

MIND YOUR HEAD

FINAL REPORT

JULY 2015

Brain Injury
Healthcare Technology Co-operative


*National Institute for
Health Research*

**A joint initiative with the NIHR Brain Injury Healthcare Technology
Co-operative**



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1. Summary of the Report

This report is an account of the setting up and delivery of Mind Your Head, an initiative devised by Headway Cambridgeshire. The project was launched in January 2014 and was concluded in November 2014, although some of the outcomes are currently on going. The report aims to explain the method by which the project was devised and operated and to examine the outcomes. The report also looks at the potential for other, similar projects and also some of the lessons learnt during the process.

2. The Background To Mind Your Head

Headway Cambridgeshire (HWC) is a charity and limited company that provides specialist services and support to people with brain injury and other neurological conditions, and their families across Cambridgeshire.

Despite the many breakthroughs in research and technology in recent decades, there still remain significant areas of unmet need in terms of the products available to people with brain injury to assist them to better cope with the challenges posed by their new condition.

The inspiration for the Mind Your Head (MYH) Challenge came from the clients at the Headway Cambridgeshire Hub, who identified over twenty problems that they experience on a day to day basis that are not properly addressed by products or services currently on the market. These ranged from difficulties with picking things up to dealing with reduced sound tolerance.

Using a crowd sourcing approach, the aim of Mind Your Head was to collaborate with patients and patient groups, charities and businesses to identify unmet clinical problems and develop new medical devices, healthcare technologies and technology-dependent interventions to improve the treatment and the quality of life for people with brain injury and help to prevent brain injury in the first place.

The Mind Your Head Project was based on the premise that by bringing together people from across Cambridgeshire and beyond, from diverse backgrounds with different talents and experiences, it would be possible to generate ideas for new products and services for people with brain injuries.

The goals of the project were:

- To launch at least one new product or service to the market with a share of profits donated to HWC.

- To raise awareness about the causes of brain injury so people take action to prevent it such as by using protective cycle wear.
- To raise funds for HWC from supporters and grants.
- To raise awareness of how brain injury affects the individuals concerned as well as their families, carers and friends.
- To unite the wider community of Cambridgeshire by involving people of all ages and from all socio-economic backgrounds from across the county.
- To educate and inspire people from all backgrounds to get involved in science, engineering, technology and design.

3. Mind Your Head Partners

Cambridge Brain Injury Healthcare Technology Cooperative

Mind Your Head was run in partnership with the National Institute for Health Research funded Brain Injury Healthcare Technology Cooperative or HTC for short. The NIHR Brain Injury HTC is delivered in partnership by University of Cambridge and Cambridge University NHS Foundation Trust, led by Professor John Pickard, Professor (Emeritus) of Neurosurgery (University of Cambridge) and Divisional Director for Clinical Neurosciences (Cambridge University Hospitals NHS Foundation Trust). See <https://brainhtc.org>

University Technical College Cambridge

The UTC Cambridge is a specialist science college for 14-19 year olds, supported by world-class partners. It opened in September 2014 and provides a dynamic and inspirational curriculum closely aligned to the needs of the local and national labour market in Biomedical and Environmental Science and Technology. The UTC aims to create the next generation of scientists and technologists who will work on industry-relevant projects to develop innovative new ways of thinking that could change the way we live. It offers young people a unique opportunity to get a head start in developing the skills required for exciting and rewarding careers in the fast-moving biomedical and environmental industries.

Cambridge Engineering Design Centre, University of Cambridge

Cambridge Engineering Design Centre undertakes research to create knowledge, understanding, methods and tools that will contribute to improving the design process. This will be achieved through: innovative fundamental and applied research; knowledge transfer via education, training, publications and industrial collaboration; and promotion of the importance and benefits of engineering design in the UK.

Mind Your Head Ambassador



Former Formula 1 racing driver and television broadcaster Mark Blundell fronted MYH. Mark's photograph appeared on all the MYH promotional materials alongside a short message of endorsement; he appeared in the MYH promotional video and attended both events.

Project Leads

<p>Karen Bevan Project Manager (25 hours/week) until 30 November 2014</p>	<p>Karen has a successful track record in establishing and developing charitable organisations with a focus on the education and health sectors. Karen was the lead for the MYH project.</p>
<p>Madeleine Reiss Project Manager (28 hours/month) from December 2014 – July 2015</p>	<p>After working as a journalist for many years, Madeleine began work at the homelessness charity Emmaus as their Communications Manager. She is currently supporting the MYH project and writing her second novel.</p>
<p>Jeanette Walker Mind Your Head Volunteer (25 hours/week)</p>	<p>Jeanette has worked in a variety of international business development roles including seven years as Business Development Director at the Cambridge-based biotechnology industry group formerly known as ERBI, and as Project Manager for the East of England Stem Cell Network. She is now responsible for attracting companies such as AstraZeneca to the Cambridge Biomedical Campus and has an extensive network of biomedical contacts in the UK and beyond. Jeanette is a volunteer and also co-designed the project with Karen Bevan.</p>

Delivery Group

<p>Mary Goode Chief Executive Headway Cambridgeshire (5 hours/week)</p>	<p>Mary's extensive and wide-ranging career includes senior roles at PCTs and NHS acute trusts in Suffolk and Sussex, focusing on corporate affairs, governance and business planning. Mary is chairman of the Delivery Group.</p>
<p>Rishi Sharma Volunteer (12 hours/week)</p>	<p>Rishi graduated from University in June 2013, after completing an MA at the Judge Business School, Cambridge and is now working at Deloitte.</p>
<p>Carol Lyon – Volunteer (5hours a month)</p>	<p>Operations Director at PHG Foundation</p>
<p>Emma Truin, volunteer (5hours a month)</p>	<p>Practice Group Leader at Slater and Gordon</p>
<p>Professor John Pickard Honorary Director, NIHR Brain Injury Healthcare Technology Co-operative (HTC) (5 hours/week)</p>	<p>John graduated in Physiology with Biophysics and Medicine from Cambridge and King's College Hospital, London (1970) and trained in Neurosurgery in Glasgow and Philadelphia. From 1979, he was Honorary Consultant and Senior Lecturer, Reader and Professor at the Wessex Neurological Centre/University of Southampton before taking up the foundation Chair of Neurosurgery in Cambridge in 1991. His group's research on intracranial haemodynamics has</p>

	<p>advanced the care of critically ill patients after brain injury (trauma, haemorrhage, disturbed CSF circulation) from initial ictus through states of impaired consciousness to final outcome using functional imaging (PET, MR), multimodality monitoring, mathematical modelling, UK Shunt Registry and RCTs (BRANT). His leadership of the WBIC adjacent to the neurosciences critical care unit has enabled the research of many other groups. He has played various national/international roles in his field.</p> <p>John is the Honorary Director of the HTC</p>
Mita Brahmbhatt HTC Programme Manager	<p>Mita is currently establishing the NIHR Brain Injury Healthcare Technology Cooperative (HTC) within the Dept. of Clinical Neurosciences at University of Cambridge. Mita graduated in Business Information Systems and has developed her skills in a variety of industry sectors. In 2007 she moved in to healthcare, working internationally (World Health Organisation), nationally (Dept. of Health), regionally (Strategic Health Authorities) and locally (Primary Care Trusts).</p> <p>Mita is Programme Manager of the HTC</p>
Professor Peter Jarritt	<p>Peter is developing the medical devices development theme for the Brain Injury HTC, working with Small Medium Enterprises (SMEs) to develop their technologies and work on collaborative opportunities that will support the implementation of new technologies in to the NHS.</p> <p>In addition, he is undertaking projects with Health Education East of England and The Academy for Healthcare Science. He previously held appointments as: Clinical Director of Medical Physics and Clinical Engineering at Addenbrooke's Hospital; Lead Scientist for the EoE Strategic Health Authority; Chief Executive, Northern Ireland Regional Medical Physics Agency; Honorary Professor, Queen's University Belfast; Scientific Director, Northern Ireland PET Institute. Lecturer and Senior Lecturer at the Institute of Nuclear Medicine, UCL.</p> <p>Peter is Deputy Director for the HTC.</p>
Madeleine Reiss	<p>Project Manager for Mind Your Head from December 2014- July 2015</p>

Governance

The MYH campaign was accountable to the Board of Trustees of HWC via the Delivery Group, the chairman of which was the Chief Executive. Terms of Reference,

the Risk Register and the Delivery Schedule were updated and reviewed on a regular basis. In addition, the MYH project was a regular item reported to the HTC management committee and to the Department of Health through the HTC NIHR-HTC annual reporting (see appendix 1: Growth and Impact Case Study)

4. How The Mind Your Head Project Was Developed

Stage 1 - January to October 2014

Recruitment of participants

Mind Your Head was promoted through direct and indirect marketing as well as the local press throughout the first nine months of 2014. Participants were invited to become 'Solvers'- people willing to join a team to help develop ideas for new products and services, 'Sages' who had expertise in areas such as design, medicine or engineering and 'Supporters' who could donate money to Headway via the challenges. The 'Seekers' were the clients at the hub who identified the unmet needs and set the challenges.

The University Technical College, who also hosted the stages of the project included MYH as part of its autumn curriculum. Students formed into teams, decided which challenge they were going to address, undertook research and developed business plans.

Stage 2 -7 May 2014

Pilot project

In collaboration with the NIHR Brain Injury Healthcare Technology Co-operative (HTC) and Morgan Sindall, a leading construction company, a pilot event was held on 7 May to test the process for the main events in the autumn. Morgan Sindall discussed a range of accidents associated with the construction industry that result in traumatic brain injury. Participants formed into teams and came up with ideas either for preventing the accidents from happening in the first place or reducing the impact

of brain injury resulting from the accidents. The pilot was sponsored the NIHR Brain Injury Healthcare Technology Co-operative (HTC).

Lessons learned from the pilot:

- Keep challenges simple and achievable in view of budgetary and time constraints.
- Take an open approach to intellectual property.
- People will readily form teams with strangers and select a leader & team name.
- The need not to present solutions.
- It is better to avoid highly researched/regulated scenarios.
- The need to recruit greater range of skills.

Stage 3 – 3 October 2014

Ideas event

HWC hosted an event at which seven Seekers described one of the challenges they encountered in everyday life and called on the Solvers to come up with new ideas. Ian Hosking from the Engineering Design Centre presented practical tips and guidelines for generating ideas.

Based on this information, the Solvers formed into teams and started to brainstorm ideas. At the end of the event, the teams with ideas they wanted to take forward into the Challenge registered their team with Headway by completing a “Concept Form” indicating their team name, team leader, team members and a brief overview of their solution.

The teams could be any size, for example, a team might have been an entire school, a church, a society, a football team, a company, a university department, a group of friends or an ad hoc group that met and formed through the Challenge. Each team appointed a team leader and created a team name. Teams could recruit new members at any time.

The teams were given 9 weeks to progress their ideas and develop a business case. Throughout this period, they had access to the Seekers, for additional information on needs; meeting rooms including Headway in Fulbourn and the advice of the Sages.

The Challenges

The Seekers identified 7 challenges:

1 Picking things up	
The challenge	Develop a solution to help people, especially those in wheelchairs with restricted mobility, to pick things up - for example from the floor or a cupboard above head height.
Test	Your solution should enable the user to lift a jar of jam or a packet of cereal from a shelf at 2m height; and to pick a 5 pence piece and a letter off the floor.
Benchmark	Standard, folding or rotating reacher or grabber
Problems with benchmark	Not suitable for very small or heavy items; for people with restricted reach and strength; people with restricted use of fingers/hands; risk of over-stretching and falling or losing balance.
Film	https://www.youtube.com/watch?v=FIWHWaE5TkM&feature=youtu.be
2 Household tasks	
The challenge	Many people with brain injury forget how to perform basic tasks and have to undergo training to do things we all take for granted. Even though they are taught how to perform these tasks, within a short time they often forget what they've been taught. Can you devise solutions to help people remember how to perform tasks such as making a cup of tea or how to cook a simple meal?
Test	Your idea should not rely on the person remembering how to use the solution; it should be as easy to use as opening and reading a

	book
Problems with benchmark	You have to own or be able to use an iphone, ipad etc; you need to know how it works generally; need to know how the app works; have your device charged up and with you; you need to find the app on your device in the first place.
3 Head protection for cyclists	
The challenge	Devise a solution to protect cyclists' heads when they fall off their bicycles.
Benchmark	Cycle helmets - most are made of expanded polystyrene (EPS) with a plastic shell to distribute the load into the EPS.
Problems with benchmark	There is much debate about the effectiveness of helmets plus many people won't wear them for a range of reasons - they are a poor fit; hard to adjust; sweaty; ruin your hair style; make you look silly; too bulky to carry around; don't keep your head dry; no indication when they need replacing
Film	http://www.youtube.com/watch?v=RgadgGJbmXw
4 Marketing a memory game	
The challenge	A group of clients from HC has developed a board game to help them improve their memory. The Challenge is to investigate the potential demand for this game initially in the UK, and potentially other countries, make any adjustments necessary, find a manufacturer and distribution outlets and secure sales.
Test	Your solution should maintain the integrity of the format of the Headway game; it should work as well as or better than the current version of the Headway game.
Benchmark	Game developed by Headway Cambridgeshire.
More info	The Headway <i>Brain Game</i> is a simple yet effective way of exercising core-thinking skills while having fun with friends & family. Invented and built by Headway clients to address their own cognitive rehabilitation needs in the context of taking control of their recovery process and making new friends in our Cambridge Hub. Players are challenged to describe processes, like making a cup of tea and making a simple journey, requiring focus, concentration and rational sequential thinking, while managing anxiety and other psycho-social challenges of living with a brain injury. Playing requires social interaction and fosters the development of trust and friendship. https://www.youtube.com/watch?v=bjD2jrixdg4&feature=youtu.b

5 Brain Injury Signpost	
The challenge	Develop a solution to help people with brain injury, and their friends and families, quickly and easily identify and access all the information, resources and support available to help them recover or adapt to life with brain injury.
Test	Your solution should be as easy to use as talking to a friendly expert or reading a book; it should be non-intimidating; appropriate for both children and adults, and appropriate for people with brain injury, their family and friends as well as healthcare professionals.
Benchmark	http://www.brainnav.info/
More info	<p>My name is Kate, and I am a Mother of three young boys – one of which, Brandon, had a brain injury at the age of 11. The critical nature of this treatment has led to an intense period of recovery, not only for Brandon, but for the whole family. My husband and I found it hard to work and support the requirements of our family, and another of my sons found it incredibly difficult to adjust to a life where his idol, his big brother, was no longer able to give him the support that he was used to. For the first year following the accident, my 9-year-old son and I required help due to post traumatic stress after witnessing Brandon fighting for his life. Within weeks of the accident, my husband was made redundant as it became very clear that we were both needed at home for Brandon's rehabilitation and the recovery of our whole family. Shortly after that, we were made homeless when we were asked to leave our rented accommodation and were financially unable to move which added to the intensity of the situation. My husband and I had to give up our jobs to become full time carers, learn about and depend on the benefits system, navigate the social housing system and network with various professionals including those involved with brain injury, rehabilitation and family therapy.</p> <p>I spent the majority of my time in the early months after leaving the hospital setting looking for help to signpost us to appropriate support services; financial, practical and social. One particular service that we have found through CCPNR (Cambridge Centre for Paediatric Neuropsychological Rehabilitation) is the Child Brain Injury Trust. A support worker was assigned to us and has worked with us to find services and support my son in his return to school. The support is of course limited, and I have found myself spending hours at a time desperately searching the internet in hope of identifying services and chasing up potential sources of funding for my sons' rehabilitation.</p> <p>My challenge to the MYH solvers to provide an affordable, accessible, comprehensive and interactive signposting portal for</p>

patients and carers following brain injury.

6 Communicating emotions without speaking

The challenge Even when they can still speak, people with brain injury can lose the ability to communicate with their friends, family and carers particularly when it comes to explaining how they are feeling. They struggle to understand why they feel certain emotions and how to explain themselves to other people e.g. how to articulate the sense of anger, frustration, confusion, sadness and lack of hope they feel after their injury. This challenge is to develop a solution, which enables people with brain injury to communicate how they are feeling but without actually speaking.

Test The solution should be targeted for adult use - children have different requirements; the person receiving the message should understand how the person with brain injury is feeling and ideally why they are feeling that way; it should not be stigmatising.

Benchmark 'I had a black dog, his name was depression' - World Health Organisation
<http://www.youtube.com/watch?v=XiCrniLQGYc>
Picture Exchange Communication System

More info I am Alice and at the age of 47 I suffered a bleed on the brain from a ruptured aneurysm and I had a stroke. I am a Mother of three children and was working full time as a Manager of a team of Instructional Designers. My world was that of communication, at work and with the family. But during the 8 hour operation to save my life a Grinch was sitting on the shoulders of the surgeon without him knowing, and when he opened my head all the knowledge and understanding of my world was taken. By the time the operation had finished, the Grinch's bag was full. I woke up in a world I could not understand, especially the world of words and feelings. I know now, after 3 years, that I felt as if I'd become a toddler again. It was like being trapped in an adult's body but with a hidden disability that nobody could see.

I wanted people to know how I was feeling but I couldn't articulate my emotions or feelings. My relationships with my husband, family and friends were put under immense pressure – some relationships did not recover and have been lost forever. Why? Because I did not have the tool of communication or the understanding of why – the Grinch had them. I spent three years chasing the Grinch to get back my understanding and knowledge so that I could become adult again and communicate.

My challenge to the MYH solvers is to develop a solution that enables people with brain injury to communicate how they are

	feeling but without actually speaking.
7 Reduced sound tolerance	
The challenge	People with brain injury can suffer from “reduced sound tolerance”. For some people with this condition (called hyperacusis), all sounds can be too loud. Other people lose the ability to filter out sound e.g. in a railway station with friends, they can’t filter out the background noise and hear the voices of their companions. The challenge is to devise a solution to help people with reduced sound tolerance.
Test	We don’t have a test for this challenge but your solution should be sufficiently well articulated so an audiologist could review it.
Benchmark	Wearing of earplugs or earphones; recalibrating the auditory system by playing pleasant sounds such as ocean waves or the sound of rainfall.
Problems with benchmark	Wearing earplugs or earphones for any length of time can make the condition worse as the brain reacts to the reduced sound. It is also uncomfortable to wear some devices; some are expensive; if you are wearing earphones in a social setting, people stare at you; they think you are odd or just plain rude!
More info	<p>My name is Robert Runcie. Following my brain injury I suffer from a condition called hyperacusis, which means I have reduced tolerance to noise or I am over-sensitive to noise, especially background noise. This means I have difficulty tolerating some everyday sounds – for example a clock ticking or a car engine running can seem unpleasantly or painfully loud to me but not to the other people I am with.</p> <p>Recently I was out in a restaurant with my family and friends and instead of hearing the conversation, what I mainly heard was the hum from the air-conditioning unit.</p> <p>I sometimes wear ear plugs or special noise reduction ear phones to block out or reduce background noise but they soon become uncomfortable and make me feel rather distant or isolated from those with or around me. Moreover some experts believe that blocking out or reducing background noise in this way can have a detrimental effect on patients i.e. it may exacerbate the problem long term.</p> <p>So my challenge is to come up with a solution to help people like me for whom everyday sounds that most people simply filter out can be intolerable and make our lives a misery.</p>

Stage 4 – 24th November

UTC Pitching Event

Prior to the pitching event the UTC students were given a set of MYH presentation guidelines and a draft business plan template to complete. The judges were sent 25 business plans to review. They selected the top 12 teams to present at the 24 November event i.e. 4 teams in age group 14-16 (year 10) and 8 teams in age group 16+ (year 12). At the event, the judges heard the pitches, asked questions, and selected one team from year 10 and 2 teams from year 12 to present at the MYH final on 28 November. The teams were assessed on the following criteria (scored from 1-5) and the teams with the highest scores were selected to present.

Criteria:

The extent to which the teams demonstrated that they:

- Understood the need and the potential demand for their product or service.
- Had knowledge of competing products or services and why their idea was better.
- Understood how to take their product from idea to market.
- Understood how credible their proposed solution was relative to the need.

UTC Judges

Peter	Taylor	Chairman TPP
Walter	Herriot	Former MD of St John's Innovation Centre and lecturer on entrepreneurship at Anglia Ruskin University
Peter	Cowley	Cambridge Business Angels
Iain	Simpson	Cambridge Consultants
James	Barlow	Anglia Ruskin University
Ian	Hosking	Department of Engineering, University of Cambridge
Margi	Foch	Assistive Technology and Telehealthcare Manager/Lead, Community Rehabilitation

Stage 5 - 28th November 2014

MYH Final

In November, a second judging event was held at which the 3 UTC teams and 7 crowd teams presented to over 100 audience members and a panel of judges in a 'Dragons Den' style event. The judges selected the top UTC team and the Chief Executive of Headway Cambridgeshire presented a certificate to the members of the winning team. The team was also photographed with the organisers and judges. The audience also voted for their top team (both UTC and crowd teams), the votes were counted and the winner announced.

The under sixteen winning team, Quartz, presented a range of glow-in-the-dark cycling garments. In the over sixteen category, Glow won with their innovative helmet, manufactured from a material 30% stronger than that used in the construction of regular cycle helmets. The over-all winning team was SmartStuff who are developing an app which helps brain injured people to communicate with their families and carers.

MYH Final Judges

Walter	Herriot	Former MD of St John's Innovation Centre and lecturer on entrepreneurship at Anglia Ruskin University
Peter	Cowley	Cambridge Business Angels
Orsi	Ihasz	Judge Business School
Margi	Fosch	Assistive Technology and Telehealthcare Manager/Lead, Community Rehabilitation
Jerry	Turner	Chairman, Team Consulting
Hugh	Roper	Investor
John	Pickard	Brain Injury Health Technology Cooperative
Anne	Blackwood	Health Enterprise East

5. PR And Marketing Done in the Course of Setting Up the Project

Marketing materials

- Website – developed and maintained free of charge by the HTC.
(<http://mindyourhead.brainhtc.org>)
- Short film about MYH: produced by PA Consulting on a pro bono basis featuring Mark Blundell, Professor Peter Hutchinson, Professor of Neurotrauma, Cambridge University Hospitals NHS Foundation Trust, Professor John Pickard, Honorary Director, NIHR Brain Injury HTC and Karen Bevan of Headway Cambridgeshire; posted on the MYH website and YouTube.
- PowerPoint slideshow: slide deck for presenting MYH to individuals as well as groups.
- Posters.

PR strategy

- Early phase: devised and implemented on a pro bono basis by PR consultancy Ware Anthony Rust.
- Later stage: devised and implemented by PR consultancy SpringUP and funded by PJ Care.
- From December 2014 onwards Madeleine Reiss, Project Manager for Mind Your Head, managed the communications and follow-up work with the teams.

Presentations

- KB/JW delivered talks to groups of people ranging from the Masons and the Women's Institute to the members of the Cambridge Network and Cambridge Wireless Network and the Eastern Region Brain Injury Federation.

Social media

- Twitter, Facebook, LinkedIn: managed by a volunteer with a background in marketing with support from the HTC.

Press releases

- 3 press releases were issued: one announcing the pilot in May; two announcing the 3 October Ideas event.

Exhibitions/shows

- Two Counties Motor Show: stand.
- Tour de France: handed out leaflets.

Radio

- BBC Radio Cambridgeshire: JW did a live interview promoting the 3 October event; Mark Blundell did a 2- hour interview on the sports programme referencing MYH throughout.

Print media

- Cambridge News: featured both the pilot event and the Ideas Event.

Direct mail

- Electronic mailshots to companies and individuals.
- Organisations intranets – e.g. Addenbrooke's Hospital.

Funding

- Grant from Awards for All: £8,000 received to cover the costs of tele- marketing and a Project (Comms) Manager to continue MYH from December 2014 – July 2015.
- Money raised by supporters: £31,200

In-kind donations and estimated values

- Co-organiser: Jeanette Walker £30, 000
- Banner design: Simpsons Creative £350
- Website-HTC: £2,000
- Venue for all 3 events: UTC £1,500
- Film: PA Consulting £5000
- Legal advice: Taylor Vinters £1,000
- Concept guidelines: Ian Hosking - £5,000

6. Outcomes

Education and Awareness Raising

One of the goals of the MYH project was to raise awareness of brain injury amongst the wider community. In this aim the project was very successful since it encouraged the participation of people from all backgrounds and specialisms, many of whom had little or no previous knowledge of the causes or the effects of brain injury.

In the process of contacting people from businesses, educational establishments and other interested individuals, information about the challenges those suffering with brain injuries face was made explicit. In addition, issues surrounding prevention were also raised by a focus on greater cycle safety, a real issue in a town like Cambridge with a large cycling population.

While setting up the project, 188 businesses were contacted and 1,349 individuals were identified as interested in either this project or future work undertaken by Headway Cambridgeshire. The team conducted 46 face-to-face meetings and made several group presentations, including one to a 200 strong audience at the Cambridge Network and to 150 people at Cambridge Wireless. Presentations were also made to the Masons and to the Women's Institute.

The pilot for the project was attended by 65 people all of whom were interested in finding out more about brain injury and identifying the unmet needs of brain injured people. The final 'Dragon's Den' event had an audience of over a hundred members and at least 35 individuals presented their ideas for products and services. Overall, the target of making at least 500 people more aware of brain injury than they had been previously, which was identified as an aim at the beginning of the project, was exceeded.

In addition to raising public awareness of the issues, MYH also served as an educational opportunity for the students at The University Technical College Cambridge. MYH was made part of the curriculum for the autumn term and all the students at the college participated in the process of learning about brain injury,

identifying need, researching products currently on the market and developing their business plans for their own concepts. The students who were selected to present their findings- approximately 70 of them, also gained valuable experience of standing up in front of an audience and pitching their ideas. The winning teams went on to have support for their concepts from the panel of dragons and from the team at Headway Cambridgeshire. One of stated goals of the project was to encourage both the study of science and the take-up of careers in science and MYH has played a part in this for the students at the college. The Head Teacher at UCT commended the project for the learning experience it afforded her pupils.

Project manager Katie Holloway of the student team 'Glow', who devised a fluorescent cycle helmet for MYH said:

"Managing a team is for life. The Mind Your Head challenge stretched my leadership skills to another level – it's been great as these are transferable business skills that will always be useful."



The over sixteen winning team present their certificates on 28th November.

The MYH project also served as part of the rehabilitation process of the clients at the Headway Cambridgeshire Hub. From the very beginning of the project, the clients participated in the process by identifying the problems that they felt needed solutions that are not currently on the market. They then selected those ideas and concepts that most closely fulfilled the brief. Not only did this mean that the participating teams

worked from the basis of real need rather than simply relying on their own ideas and presumptions about what people with a brain injury require, but it also meant that the clients were given a voice and the opportunity to make a difference for themselves. This process enabled a greater sense of confidence amongst the clients, something that is often eroded by brain injury.

Concepts and Products

The MYH project inspired a range of innovative and exciting ideas. These ranged from cycle wear, drones to identify accident locations, grabbers to pick up objects fallen from wheelchairs, hubs to signpost brain injury services, robotic arms, smart watches and bracelets, apps to aid communication, games to trigger and improve memory and headphones and earpieces designed to overcome tinnitus, which is a frequent side effect of brain injury.

Of all the concepts and ideas put forward, several earned extra investigation and the support of Headway Cambridgeshire. The length of time health products and services take to come to the market means that all of these concepts are still works in progress and are currently at various stages of research and development.

The products that have made the most progress to date are:

- An app designed to help those with brain injuries communicate with family, friends, carers and peer groups. The team who designed the application is currently investigating investment opportunities.
- An app and an eBook to aid the communication of emotions with the use of story telling. Following the presentation event, the Judge Business School in Cambridge and HTC sponsored the team to attend a Social Venture Weekend. As a result of this they have been invited on the Social Incubator East Programme to further develop their product.
- An app to help people with brain injuries to organise their lives has been workshopped at the Cambridge Engineering Design Centre and the product will now undergo further development by conducting a research project with the help of staff and clients at Headway Cambridgeshire.

- A design for headphones to help with hyperacusis has been adopted by the PRIDE network (Promoting Real Independence through Design Expertise) for further research.
- The fluorescent cycle wear designed by the students at UTC has undergone further research by the students and the possibility of specially treated hoodies and rucksacks is being investigated.
- A board game to aid memory, which was originally invented by the clients at the Cambridge Hub, has been given a new design by a communications agency. Work is underway to improve the mechanics of the game with the help of industry experts with a view to producing the board game in the first instance for all Headway clients across the UK. The game also has the potential to be used by other people such as those suffering with dementia. The board game will also provide the basis for a social enterprise conducted from the Cambridge Hub. A venture that will earn revenue for the charity but will also form part of the rehabilitation of the clients by helping them with the transition back into the world of work.

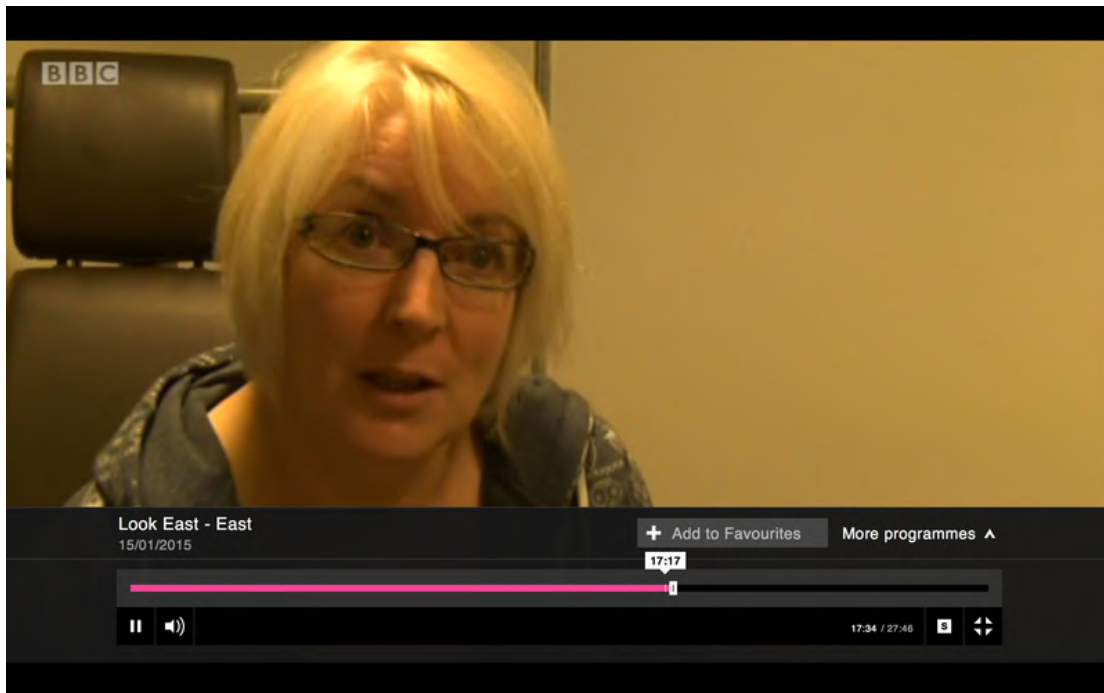


The prototype for the board game.

Publicity

- Piece in Cambridge News about the participation of UTC in the Mind Your Head Project.
- Piece in Cambridge News about the board game- soliciting questions from the public to use for the game cards.

- Article in Disability Review.
- Participant in the MYH project and also Mary Goode Chief Executive of Headway Cambridgeshire interviewed on BBC Look East.
- Headway UK magazine- feature about MYH.
- Mary Goode talking about MYH as part of the Working Life section of the Cambridge News.



Mind Your Head participant talking about her concept on BBC Look East.

7. Lessons Learnt

- A year was not long enough to achieve all the objectives of the project. A two-year timescale would have been more realistic and a five-year period running alongside the work of Headway Cambridgeshire would have been better still.
- MYH needed more resources than it had available to properly follow-up and support the participating teams.
- More expert guidance needed to be made available to the teams when they were first researching and developing their ideas.
- The financial backing required to bring health products to market should be factored in when considering a project of this sort.
- Service users are the very best people to work with when developing health care products. The success of MYH was due in great part to adopting this need-led approach.
- There is a wealth of ideas and enthusiasm amongst the public for developing products and services that are of use to brain injured people.
- The crowd sourcing approach is effective when it comes to bringing together people from all backgrounds and giving them a common objective.
- There is still a huge gap in the market for products that genuinely improve the quality of life for people with brain injuries.

8. Additional Information

The NHS & Social Care provides an excellent service treating people with brain injury and helping them to recover through rehabilitation. However, with the budgetary constraints facing the NHS and Social Care, the resources available to people with brain injury, particularly after they have been discharged from hospital or rehabilitation, is severely limited. Headway Cambridgeshire works alongside the NHS delivering essential services to people with brain injury (and their families) that the public sector is not resourced to provide.

Headway Cambridgeshire recognises the far-reaching practical and emotional impact that living with brain injury can have on a person and their family, friends and carers. The charity is available to support people with brain injury throughout their journey, whether they need information and advice, or emotional help. Trained staff are located at three hubs in the county as well as in the community and at local hospitals.

- Headway Cambridgeshire (HWC) is the only provider of personalised, “client”-focused, specialist neuro rehabilitation services in Cambridgeshire that supports clients throughout their pathway.
- HWC fills the gap that the public sector cannot fill.
- HWC is the one constant in the lives of people with brain injury, offering practical and emotional support plus enablement services to ensure their quality of life is the best it can be.
- This support starts at Addenbrooke’s Hospital and extends out into the community and into the home, as well as providing support at hubs in Cambridgeshire.
- HWC breaks the circle of dependency. This means that rather than going round and round the public sector system accessing intensive short-term support, HWC steps in.