

## Evidence Generation Case Study: Macusoft

### Overview

[Macusoft](#) is a digital cloud solution that streamlines and simplifies clinical decision-making for macular diseases. It improves in-clinic efficiency and enables the expansion of clinical resources by task shifting, while also supporting emerging models of care such as out-of-hospital virtual clinics. Cases of sight impairment are reduced by personalised treatment plans, and patient relationship management ensures patients understand their condition and are in control of clinical management and self-care options.



237 million people globally suffer from Macular Degeneration, the most common cause of certifiable visual impairment in the developed world. It is estimated at least a quarter of a million older adults in the UK alone suffer from blindness due to the condition.

Maintenance of vision requires lifelong monitoring and treatment for successful long-term control of the disease. Timely on-going regular monitoring is required to assess disease activity and adjust treatment intensity. Failure of services to deliver this can lead to permanent and irrecoverable loss of vision. Studies identified that many centres don't have adequate capacity to meet the demand. This is causing delays in both follow-up and treatment and has a negative impact on visual outcomes.

Macusoft was successful in being selected for the fourth cohort of the [DigitalHealth.London Accelerator](#) in 2019-20. When Macusoft joined the programme in September 2019 they were early stage, with a prototype product. They understood the clinical nature of their product and that it influenced clinical decisions and therefore it would need a certain level of clinical validation.

Through conversation, the Accelerator team and Macusoft decided that it was important to delve into the detail of the product, to understand which NICE Digital Health Evidence Generation tier it would fall into, and therefore inform their evidence generation journey.

### Supporting Evidence Generation

Through conversations with their Navigator, and Professor Paul Wallace, they quickly identified the requirement to develop a strong research question. The key challenges for Macusoft were identified as firstly being the lack of evidence around the accuracy of predictions, and secondly the benefit the product would create in a real-world setting.

Two research questions were postulated through one-to-one sessions with Paul and their Navigator, and quickly we were able to proceed in engaging with academics. Macusoft were very proactive and benefitted from attending the Accelerator evidence generation workshops, one-to-one sessions and Health Economics workshops. Early in the programme they realised the value and the need for robust evidence generation and the impact it would have on their growth as a company.

## Building Research Partnerships and Applications

The approach and development of the research question really enabled Macusoft to engage with academics, researchers and other clinicians. They were able to engage with the research team at Guy's and St Thomas' Hospital Trust (GSTT). The Accelerator team were able to support the process through bespoke one-to-one support and insights, and through providing advice around the research analysis and protocols. Through this engagement, they were able to proceed to developing an application for an NHSX AI award, for which they were awarded a significant sum of money for an initial feasibility study.

In the summer of 2020, Macusoft presented their current research activities and future research plans to a meeting of the London Clinical Research Networks (CRNs) Leads and the London Research Design Service (RDS) organised by Paul Wallace. In preparation for pitching to a diverse group of clinical researchers, the Accelerator supported the Macusoft team to develop their pitch and refine their evidence generation asks to the group.

## Looking to the Future

Through the support of the Accelerator and their own curiosity, Macusoft have developed a robust plan for Evidence Generation. This journey has started with the NHSX AI Award Feasibility Study, however they are already planning their next steps in conducting a Health Economic analysis, with a view to commercialise the product and have a significant positive impact on patient care.

"The DigitalHealth.London Accelerator team provided us with consistently sound and pragmatic advice, assisting us with challenging topics and sharing their significant NHS knowledge.

"Generating evidence and navigating regulation is difficult for a company at our stage and through the Generator we have made good headway."

**Nilkunj Dodhia, CEO of Macusoft,  
DigitalHealth.London Accelerator 2019-20**