

Changemakers: Creativity and Value Creation
BMHP5014

Component 2: Assignment (Report)

**LiveSafe AI: An AI-Enabled Smart watch for Older
Adults Living Alone and dealing with Dementia**

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Poster

Introduction

Health and social care is the concerted delivery of healthcare and care services for the promotion of individuals' physical, mental and social care (Kosiol et al., 2024). This poster is based on the innovation of AI-enabled smart home monitoring system designed to support older adults with dementia who lives alone. It will explain the gap in the market and timeline for the implementation.



Overview of the proposed innovation

Title: LiveSafe AI: An AI-Enabled Smart watch for Older Adults Living Alone and dealing with Dementia

Overview: Innovative products in health care increase the safety of patient treatment, improve patient quality of life and overcome unmet patient care needs (Zahlan, Ranjan and Hayes, 2023). LiveSafe AI will be an innovative AI-enabled healthcare smart watch designed for older adults living alone with dementia which will be developed with a cost of £500,000. It will track health data and alert to falls, verify with GPS whether wandering and can remind of medicines and set up easy emergency contacts. Its lightweight design, convenient strap and intuitive way of use will help it to facilitate independence to the best of their ability, whilst also providing timely intervention, and enhancing the wellbeing of users.

BSc (Hons) Health and Social Care

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Integration of technology
Innovative healthcare products combine technologies of artificial intelligence (AI), Internet of Things (IoT), GPS-tracking and encrypted data all in one item (Harish and Dhanushiya, 2025). Machine learning algorithms will continuously monitor the movement patterns, vital signs, and location to identify falls, wandering and other unusual activities. The LiveSafe AI will transfer real time data to authorised carers or healthcare experts securely while safeguarding the user's personal information through the usage of effectual encryption while the data is processing.

Enhancing Effectiveness:
The integrated technologies enhances the effectiveness of new healthcare innovation, allowing for the AI to continuously monitor health, initiate alerts in emergencies, and swiftly identify and alert potential risks. Real-time exchange will enable quicker interventions, the shortening of time to action and improve carer and healthcare professional decision making. These will help to facilitate safer independent living, better health and reassure both the person using the gear and their family.

TYPES OF DEMENTIA

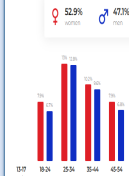
Dementia is an umbrella term for loss of memory and other thinking abilities severe enough to interfere with daily life.

- Alzheimer's
- Vascular
- Lewy body
- Frontotemporal
- Other, including Huntington's
- Mixed dementia: Dementia from more than one cause

Facebook users in United Kingdom 2025

57 100 000

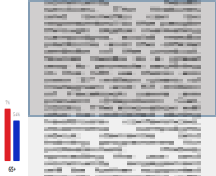
52.9% women 47.1% men



Instagram users in United Kingdom 2025

37 500 000

54.9% women 45.1% men



Impact and the target audience

Target Demographic: LiveSafe AI's initial focus is on older individuals with dementia, individuals living alone, and older persons in the early to moderate stages of dementia who would like to live independently but are seeking extra assistance when it comes to daily safety. The improved monitoring of health status and improved communication are the benefits of the product for family and healthcare professionals who are responsible for taking care of old people.

Health, Wellbeing and Common Good: The healthcare innovative wearable products helps in monitoring vital signs, reminding users to take their medications and making AI-based alerts in emergency situations (Singh, 2025). The features of the watch will minimize the likelihood of injury, facilitate independent and healthy living and will give people and their loved ones a sense of security and assurance of stress free life. The innovation advances the common good by providing early intervention as well as cutting down on avoidable hospital stays, while providing support for families in the community when caring for someone with dementia.

Regulations and development

A new medical innovation that is based on data collection has to abide by the requirements of the UK General Data Protection Regulation (UK GDPR) and the Data Protection Act 2018 laid down when it comes to the secure collection, storing and handling of users' personal health data (Gov.UK, 2026). A new innovative product in healthcare has to comply with the UK Medical Devices Regulations 2002 (Gov.UK, 2026). The innovation is also required to take into account the Health and Social Care Act 2012 (Gov.UK, 2026).

Conclusion

LiveSafe AI has been presented as an innovative smart watch for older adults living alone with dementia who now have an enhanced safety, independence and wellbeing. The launch and right use of innovative product has a great role in enhancing quality of person-centred care, making timely and rapid responses to emergencies, mitigating risks, and improving the quality of life with intelligent wearable device.



HSC and the gap in it

In the UK, there are an estimated 982,000 people with dementia and this is expected to rise to 1.4 million by 2040 and the cost of treatment is high for severe dementia which is £80,500 per annum (Alzheimers.Org.UK, 2026). There are many older people who have dementia do live alone, and are at the highest risk of needing unmet care, less good physical health, less good psychological health, hospitalisation and early admission to care. With the growing share of older people in our society who are living alone, LiveSafe AI will monitor them continuously and enhance their security, enable them to live independently and effectively respond to emergencies when they occur.



Implementation

Community of old people, primary healthcare settings, and residential care homes will be helpful in applying any proposed innovation. After making a personal assessment, the smart watch will be prescribed or recommended by GP's, dementia specialists, community nurses and occupational therapists (OT's). It will be used and safety features will be taught to practitioners and carers. Continued monitoring will provide for prompt responses to emergencies, foster independent functioning and facilitate linkages with health, carers and emergency responders.

Timeline

Research and design will be finished in the first 3 months, then a prototype will be developed, tested, and communicated to the community, after which it will be piloted in various locations for three further months before being manufactured and sent for training to further sites in Months 5-8, and commercialized launch will be done in Months 16-18.

Activities and phases	1-3 Months	4-6 Months	7-9 Months	10-12 Months	13-15 Months	16-18 Months
Research and design phase						
Software and prototype development phase						
Testing and refinement phase						
Pilot implementation phase						
Manufacturing phase						
Commercial launching phase						

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Pitch

Introduction

Dementia is an ongoing variable disorder of the brain that leads to a problem with memory, thinking and behaviour, and with performing daily tasks (Reuben, Kremen and Maust, 2024). This pitch is a broad explanation of the innovation that is discussed in the poster focused on the problem of dementia. The pitch will elaborate the impacts that can be made through the innovation on the specific audience.

Assessment

Innovation and its need

Innovations like the social innovation are important in health and social care, as it helps to improve for patients, increase safety and develop better methodologies in work to meet changing care needs (Tariq, 2024). There are chances to increase the independence of older people with dementia and lower the risks with living alone and memory loss using the wearable devices. The LiveSafe AI is an innovative device for seniors and it will be developed at a cost of £500,000 and in a timeline of 18 months. Continuous monitoring, emergency alerts, and medication reminders, along with location support will offered by the smart watch which will enhancing daily lives in terms of both their safety and wellbeing. It will provide value by facilitating intervention from early on in life, improving communication between users, carers and health care professionals, and minimising unnecessary health risks. LiveSafe AI facilitates individual living, dignity and safety with personalised support and helps to promote a more person-centred, responsive health and social care system.

Benefits and target audience

The greatest values are added by health and social care initiatives that address the needs, challenges and experience of the people who receive the care and services (Matos *et al.*, 2025). LiveSafe AI will help older adults who lives alone and have dementia, especially in the early to moderate stages of the disease and desires to live independently and without any worries. The innovation will be focused on the group of old aged people and will be documenting their health and alerting them or their carers about possible threats through early warnings during emergencies. It will promote wellbeing and provides a way to manage anxiety, promote self-confidence and maintain people within their normal homes. Family carers will be enjoying the

benefits of better communication and knowing their relatives are safe. With the help of this innovative product, relevant information will be available to healthcare professionals, providing the basis for improved decision making and tailoring care plans. Thus, LiveSafe AI can benefit community-based dementia support by ensuring the independence, dignity and quality of life of older people.

Professional services, legislation and policies

Professional Services Supporting Safe Dementia Care: The implementation of LiveSafe AI needs to include a variety of health and social care practitioners who endorse the adoption of the innovation in a safe and personalised manner. Assessment of individual needs and sufficient integration of the technology into existing care plans depends on the role of general practitioners, dementia specialists, community nurses, occupational therapists and social care workers. These experts will help understand the purpose and benefits of smart watch and monitor the outcomes, providing guidance to users. This is consistent with the NICE dementia guidelines that place priority on person centred care, keeping people independent, ensuring that people can do the things that are important to them and that people and their families are involved in decisions made about their care (NICE.Org.UK, 2026). LiveSafe AI complementing this vision, offers further safety support whilst acknowledging the views and dignity of older people. UKCA marking before the launch of a new product is required for ensuring that the new product is meeting the required safety and quality standards (Gov.UK, 2026).

Legislation, Policies and Regulatory Compliance: LiveSafe AI will be committed to providing a safe, ethical and efficient service delivery within the framework of key legislation and policies set within the UK health and social care system. The innovation adheres to the United Kingdom General Data Protection Regulation and Data Protection Act 2018 to respect sensitive information about health gathered using monitoring systems (Gov.UK, 2026). By promoting approaches to enhance quality and improve integration of care, it also takes into account the strategic principles of the Health and Social Care Act 2012 (Gov.UK, 2026). Like all health technology devices, LiveSafe AI must be marked for its first use in the UK to show that it conforms to the safety, quality and performance requirements. Such regulatory measures instil user confidence, trust within families and practitioners and provide secure innovation to support people living with dementia. The Medical Devices

Regulations 2002 is required to be followed for developing a new medical device and getting it approved (Gov.UK, 2026).

Involvement of public

Public Awareness and Community Involvement: Community engagement is important to improving care for people with dementia, as communities shape people's experience of support, inclusion and understanding (Mathie *et al.*, 2022). The LiveSafe AI's campaign aims to raise awareness of the general public to join in the fight against dementia, by minimizing the stigma and highlighting early support. Community members will be involved in the process by sharing information with them and supporting families who are having older adults living with dementia. Public awareness is extremely important for creating a safe environment for patient that is more inclusive and respectful towards the patient with unique need of treatments.

Supporting Innovation Adoption through Engagement: Engagement of public with a new product fosters a sense of trust and acceptance of innovative healthcare products and makes it easy to introduce in the market (Horgan *et al.*, 2022). The benefits of the smart watch maintaining independence and improving safety can be conveyed through public health campaigning using social media or at health events or dementia awareness sessions. There are ways they can help, with families, carers and local organisations supporting them in their use of the innovation in an effective and confident way. Leading dementia charities and NHS organisations and old age homes are further involved so that there is increased participation and the initiative is made accessible to those who require extra assistance. In addition, public contact enables feedback from the user and the community leading to an improvement of the innovation based on the actual experiences. So, active community involvement is integral to building a more loving care approach for people living with dementia which combines technology and human intervention to improve quality of life.

Conclusion

With its expert support at its core around requesting regulatory assistance and ensuring compliance, LiveSafe AI has proven the value of using AI along with regulatory expertise in enhancing dementia care. The innovation facilitates person-centred care and more effective support for older adults to live on their own, as well as contributes to safety by timely monitoring and intervening.

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