meet the needs of an ageing population.

The Challenge was implemented through several funding strands that supported academic- and industry-led research and innovation (R&I) projects at different stages of maturity. Early-stage development of new innovations was supported by university-led Catalyst Awards and Social, Behavioural and Design Research Programme [SBDRP] and industry-led Investment Partnerships. Late-stage development of existing products, services, and business models aimed at supporting their
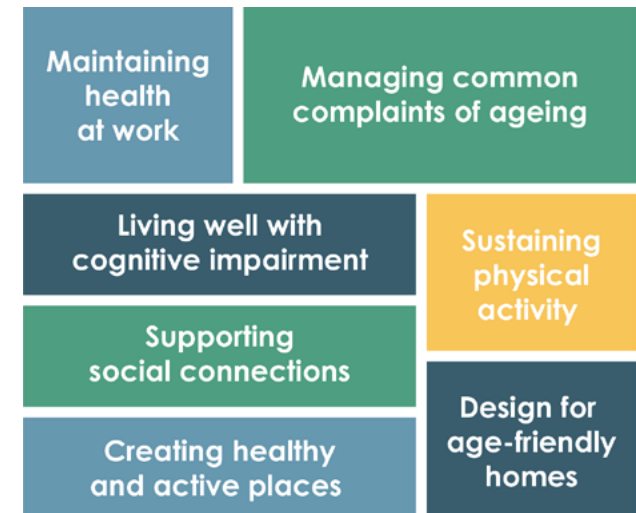
adoption and scaling was funded through industry-led Trailblazers, Investment Partnerships, Designed for Ageing [DfA] initiative; and social ventures-led Small Business Research Initiative [SBRI].
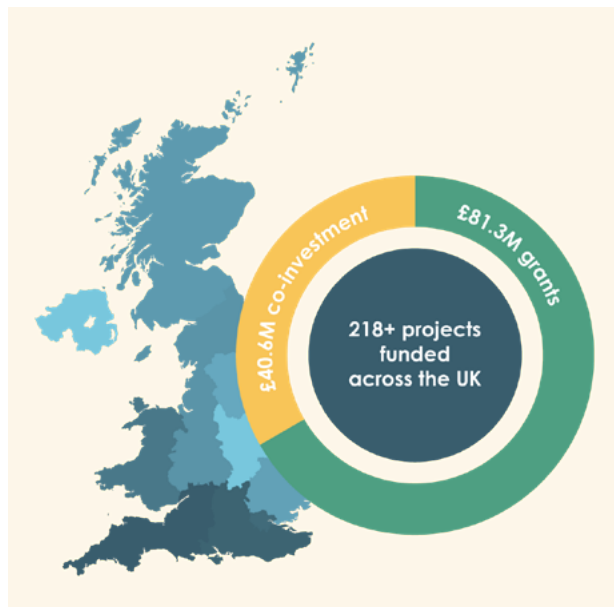
In total, over 218 projects[1] were funded across the UK through these strands, receiving £81.3M in grants and £40.6M in pledged co-investment primarily from the industry sector. These projects were spread across all regions of the UK and predominantly focused on developing HA products and services. The solutions aimed to benefit a broad spectrum of income groups, including those from lower income brackets. Various stakeholders participated in these projects, notably older people, businesses, charities, local authorities, community organisations/networks, as well as individuals from low-income backgrounds, from black and minority ethnic backgrounds, or with physical or cognitive challenges.

Projects focussed on the following seven HA themes:

Maintaining health at work

Managing common complaints of ageing

Living well with cognitive impairment

Sustaining physical activity

Supporting social connections

Creating healthy and active places

Design for age-friendly homes

£40.6M co-investment
£81.3M grants
218+ projects funded across the UK

Evaluation scope and approach

Technopolis with support from Ipsos, Science-Metrix and glass.ai was commissioned by UKRI to conduct an independent, external evaluation of the HAC. The aim of the evaluation was to understand both the economic and non-economic impacts that HAC has enabled as a whole and its potential for impact in the future. The evaluation considered HAC awards made since 2020 and was conducted between October 2022 and May 2024. This executive summary lays out the main findings from the evaluation and key considerations for the future.

The study team employed a theory-based mixed-methods approach, including both qualitative and quantitative methods, which included development of an intervention logic, data collection and analysis through desk research, bibliometric analysis, online surveys (of successful and unsuccessful applicants), stakeholder interviews and impact case studies.

It is important to note that HAC projects either concluded shortly before the evaluation or were still ongoing at the time. As a result, the data collected on outputs, outcomes and impacts from these projects was incomplete. Additionally, many projects were in a pre-commercial stage, which restricted the available evidence on potential economic impacts of the Challenge. The societal and economic benefits of these projects often manifest over an extended period, meaning that the true impact of the programme will only become clear in the coming years.

Main findings

Direct outputs of the programme:

New knowledge outputs: HAC awards (mostly Catalyst Awards and SBDRP projects) reported 135 publications (including 59 journal articles and 38 conference proceedings) to date. Other outputs reported by HAC participants included establishment of proof of concept or feasibility of solutions, new resources and datasets, and educational resources for stakeholders. These outputs covered a wide range of HA topics, such as loneliness, medicine management, rehabilitation exercises, hearing loss, mobility issues, and menopause.

New intellectual property (IP): Project teams are beginning to register new IP, such as designs, trademarks, copyrights and patents. They have also developed know-how, trade secrets and new R&D tools and methods. Examples include a copyright for a virtual cognitive stimulation therapy tool, a house design guide for designing age-friendly homes and a patent for a posture-sensing system for a smart chair.

Products and services de-risked for follow-on funding: Evidence from surveys suggests that HAC funding generally supported the progression of innovations in terms of technology readiness levels (TRLs), bringing them closer to market. The maturity levels of the innovations varied across funding strands. On average, projects starting at the ideation/planning phase (TRL1) progressed to a working prototype (TRL 6).

New collaborations and skills: Survey responses indicate that approximately three-quarters of HAC projects involve new collaboration partners. Around one-fifth of surveyed projects are entirely based on new collaborations. Catalyst and SBDRP awards saw the highest involvement of new partners, largely due to the requirement for collaboration between universities and other sectors, particularly businesses.

Participation in HAC projects also led to new and improved skills in areas of HA research and innovation (R&I), understanding market needs and opportunities, technical expertise, community and user engagement, business development and fundraising, scaling strategies, and approaches to co-design.

Further outcomes that emerged from project activities:

New knowledge: HAC project participants developed new knowledge and insights particularly with regard to product and service design, user/stakeholder involvement and co-design.

Capacity and ecosystem building/ strengthening: According to participants, HAC projects have strengthened multidisciplinary, inclusive R&I collaborations across various partners including policymakers, practitioners, businesses and social ventures. These collaborations enhance absorptive capacity and buy-in from users (both individuals and organisations) to facilitate the adoption of innovations developed in HAC projects. The HAC Community of Practice and Healthy Ageing Conference have also played a significant role in this effort. HAC also contributed greatly to integrating new sectors and types of organisations into the HA R&I ecosystem.

Follow-on funding and investment leveraged:

- Researchfish® indicates 12 Catalyst and SBDRP awards captured a total of £7.9M in additional funding, mostly from public or charity/non-profit sources
- According to PitchBook data (as of April 2024), across the Challenge, companies have secured additional private investment (beyond the pledged co-investment) totalling £16.8M in follow-on funding including seed investment, angel investment, early-stage venture capital and late-stage venture capital

Adoption and scaling: At the time of data collection, most HAC projects were at a pre-commercial stage, with many having conducted small-scale pilots or user trials. Nevertheless, some projects had achieved adoption beyond their initial user base, including:

- A digital app and coaching support for people in their 50s, 60s and 70s, which has been scaled up and used by some 170 GP practices across the UK
- A project which uses golf to assist people with comorbidities and neurological conditions now operates in 23 golf clubs across the UK
- An augmented reality storytelling product aimed at improving social connections among older people has been used by 2,580 older adults and seven organisations

Business growth: Early evidence indicates that the Challenge has boosted firm growth in terms of company turnover (£26M to £41M; £15M growth), research and development expenditure (£2.8M to £10.2M; £7.4M growth) and staff headcount (expanding from 599 to 859 full-time employees, net 260 additional employees) over the Challenge period for companies participating in HAC projects.

Health and wellbeing benefits have been achieved in some projects primarily for end users participating in the project's R&I activities. These end users include citizens, especially older people from diverse backgrounds, including ethnic minorities and low-income groups, as well as those with cognitive and physical disabilities. Examples of these benefits include:

- Music in Mind reported a 90% drop in agitation amongst their beneficiaries, with estimated annual wider system savings of approximately £60,000 per individual
- Aesop's Dance to Health project reported a 96% improvement in mental wellbeing, alongside a similar percentage of participants indicating increased physical activity
- Civic Dollars recorded an 8.5% increase in health and wellbeing among participants
- Cricketqube found that 40% of users aged 50 and above reported reduced depression; 86% reported increased happiness after sessions, and 57% felt more relaxed

Future Impacts

Most projects are still in early stages and have not had enough time to fully develop solutions for widespread adoption and scaling. As a result, significant contributions to population-level health and social impacts, as well as broader sectoral impact, have not yet been realised. Nonetheless, there is early evidence showing progress in HA innovations and growth among companies involved in the Challenge. This early evidence suggests that the Challenge is creating opportunities for long-term impact.

Conclusions

HAC has largely achieved its planned outputs and short- to medium-term outcomes. Even against a backdrop of a global pandemic and cost of living crisis, HAC has successfully established proof of concept for new innovations, generated new knowledge and transformative ideas, and developed accessible and inclusive innovations for healthy ageing. It has fostered multidisciplinary collaborations across sectors and enhanced skills among participants. Short-term outcomes such as health and social benefits for users involved in testing, follow-on funding and new investment, and increased R&I and absorptive capacity have been achieved in specific projects.

HAC has supported R&I across the entire innovation pipeline from early-stage research and feasibility studies to adoption and scaling research and commercialisation. This has resulted in a pipeline of innovations spanning all seven HA themes at various stages of development. New products and services have been designed with user input, proof-of-concept has been established in several cases, and existing innovations have been further developed with new markets and business models in mind.

Social benefits, particularly health and wellbeing benefits, have been achieved in some projects primarily for end users participating in the project's R&I activities. Long-term benefits such as savings for health and social care providers and population-level health impacts are expected to emerge. These will depend on large-scale adoption of said innovations.

Since most solutions undergoing development through HAC serve a wide range of income groups, including lower-income brackets, there is potential for HAC to address inequalities in healthy ageing in the UK, depending on adoption by relevant populations. Older people from diverse backgrounds, including ethnic minorities, low-income groups, and those with cognitive and physical disabilities, have participated in HAC R&I activities. This inclusivity is likely to foster understanding and acceptance across diverse demographic groups, thereby supporting adoption of HA solutions and mitigation of inequalities.

HAC has contributed to firm-level growth, as evidenced by increased turnover, R&D expenditure, and staff numbers among participating companies.

HAC has helped galvanise the nascent HA sector by making considerable inroads into developing a HA R&I ecosystem in the UK. It has fostered a community of practice, bringing together stakeholders from various sectors to collaborate on developing HA solutions. It has encouraged new entrants, from micro and small enterprises to large multinational companies, as well as social ventures and universities to participate in HA R&I. The focus on inclusive and user-centred design of HA solutions has leveraged UK expertise in research, innovation, and design, further stimulating investment in the HA sector.

The medium- to long-term outcomes are likely to be achieved over the next 3 to 5 years, following the conclusion of the Challenge. Anticipated outcomes include social and health benefits for users of HA innovations, cost savings for health and social care providers, and continued economic growth for companies involved in developing these innovations.

Considerations for the future

To ensure HAC achieves its long-term outcomes and impacts, and to safeguard the substantial investment already made, we propose the following key considerations for the future:

Ensuring the future sustainability of the HA R&I community galvanised by HAC. While HAC has started to establish an ecosystem for HA R&I in the UK, it is in its early stages, and the ecosystem is not yet self-sustaining. The community, activated through HAC projects, the Healthy Ageing Conference and Community of Practice, includes networks comprising businesses of all sizes, social ventures, universities, government and local communities. Without continued efforts, there is a risk that this community could disperse. Therefore, it is important to continue supporting the initiatives started by HAC to foster consolidation and growth of the HA R&I community, for example through the Ageing Business Society Special Interest Group of the British Society of Gerontology or similar organisations.

Exploring options for sustained funding for HA R&I is essential to maintain the momentum generated by HAC. Many of the innovations supported in HAC are at a stage where further development or support is necessary to bring them to market. Therefore, there is a need for continued funding for HA R&I over the medium to long term, possibly through a programme similar to HAC, to maximise the impact from previous investments and progress. It is critical to sustain the momentum built so far in addressing the challenges posed by the UK's ageing population, as these issues continue to persist.

Supporting improved access to HAC and HA innovations is another key consideration. HAC has facilitated the development of several HA solutions with potential social benefits. However, a significant challenge remains in ensuring that innovations supported by HAC funding are available to those who need them. Many of these innovations are designed to address issues within the publicly funded NHS and social care systems, requiring specific evidence and meeting particular requirements to be commissioned. HAC participants have identified this as a gap/barrier which may prevent the potential of products and services to benefit the population and save costs in health and social care systems from being fully realised.