



**MedTech
SuperConnector™**

CONNECTING CAPABILITIES TO DRIVE FORWARD MEDTECH INNOVATION

BUCKINGHAMSHIRE NEW UNIVERSITY CASE STUDY

September 2020



The Challenge Accelerator

The Challenge Accelerator programme centres on the formation of a team and idea development. It takes postdocs, PhD and Master's students, from any academic background, with a passion for the programme's challenge of mental health, wellbeing and happiness through the six-month accelerator. Here they receive access to entrepreneurship training and financial support.



**Research
England**



In 2018, [MedTech SuperConnector](#) (MTSC) became one of 18 innovative projects funded by [Research England's Connecting Capability Fund](#) (CCF). Combining their knowledge through strategic collaborations, Higher Education Institutes would contribute to the aims of the UK government. The projects would strengthen their contributions to economic growth as well as support the delivery of objectives in the government's industrial strategy. MTSC, a consortium of institutions led by [Imperial College London](#), includes [Buckinghamshire New University](#) (Bucks) as a project partner.

An open experiment in medtech acceleration, MTSC programmes are setup to support early career researchers (ECR) fast-track the commercialisation of their early-stage medtech innovations. In doing so it aims to share the resulting learnings and best practice across the consortium partners to become, a world leading organisation for supporting and accelerating the commercialisation of early-stage medtech innovations. Nearing the end of the three year experiment, the MTSC is now collating the learnings and impact on the partner institutions and venture development from participating in this experiment. It is also seeking an extension to the programme which would broaden its impact across the medtech landscape.



The Coggi team speaking to investors and industry at MTSC's Cohort 2 Showcase in 2019

BUCKINGHAMSHIRE NEW UNIVERSITY

Buckinghamshire New University (Bucks), with campuses in and around London and the South East of England, differs from other MTSC consortium partners in its strategic approach. Their education strategy aims “for Bucks to be a University with sector-leading impact, renowned for an education that is flexible, built around the needs of its students, and vocationally-based, ensuring their career success” ([Bucks Impact 2022 Strategic Plan](#)).

This was proven successful when the [Higher Education Statistics Agency](#) (HESA) published graduate outcomes data this June. It showed that 98% of graduates were in or starting employment or further study within 15 months of graduation and is one of the top five for the lowest graduate unemployment rate in the UK ([Higher Education Graduates Outcomes Statistics: UK 2017/18](#)). In contrast, other consortium members are heavily research-focused, with more emphasis on technology transfer, the process of disseminating innovative technologies into mainstream markets. Greta Paa-Kerner, Head of Business Engagement at Bucks, is Bucks’ representative on MTSC notes that; “We [Bucks] don’t have a refined entrepreneurship programme and we don’t have a tech transfer office. We have comparably few PhD students when compared to more research-intensive universities.”

In contrast, within the healthcare sector, Bucks offers award-winning nursing degrees, as well as range of practical health and social care degrees giving it a background in patient-facing health and social care; a unique offer compared to other consortium members.

However, in recent years Bucks has begun to put more emphasis on their entrepreneurship offering, putting in motion several initiatives aimed primarily at supporting innovation in the healthcare sector. At the same time as Bucks joined the MTSC consortium, it also received funding to build the [Digital and Health Tech Hubs](#) as well as launch [Bucks HSC Ventures](#) funded by the [European Regional Development Fund](#). Ms Paa-Kerner has been leading the development and implementation of many of these initiatives, “Almost everything started at exactly at the same time.... we started Bucks HSC Ventures, at the same time we started the building of the two hubs and at the same time we started MTSC.” This suite of complimentary programmes has proven ideal for kickstarting Bucks’ entrepreneurial offer to students, staff and SMEs along with supporting MTSC alumni from across the consortium.

BUCKINGHAMSHIRE NEW UNIVERSITY AND MTSC

Projects Supported

- **Coggi** *Mobile application to promote wellbeing in children*
- **Wellbrowsing** *Browser extension monitoring social media usage*
- **Safer Cap** *Low friction child resistant cap*



£200,000 + project funding awarded



Digital/eHealth Solutions



Innovative product design & manufacturing

BRINGING INNOVATION INTO PRACTICE

Buckinghamshire New University has successfully supported three projects with two continuing post-programme and five participants over the course of its engagement with MTSC, a comparable figure to other consortium members. The benefits to participants have been both financial,



Coggi the chameleon is the main character in Ms Stonor's new digital health solution promoting positive psychology

receiving just over £200,000 in collective funding, along with educational. The programme has provided participants with significant opportunity to connect with industry and develop entrepreneurial skills with access to +20 hours of 1-2-1 business coaching along with specialised workshops.

Challenge led cohorts, in which participants are encouraged to develop solutions to challenges posed by an industry partner, has

been where Bucks as found its niche. Cohort Four challenge led programme in partnership with [GSK Consumer Healthcare, Future of Pain](#), has supported PhD candidate [Richard Harlow](#) to take a design project and accelerate its development. His product is a low friction child resistant cap that allows for easy access to those suffering from joint and muscle related conditions. MTSC has given him the opportunity to explore his idea further, working towards patenting and understanding the regulatory landscape the design fits into to prepare for mass production.

Cohort Two participant, [Pepita Stonor](#), joined the programme whilst completing an MSc in Applied Positive Psychology after successfully pitching at a two-day MTSC led hackathon proposing a solution to the challenge, Mental Health, Wellbeing and Happiness. The solution developed with support from a researcher at the [Royal College of Music](#) initially focused on university student wellbeing, including how to manage their finances. One-year post programme, Ms Stonor has continued to pursue the venture pivoting towards supporting positive mental health in children via the development of a mobile application called [Coggi](#). While using the app children engage with Coggi, a chameleon, who responds to user input through games and interactions promoting psychological well-being.

Ms Stonor credits the design of Coggi to understanding user experience – in this case child psychology. As a patient facing solution the application is designed to focus on the needs of the user, “[children] need to feel comfortable and children want to use phones. They don’t want to use a piece of paper.” Bringing this learning back to her own MSc cohort, as well as a new cohort studying positive psychology, Ms Stonor has been able to challenge traditional academic thinking and apply it beyond the institution.

Networking opportunities have also proved invaluable, after being introduced to a specialist lawyer in intellectual property via a consortium partner Ms Stonor has received

pro-bono legal advice, critical to protecting the code that sits behind the application. Mr Harlow has similarly found the resources and support available on how to approach intellectual property (IP) key to been able to explore alternative avenues for the commercialise his product, “If I was doing it personally, I may not have gone down the patent route, because it’s an expensive process to get started but MTSC has facilitated that because they give you an allotted amount so that you can apply for IP.”

RECOGNISING SYNERGIES

Bucks’ entrepreneurship and business support initiatives evolved in parallel; informing each other and interacting throughout, essentially feeding from one programme to the next and even supporting individuals from consortium HEIs. Cohort One venture, [Keratify](#), founded by Dr Rosalind Hannen a researcher at [Queen Mary University of London](#), participated in Bucks HSC Ventures allowing her to secure a working relationship with Bucks Healthcare NHS Trust to access skin samples pivotal for the continued testing of her 3D skin modelling platform. Keratify’s skin culture platform “offers a new solution to human skin testing to resolve current limitations of standard laboratory practices.” After Dr Hannen finished MTSC programme she needed to rapidly expand testing to develop further and needed to connect with plastic surgeons and other industry practitioners. Dr Hannen found that working Bucks Healthcare NHS Trust

provided a portal for this need but also that the plastics team were “really enthusiastic and actually want it to happen,” a “different and refreshing experience” for the entrepreneur.

It was Ms Paa-Kerner whom suggested applying for the programme, crediting this connection of a problem to a viable solution to the parallel development of Bucks’ entrepreneurial initiatives; “Dr Hannen has this relationship with the Trust due to the connection between MTSC and Bucks Healthcare

NHS Trust. Otherwise this connection would never have been made.” Dr Hannen successful application shows how participants can feed from one programme to next across the consortium and grow into programmes aimed at market ready businesses.

Ms Stonor has followed a similar journey, having recently been awarded a place on Bucks HSC Ventures. A year on from MTSC and she’s now at the stage where her product will be ready to test and launch, benefiting from the specialist support for digital and healthcare businesses available as part of the Bucks HSC Ventures programme.

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Richard Harlow, MTSC Cohort 4 participant



The judging panel at Cohort 2's Hackathon. Pictured here are Ms Greta Paa-Kerner & Dr Simon Hepworth, Director of Enterprise at Imperial College London

LEARNING FOR THE FUTURE

Facilitating the synergies between the programmes and entrepreneurship education allows Bucks to strengthen and extend the support it already offers to staff and students. Participants in MTSC programmes can directly benefit from the infrastructure and support provided by consortium partners and exposure to a diverse network of peers giving richer and more nuanced entrepreneurial experiences. At an institutional level, participation in MTSC has provided opportunities for Bucks to explore the provision of entrepreneurship training for students and staff as well as leading on programmes that support businesses whilst capitalising on the connection between the two. As a member from one HEI cites the valuable skill building opportunities for

participants and the sharing of best practice across the consortium,

“MTSC gives us a lot of access and insight into new ways of doing things and thinking...and our participants in the cohorts are bringing back skills that very much feed back into our work as well.”

The practical design solutions developed by Bucks participants, together with the funding and knowledge exchange between universities have driven these solutions closer to becoming a reality for everyday consumers.