

SN∞OK™

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Using service design to learn from and integrate service users in health and social care services

“Many observers and stakeholders mistakenly believed that implementing health IT would be a simple matter of technical change – a straightforward process of following a recipe or a checklist. In fact, implementing health IT is one of the most complex adaptive changes in the history of healthcare, and perhaps of any industry. Adaptive change involves substantial and long-lasting engagement between the leaders implementing the changes and the individuals on the front lines who are tasked with making them work. Successful implementation of health IT across the NHS will require the sustained engagement of front-line users of the technology.”

*Making IT Work: Harnessing the Power of Health Information Technology to Improve Care in England.
Wachter, R.M. 2016 Report of the National Advisory Group on Health Information Technology in England.*

The challenges facing the health sector demand a fresh approach to citizen and practitioner engagement and service delivery

There's a fundamental need for innovation and improvement that is citizen and practitioner led.

We've considered a series of challenges from our experience of working in and around the health sector, identifying opportunities for innovation and improvement.



Financial sustainability

The NHS is being asked to do more with less, facing major challenges related to rising demand and constrained budgets. These challenges include (but are not limited to):

- An ageing population and diminishing tax-paying workforce
- More people with long term conditions and multi-morbidities
- Drives to reduce hospital beds by moving care into community, without providing adequate resources or services in the community
- Demands for efficiency savings that do not impact on the quality of care

Healthy Lifestyles

With a focus on preventative spend, encouraging people to adopt healthy lifestyles is a key focus for public health. However, there are major challenges associated with changing cultural norms and motivating people to adopt healthy lifestyles, including:

- Reducing health inequalities – recognising that, as the Marmot Review (2010) explained, health inequalities result from social inequalities
- Developing a programme of supported self-care for the High Resource Individuals – the 2% of the population who account for 50% of the healthcare spend

Integrating Health and Social Care

Developing place-based systems of care is a core component of the drive to improve population health outcomes. Multi-specialty community providers (MCP) and Primary and Acute care systems (PACS) vanguards seem to offer great potential. However bridging the barriers, functional and disciplinary boundaries, and hierarchies within the existing infrastructures of the NHS, Social Services and local government is a major challenge. In addition, integrating legacy systems and lack of interoperability between the different IT systems adds to the challenge. These barriers must be overcome to enable these disparate, yet highly interdependent, organisations to work together for a common purpose.

Service Design provides the methods and tools to enable diverse groups to co-design new service models.

Transformation

The cumulative negative effect of decades of restructuring (what Oxman and Sacket 2005 call the 're-disorganisation of the NHS') have left a disillusioned workforce with low morale and lack of motivation. Transformation plans have often been mandated from above by Central Government and the Department of Health. The Five Year Forward Review (2014) focused on empowering patients and engaging frontline workers and communities in effecting change at a local level. Health and Social Care Partnerships provide the opportunity for NHS providers and commissioners to work together with local authorities, health and social care providers and the voluntary sector to transform population health. Co-design and user-centred design can insure that any plans for transformation are developed with people who access and deliver services.

Digital expectations

Digital solutions will not solve the intractable challenges of the health economy alone and cannot be developed in a vacuum. We must fundamentally understand the problems, meet user needs and design services that work, that have digital technology as a core component, while recognising that there is a whole multi-channel service system that wraps around the technology. A narrow focus on UX and digital design means that people fall into the 'app trap', concentrating on one app, in isolation, without recognising the importance of a coherent service offering across all channels.

Data sharing

Our fragmented health and social care systems result in patients and citizens being asked to repeat their stories and fill in the same information on forms over and over again. The cancellation of care.data and the associated challenges around the ethics of privacy and data sharing have received a lot of attention recently. We must prioritise the development of data sharing protocols, considering solutions such as distributed ledger technologies, to enable patients to hold their own personal records and to share these across primary, acute and social care.

Realising Scotland's Full Potential in a Digital World

“effective use of digital technology to ensure public services are designed around the needs of users and make sense to the people who need them most.”

SCOTLAND'S DIGITAL HEALTH & CARE STRATEGY

ENABLING, CONNECTING & EMPOWERING



“The issue is not whether digital technology has a role to play in addressing the challenges we face in health and care, and in improving health and wellbeing: the issue is that it must be central, integral and underpin the necessary transformational change in services in order to improve outcomes for citizens.”

We are an **award winning design agency**
based in Glasgow & London, helping
organisations produce great services
by putting people first

**A multidisciplinary team of designers,
researchers, strategists and technologists
working together to design products
and services**

How we think about service design



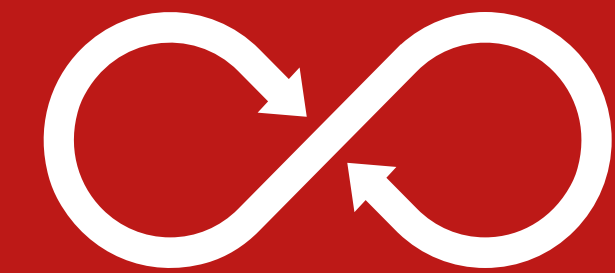
Joined up channels

We ensure touchpoints line up across all channels for the customer and are efficiently delivered.



People centred

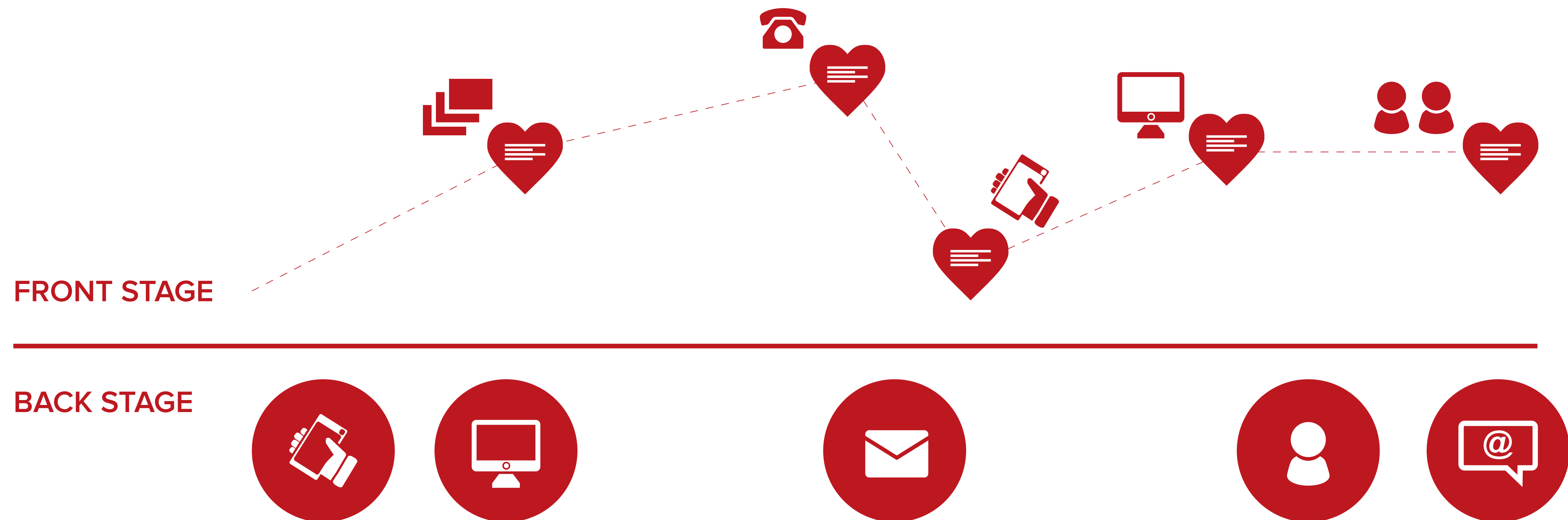
We research and understand how people experience your service in order to improve it.



End-to-end experience

We map end-to-end journeys and ensure people can easily transact with you.

Allow people's desired experiences to direct the design of service processes rather than the other way round



Avatars?

RITA is a project that seeks to optimise Quality of Life and Personal Autonomy by creating an innovative model of personalised care, built around a package of supportive technologies.

The service model provides not just a safety net, but a support framework that enables the person with dementia to set key parameters in their advance planning, maximising choice and control. This mediates the stress associated with loss of control over tasks, decisions, resources and the physical environment (McLaney and Hurrell 1988).



Responsive InteracTive Advocate

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Responsive InteracTive Advocate

The technical platform for this project consists of three integrated components:



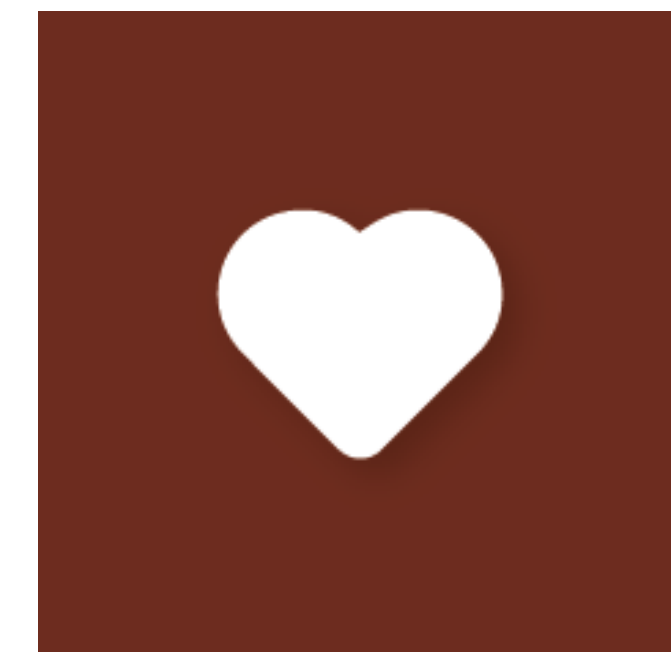
The face

A realistic and emotionally expressive virtual avatar, representing a friendly face, encouraging communication and interaction



The mind

An 'essence' repository for storage and organisation of all personal and memory-related information, where access is determined by the user.



The heart

An empathetic sensory interface that is capable of understanding and responding to the physical, psychological and emotional needs of the user.

Responsive InteracTive Advocate

All three aspects of the technology are set and controlled by the user, who may set some 'safety net' functions to encourage maintenance of desired behaviour in the face of diminishing cognitive function (i.e. set the avatar to prompt them to take exercise for example).

The approach is based upon the Conservation of Resources theory (Hobfoll 1989, 2001), which suggests that maintenance of social, psychological, and specific coping resources (and control over these resources), serves a protective function in maintenance of wellbeing. This proactive approach supports self-efficacy and promotes a proactive framework preserving human rights of those facing decline of cognitive function.







Avatar-based counselling

“Virtual human interviewers allow simultaneous use of two techniques for eliciting disclosure that would otherwise be incompatible; they afford anonymity while also building rapport. We examined whether virtual human interviewers could increase disclosure of mental health symptoms among active-duty service members that just returned from a year-long deployment in Afghanistan. Service members reported more symptoms during a conversation with a virtual human interviewer.”

Reporting Mental Health Symptoms: Breaking Down Barriers to Care with Virtual Human Interviewers from <https://www.frontiersin.org/articles/10.3389/frobt.2017.00051/full>

see also: <https://www.wired.com/story/virtual-therapists-help-veterans-open-up-about-ptsd/>

Avatar therapy for schizophrenia

“The randomised controlled trial compared the avatar therapy to a form of supportive counselling (adapted specifically for the study). It found that avatar therapy was more effective at reducing hallucinations at 12-week follow-up, and had a large effect size.”

“Patients create a computerised simulation (avatar) of the voice they most want to influence, including what the voice says, how it sounds and how it could look.

Therapy involves a three-way conversation between the patient, therapist and avatar, with the therapist speaking as themselves and also voicing the avatar.

In the trial patients talked face-to-face with their avatar over six sessions. They practised standing up to it, correcting misconceptions about themselves and taking control of the conversation, so that power shifted from the avatar to the patient.”

Avatar Therapy

<https://wellcome.ac.uk/news/avatar-therapy-early-trial-results-very-encouraging>
<http://www.innovationtoronto.com/2017/11/can-avatar-therapy-help-reduce-auditory-hallucinations-for-those-with-schizophrenia/>



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OUR WORK

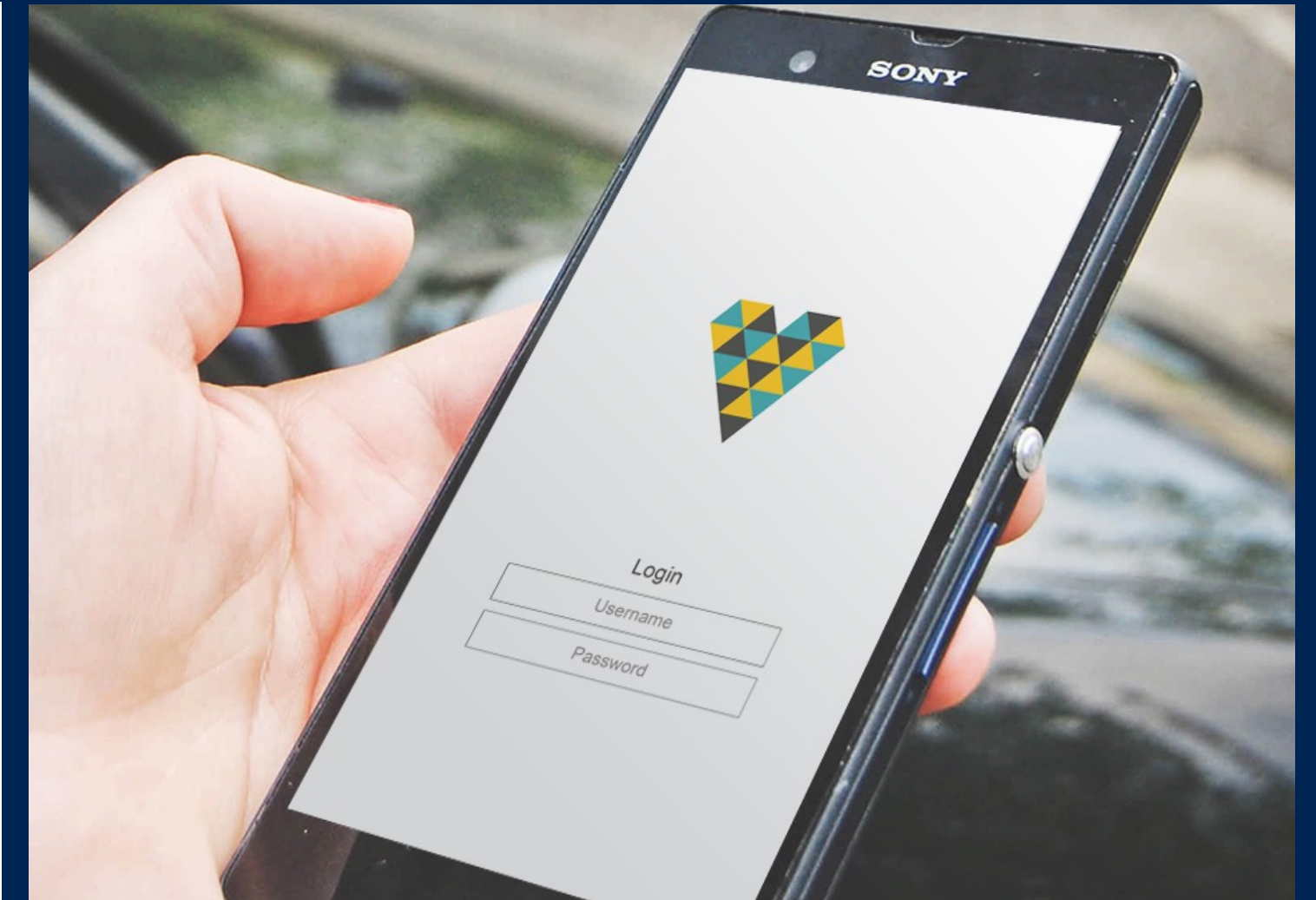
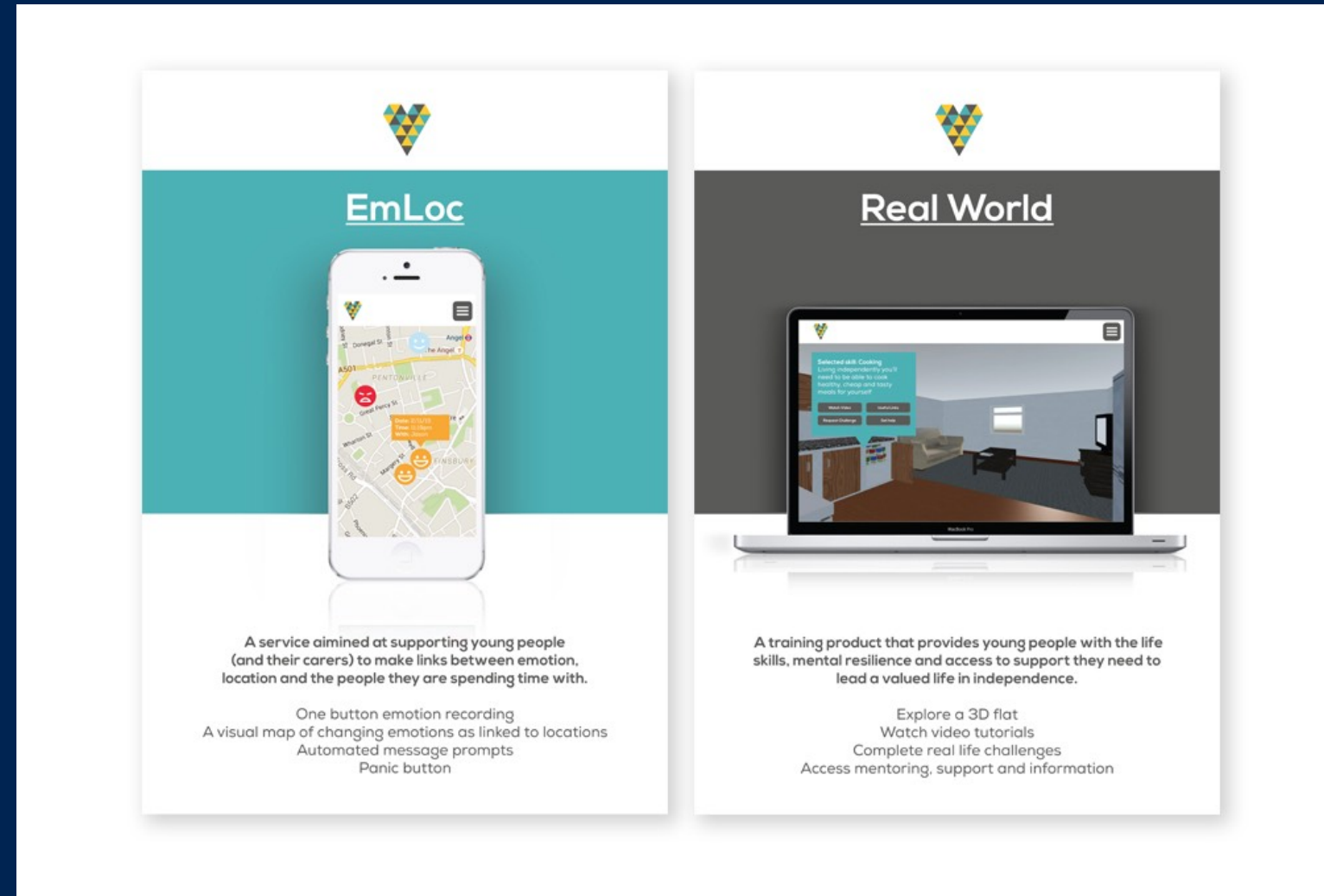


Co-designing care with young people

Researching, prototyping and testing how
technology can help support young people
in care

Overview

Snook worked with Centre for Child Protection at University of Kent and the development teams at University of Portsmouth and Affective State to explore how technology can support young people in care to stay safe; recognise and manage their emotions and behaviour; and communicate more effectively with practitioners.



Co-design process

We engaged groups of young people who were currently in care, or had recently left care, and took them through a six month process to co-design a service that works for them. We also engaged practitioners and carers in co-designing solutions that addressed the challenges they faced.

Discover

Working with young people to understand their challenges and needs and identify key ideas for exploration moving forward.

Define

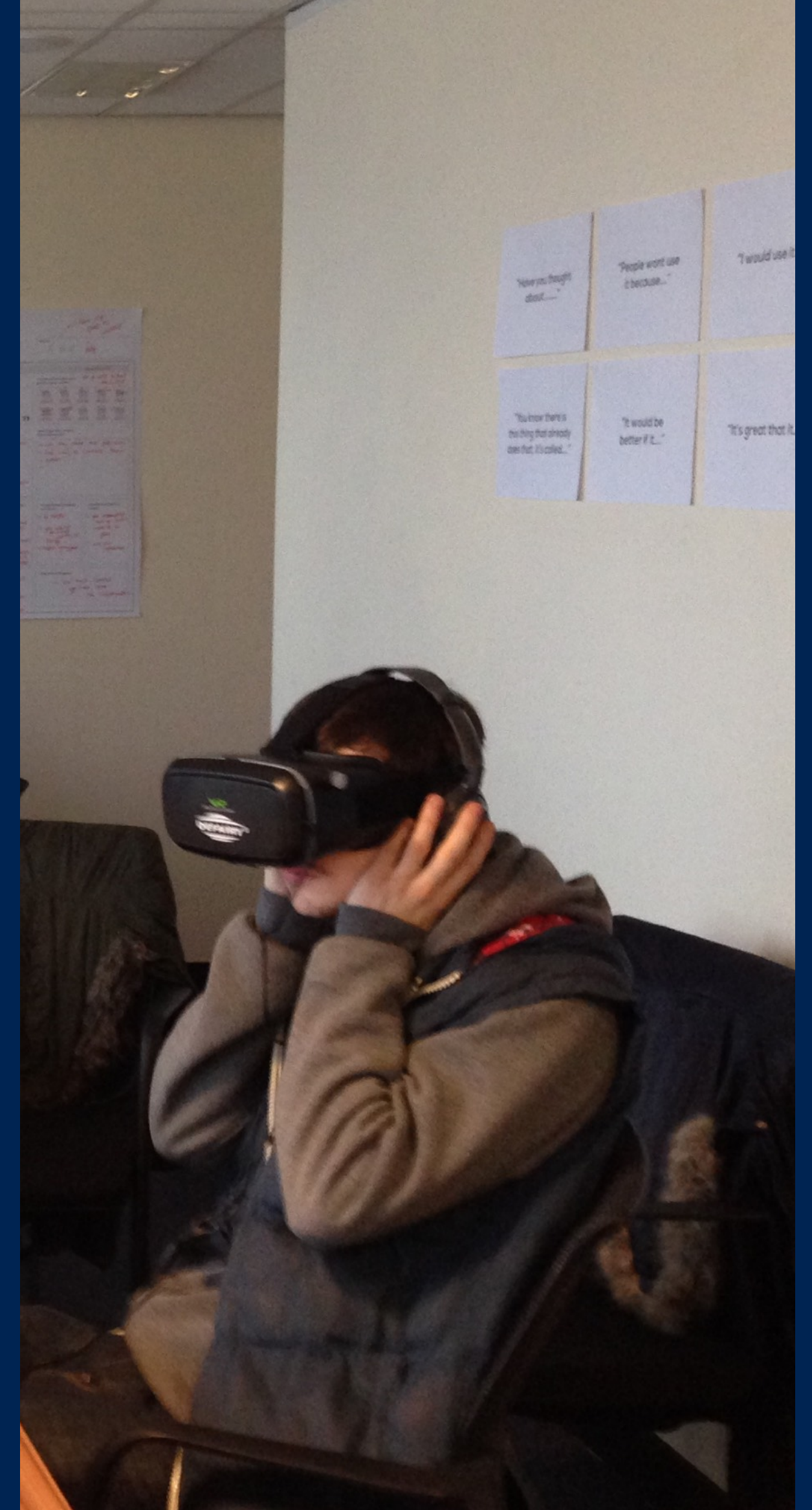
Focus on the co-design of low-fidelity mock-ups with the young people - building on the ideas identified in phase one and working to refine these ideas and bring them to life visually.

Develop

Technical development - working with the young people to test and refine the technology until we reached limited function prototypes.

Deliver

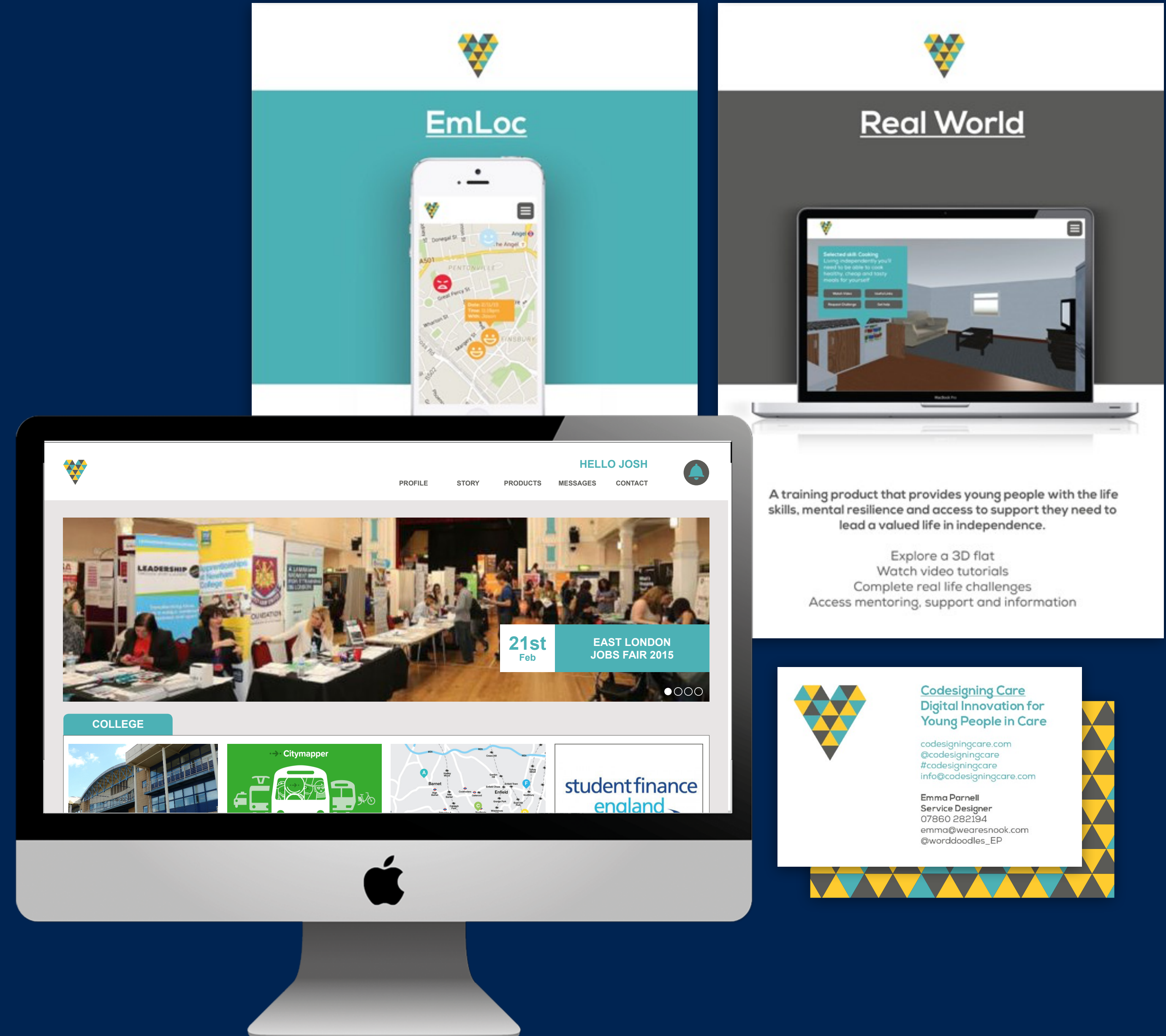
Further prototyping and refinement to develop working prototypes and a demonstration video.



Prototyping and testing

Six ideas were developed to various levels of functional prototype that were tested and refined with the young people in the co-design sessions. Some prototypes remained low-fidelity mock-ups, others were developed further through use cases with the young people.

We are exploring follow-on development funding for the Real World prototype.





Real World



A training product that provides young people with the life skills, mental resilience and access to support they need to lead a valued life in independence.

Explore a 3D flat
Watch video tutorials
Complete real life challenges
Access mentoring, support and information



Calm Space

A virtual reality calming environment that young people can retreat to during times of high stress/anger to help calm them down.

Escape the stress of everyday life
Listen to music
Get some time to yourself

“Witnessing young people’s ideas being implemented through technological prototypes enabled them to feel heard, valued and gave them a sense they were making a real contribution. Snook were skilled in how they engaged the young people, consultation sessions were enjoyable but also challenged them to think creatively which positively impacted on outcomes of this project.”

SARAH CLARSON - Co-ordinator For Childrens Participation and Independent Visitors Project

Virtual Reality Can Reduce Anxiety, Improve Social Interactions in Psychosis

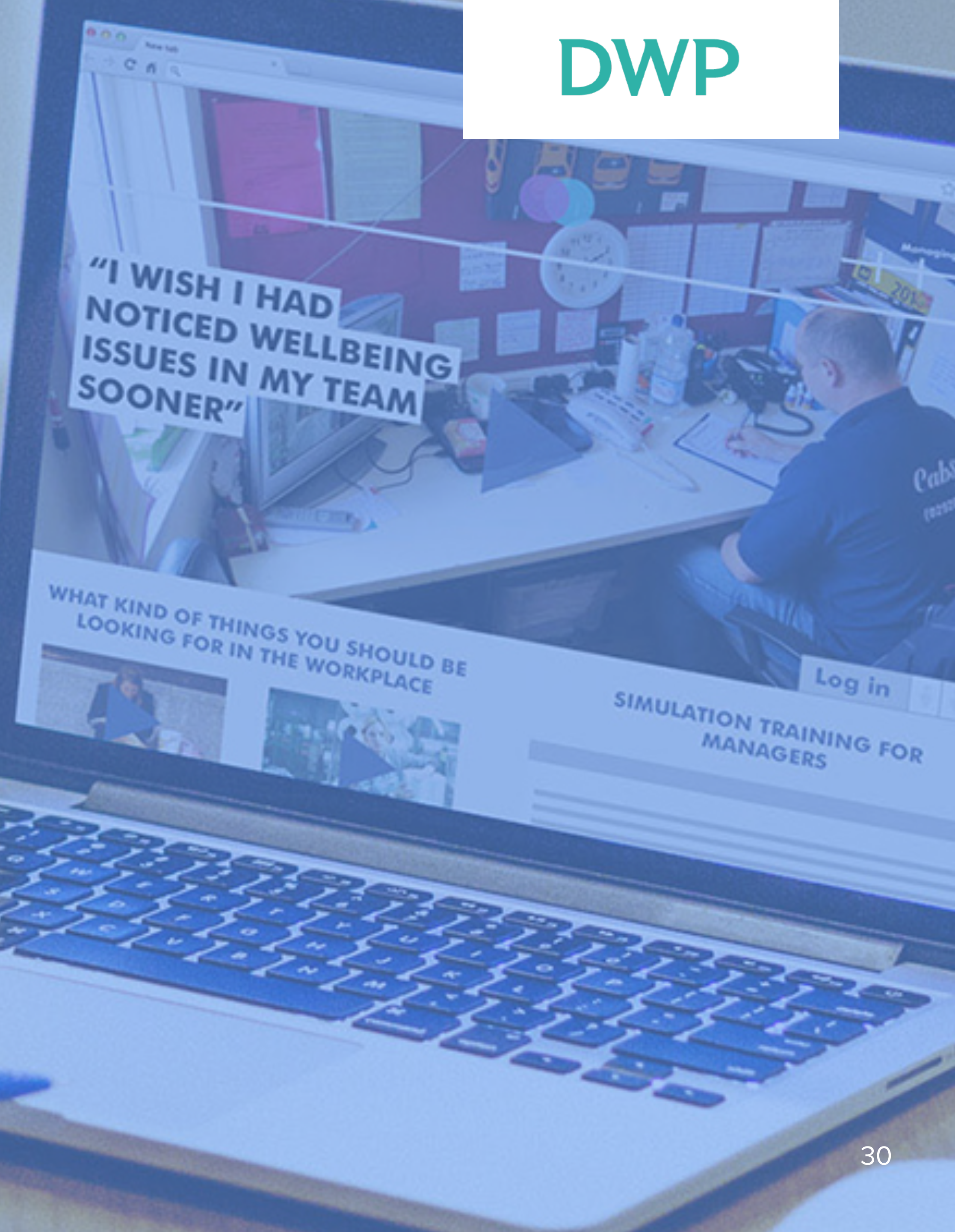
“Use of virtual reality environments in which participants interact with computer-controlled situations or avatars enables a more fine-tuned approach to exposure in the context of cognitive behavioral therapy.”

From: <https://www.psychiatryadvisor.com/schizophrenia-and-psychoses/schizophrenia-psychosis-anxiety-paranoia-social-avoidance-cbt-cognitive-behavioral-therapy-vr/article/742962/>

See also: <https://www.bbc.co.uk/news/health-41915545>

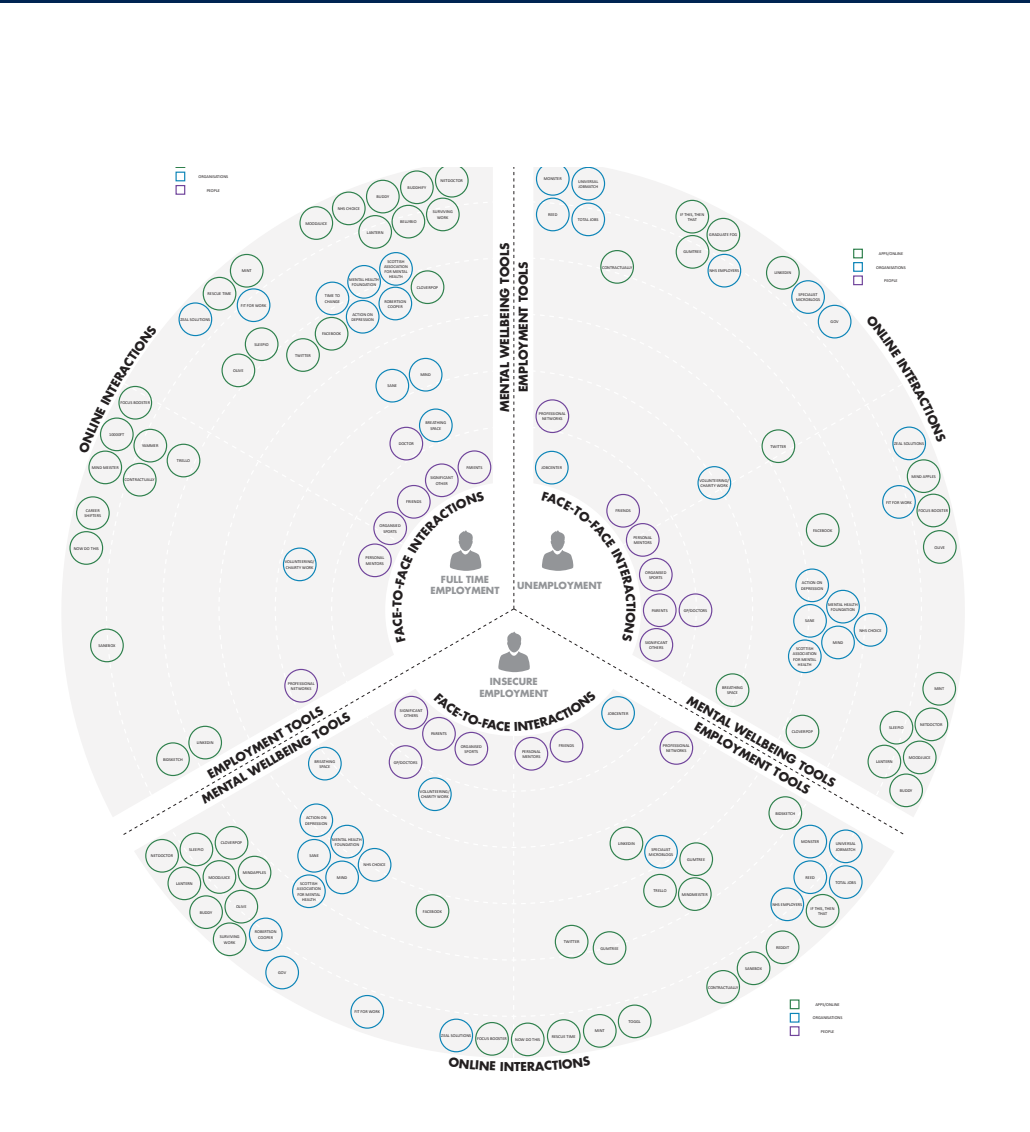
New digital tools for mental wellbeing

Researching peoples experience of being in and out of work and the impact this had on their mental wellbeing



Overview

Snook conducted User Research throughout the UK to understand peoples experience of being in and out of work and the impact this had on their mental wellbeing.



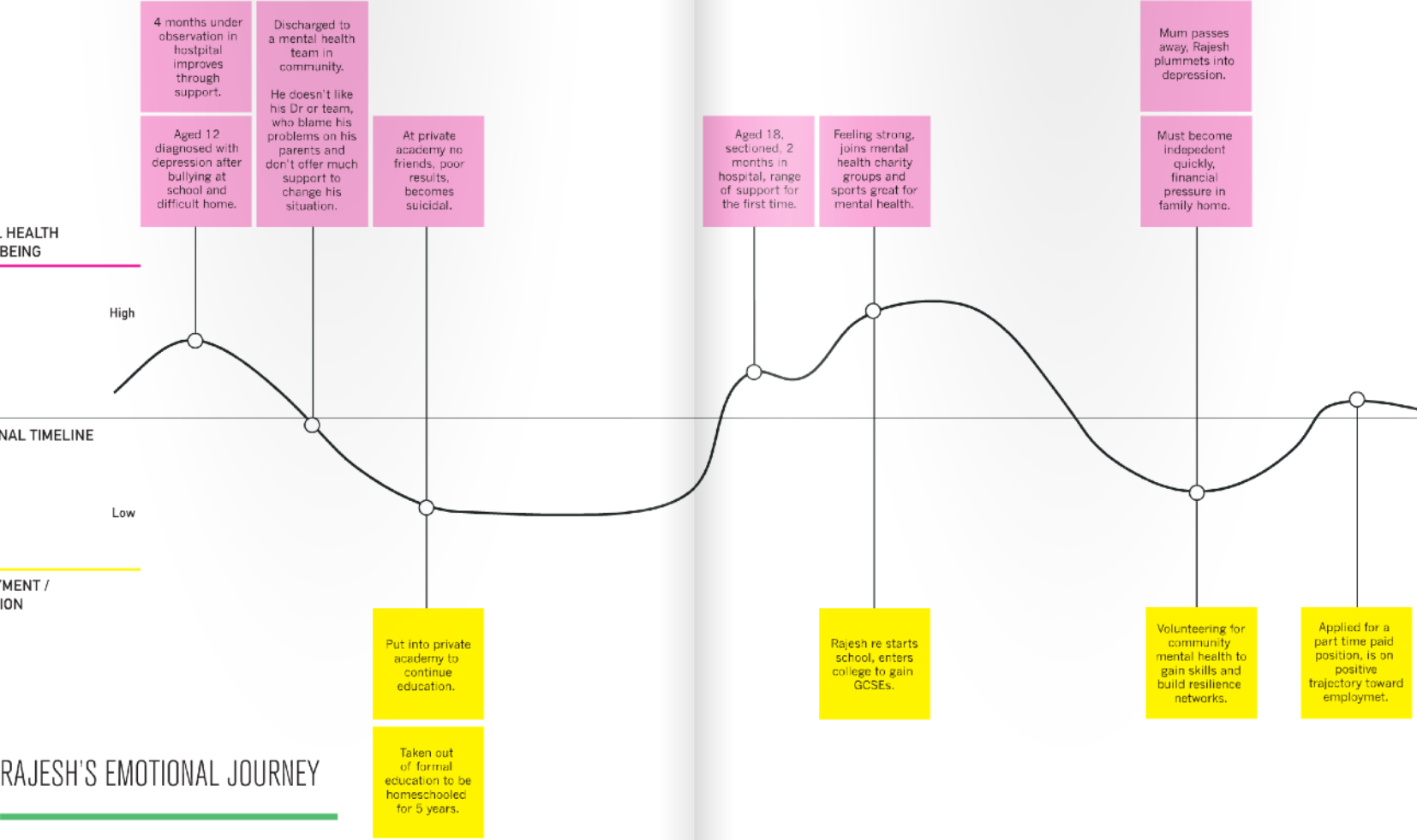
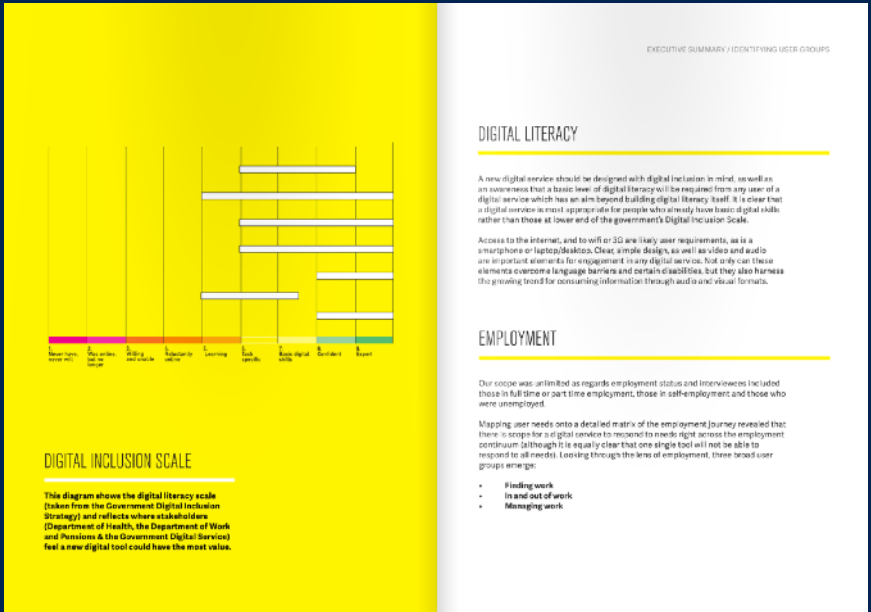
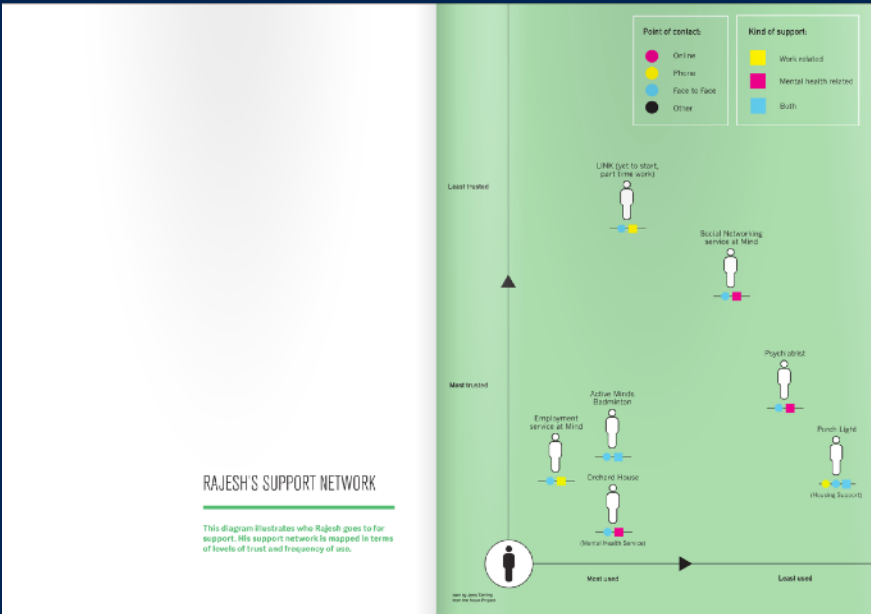
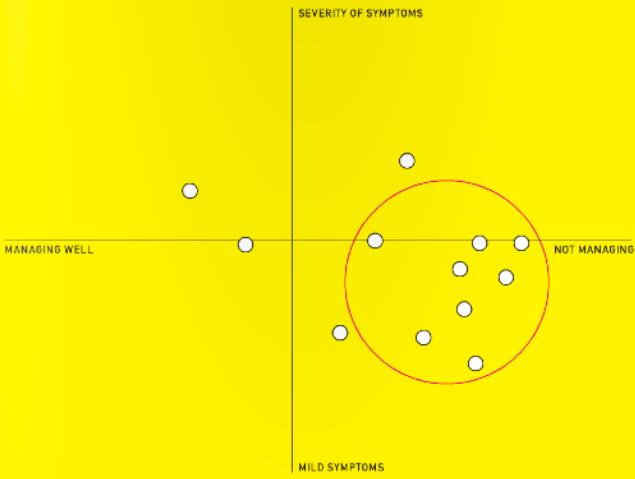
DEMOGRAPHICS OF DISCOVERY PHASE PARTICIPANTS

INTERVIEWEES

Mental health	Undiagnosed	16
	Diagnosed	34
Employment	FT employed	20
	Insecure employment	12
	Unemployed	18
Age	25 and under	5
	26-35	12
	36-45	9
	46-55	17
	55+	7

WORKSHOPS

Mental health	Undiagnosed	14
	Diagnosed	8
Employment	FT employed	14
	Insecure employment	3
	Unemployed	5
Age	25 and under	8
	26-35	9
	36-45	2
	46-55	2
	55+	1



This diagram highlights key points in Rajesh's life in relation to developments in his mental health and career. They are plotted against his relative sense of wellbeing.

Approach

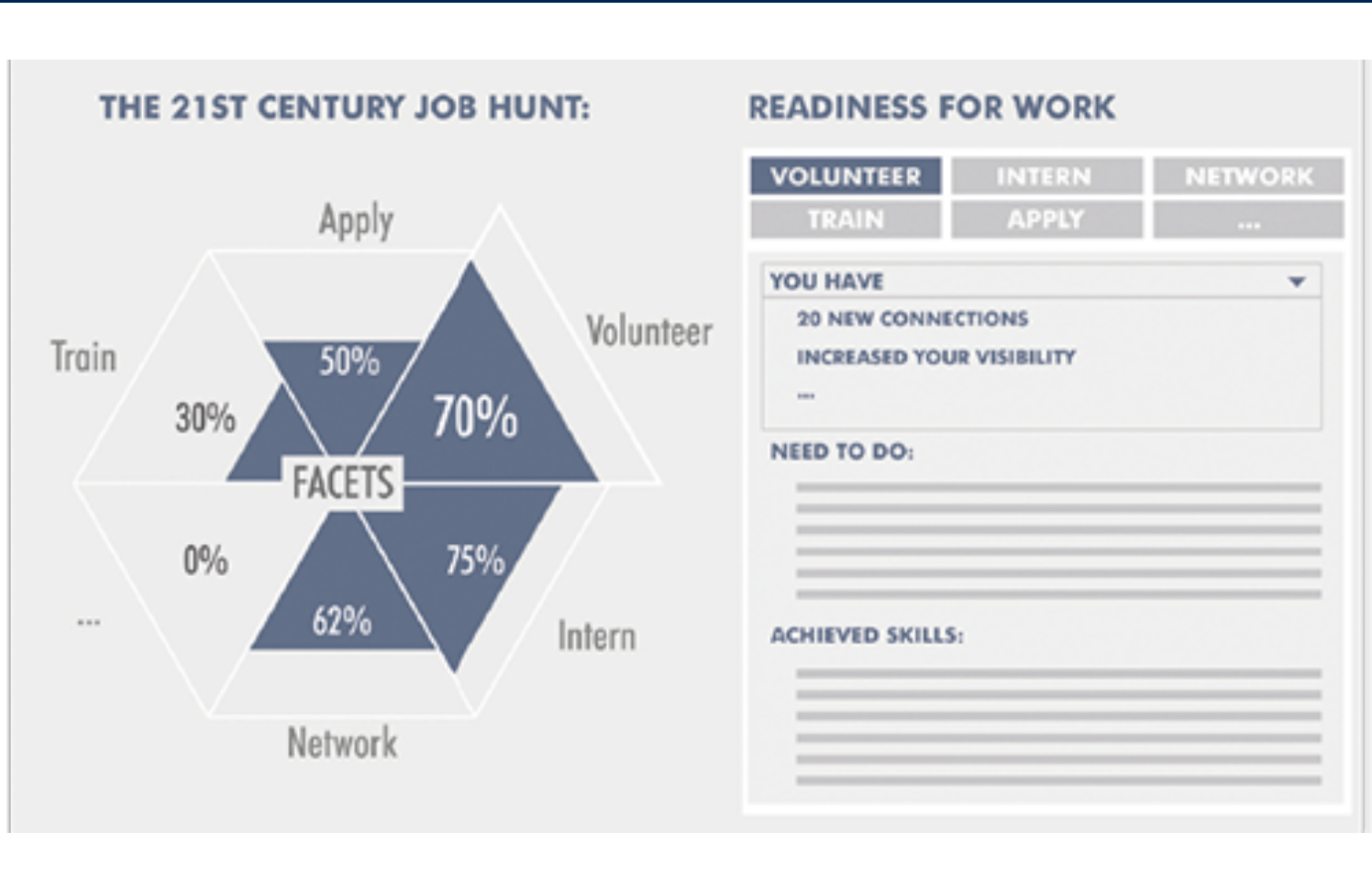
The user research was UK wide. Methods included in-depth interviews, focus groups and workshops (using Snooks bespoke toolkits). These helped create visual maps of people's employment history, illustrating highs and lows of mental wellbeing and opportunities for digital innovation.

Snook held further workshops with the funding partners to present findings and identify priorities for research and development.



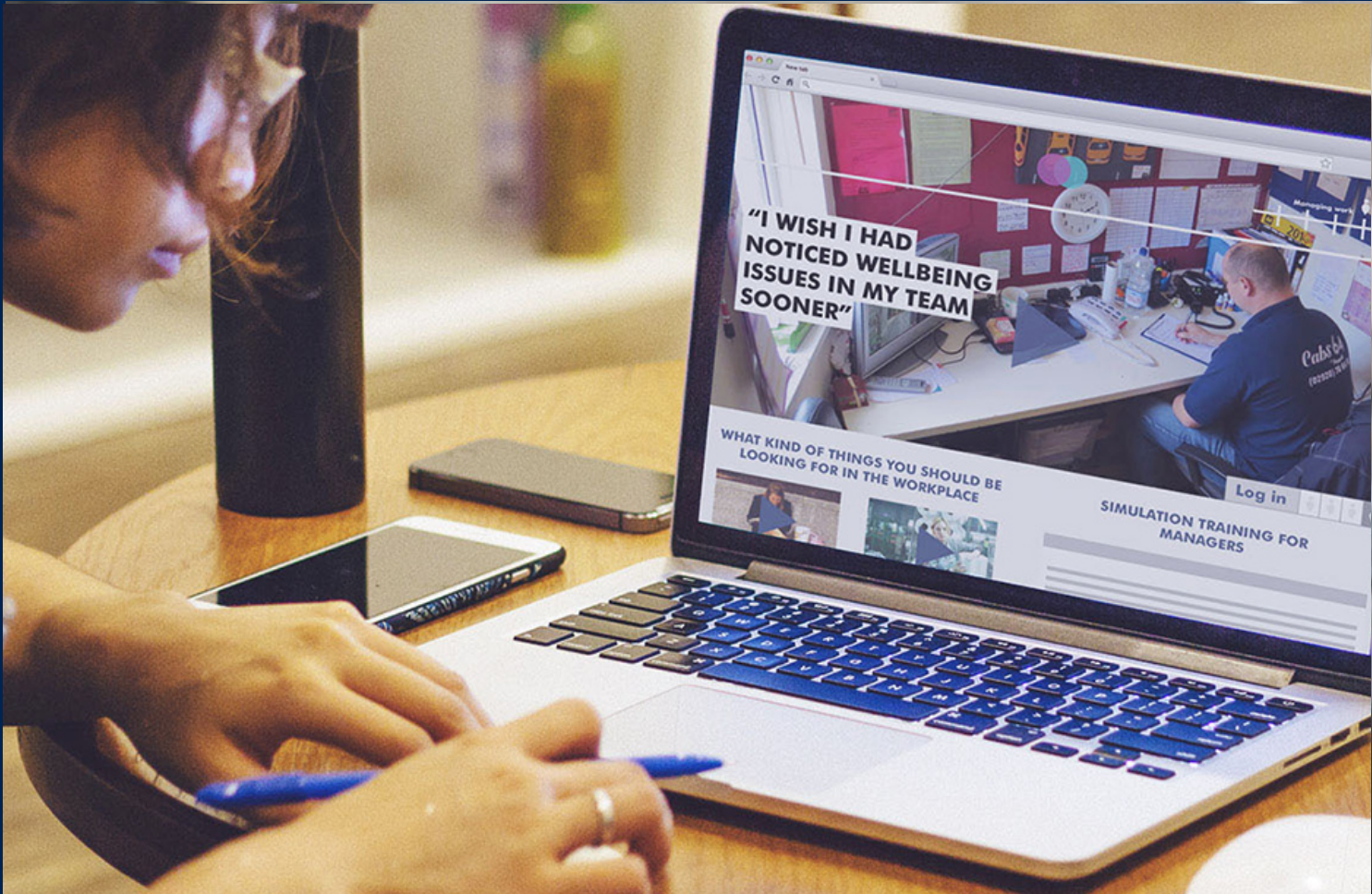
“If someone is off with broken arms and legs, people rally round them. If someone is off with mental health problems, they’re like ‘Oh, they will pull themselves together’ sort of thing... A lot of places need to understand it a little bit more.” – Charles

Deliverables



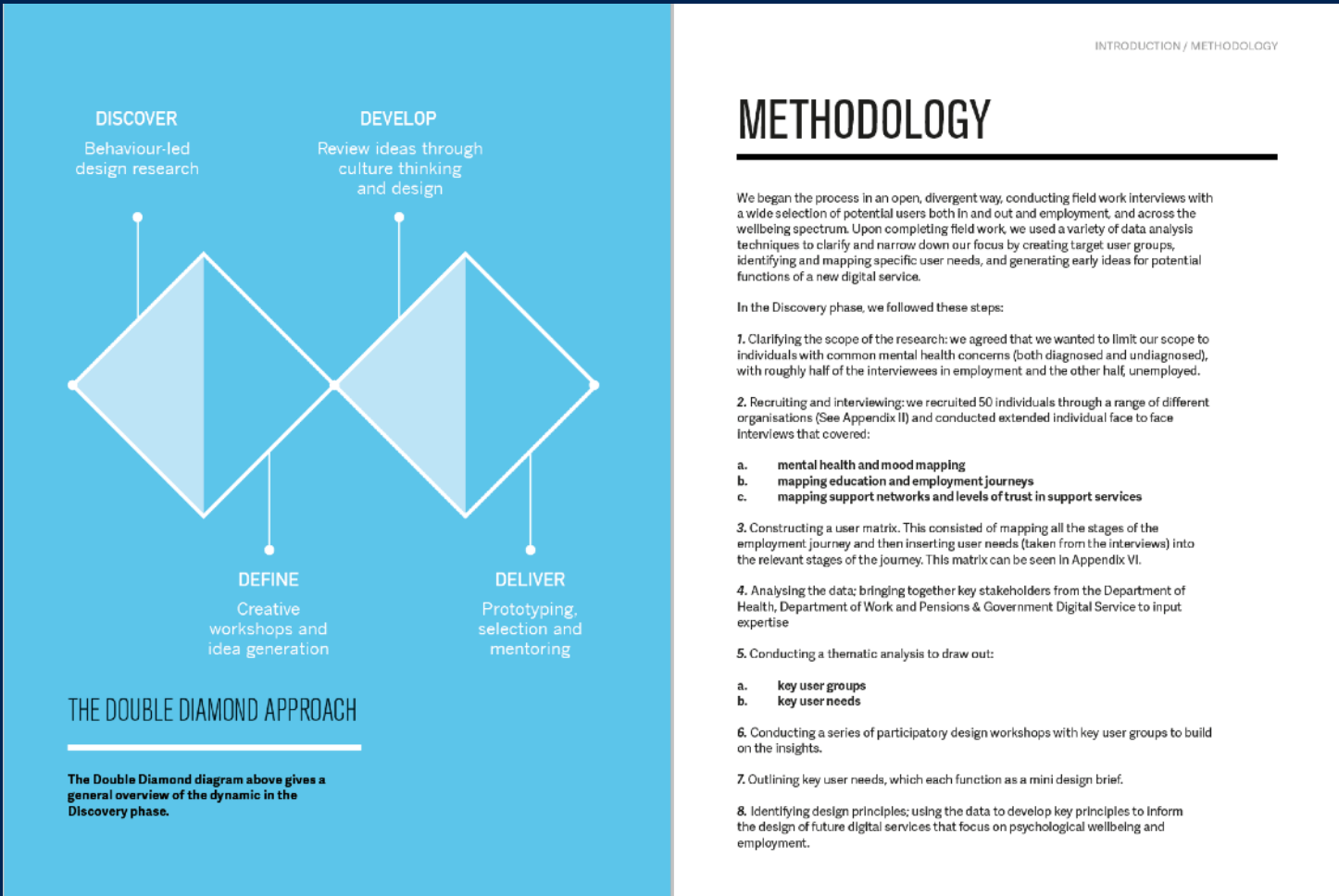
Visual maps

Our bespoke tools, in-depth interviews, focus groups and workshops helped in the creation of visual maps. The maps may be visually pleasing but they also illustrated highs and lows of mental wellbeing.



Designing support

We focused on three main phases of employment: finding work, being in and out of work, and managing work. Based on what participants told us, we created a set of design briefs presenting needs, insights and challenges, each with its own case study.



Research worth recording

The Department of Health published two reports detailing all the user research. Deep insights into user support needs were recorded and the outputs of the co-design sessions, that focused on developing a range of digital support services.

Report

Read or Download
the full report:
bit.ly/pwwreport

CREATING DIGITAL
TOOLS FOR MENTAL
WELLBEING AND
EMPLOYMENT
SUPPORT.

THE DISCOVERY PHASE

DISCOVER
Behaviour-led
design research

DEVELOP
Review ideas through
culture thinking
and design

DEFINE
Creative
workshops and
idea generation

DELIVER
Prototyping,
selection and
mentoring

THE DOUBLE DIAMOND APPROACH

The Double Diamond diagram above gives a general overview of the dynamic in the Discovery phase.

INTRODUCTION / METHODOLOGY

METHODOLOGY

We began the process in an open, divergent way, conducting field work interviews with a wide selection of potential users both in and out of employment, and across the wellbeing spectrum. Upon completing field work, we used a variety of data analysis techniques to clarify and narrow down our focus by creating target user groups, identifying and mapping specific user needs, and generating early ideas for potential functions of a new digital service.

In the Discovery phase, we followed these steps:

1. Clarifying the scope of the research: we agreed that we wanted to limit our scope to individuals with common mental health concerns (both diagnosed and undiagnosed), with roughly half of the interviewees in employment and the other half, unemployed.
2. Recruiting and interviewing: we recruited 50 individuals through a range of different organisations (See Appendix II) and conducted extended individual face to face interviews that covered:
 - a. mental health and mood mapping
 - b. mapping education and employment journeys
 - c. mapping support networks and levels of trust in support services
3. Constructing a user matrix. This consisted of mapping all the stages of the employment journey and then inserting user needs (taken from the interviews) into the relevant stages of the journey. This matrix can be seen in Appendix VI.
4. Analysing the data; bringing together key stakeholders from the Department of Health, Department of Work and Pensions & Government Digital Service to input expertise
5. Conducting a thematic analysis to draw out:
 - a. key user groups
 - b. key user needs
6. Conducting a series of participatory design workshops with key user groups to build on the insights.
7. Outlining key user needs, which each function as a mini design brief.
8. Identifying design principles; using the data to develop key principles to inform the design of future digital services that focus on psychological wellbeing and employment.

“The depth of insights generated through this user research exceeded our original expectations. Whilst this was a research project specifically for a digital tool, some of the findings have been useful for informing wider policy decisions. We really welcome these reports and have made them publicly available so that they can inform the future design of mental health and employment support.”

Lauren Jones, Policy Lead for Mental Health and Work, Department of Health



We are a strong team of researchers, designers and strategists. Using a balance of insight and design expertise to create ideas and make them a reality.

Service design with a not-for-profit

Creating a network of support that would allow young people with a learning disability to leave the care of the family home or a residential establishment and move into independent living.

Grapevine Coventry

Snook worked with **Grapevine Coventry**, a not-for-profit organisation, who act as advocates, helping people experiencing isolation, poverty and disadvantage to move towards a positive future. This particular project focused on creating a network of support that would allow with young people with a learning disability to leave the care of the family home or a residential establishment and move into **independent living**.

Overview

Grapevine support a large number of families and young people with learning

Often youngsters have been moved into residential care because of safeguarding concerns, or because overwhelmed parents can't continue caring. As a result 50% are in residential settings where over-medication, regular restraint and long isolation are normal. Expectations are low, service dependency and institutionalisation



Approach

Snook conducted user research with thirty families and young people with learning disabilities.

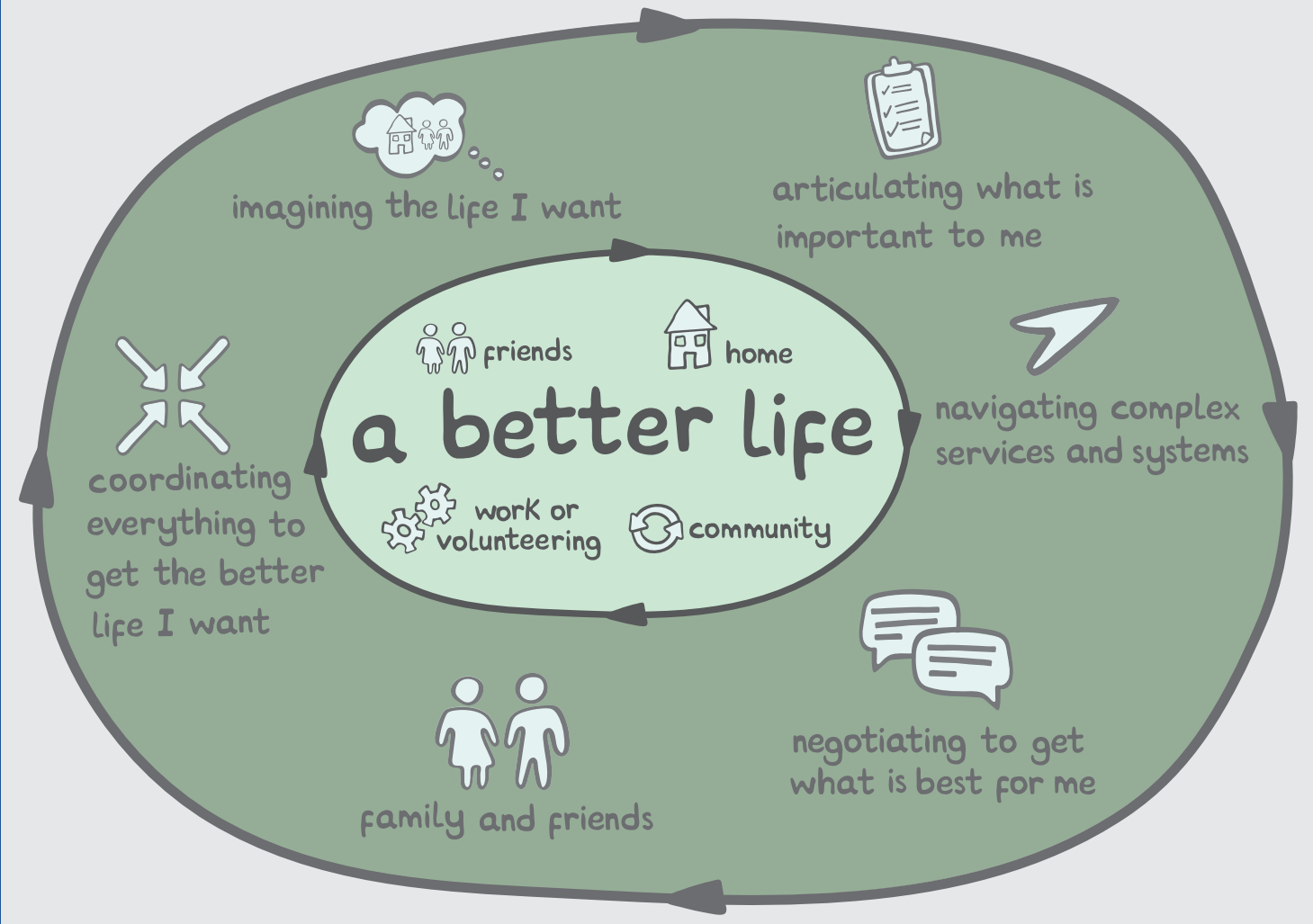
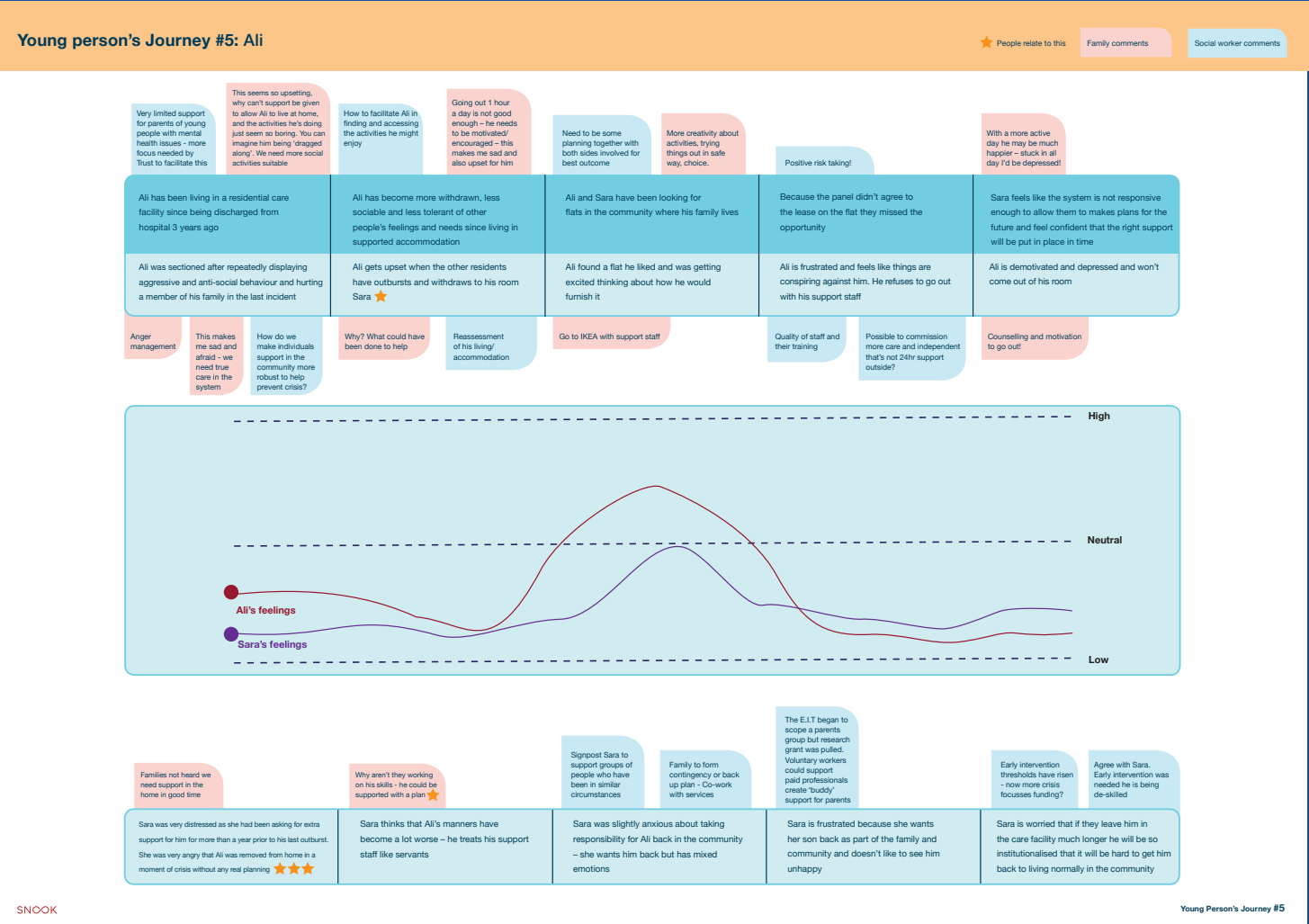
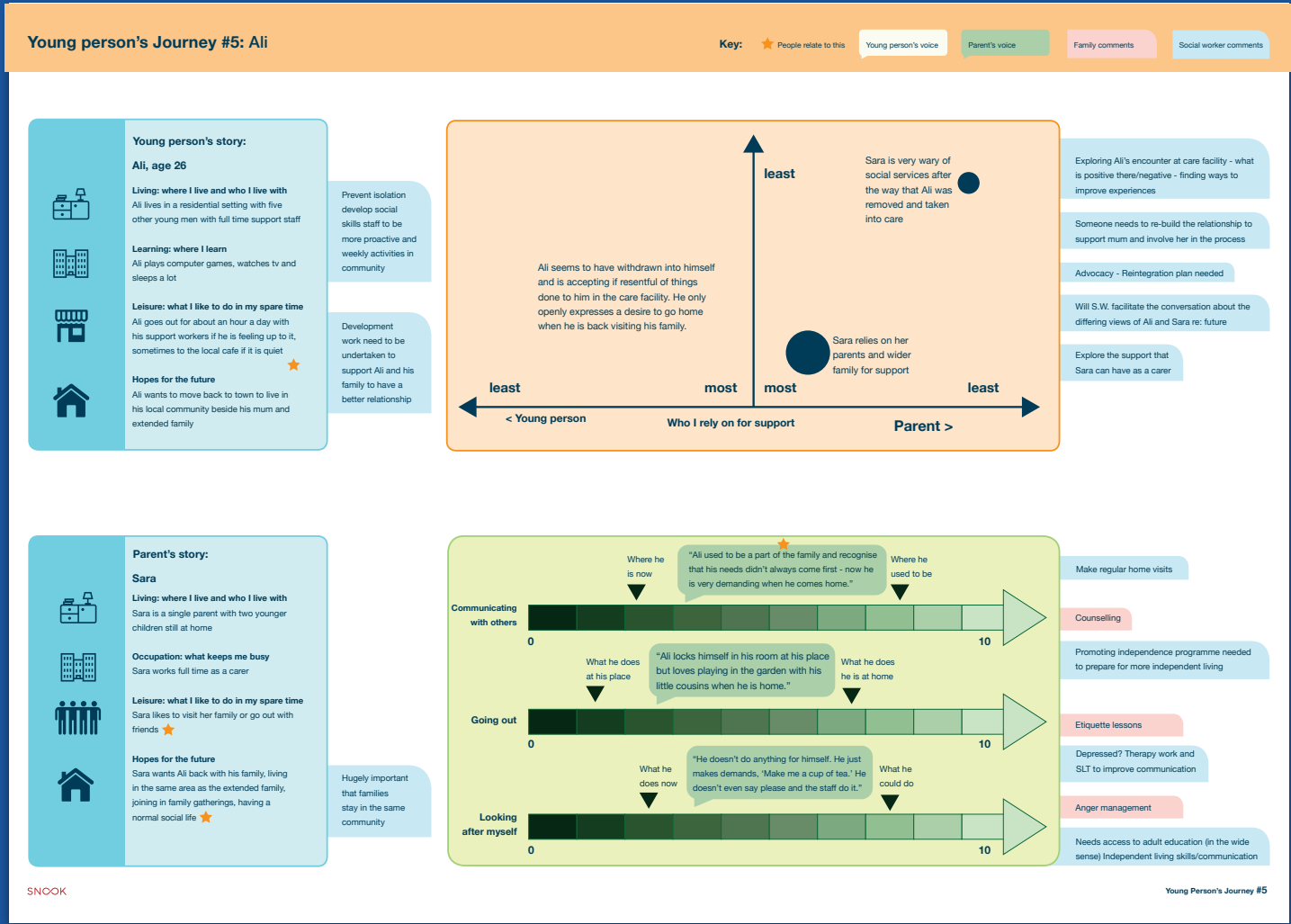
We held an introductory workshop where we asked participants to tell us what they felt they would need to make independent living work for them. We then used some bespoke visual tools to conduct contextual interviews in family homes.

From the research we created a set of personas, user journeys and experience maps that were refined to focus on 'possible futures' through further co-design workshops.

We also held two workshops with a wide range of professional stakeholders from education, health and social care.



Deliverables



Experience maps

Drawing on our extensive research with young people and families, we produced a set of personas, user journeys and experience maps. These were refined over three workshops with families and young people to more accurately reflect their experiences and to include their comments and feedback

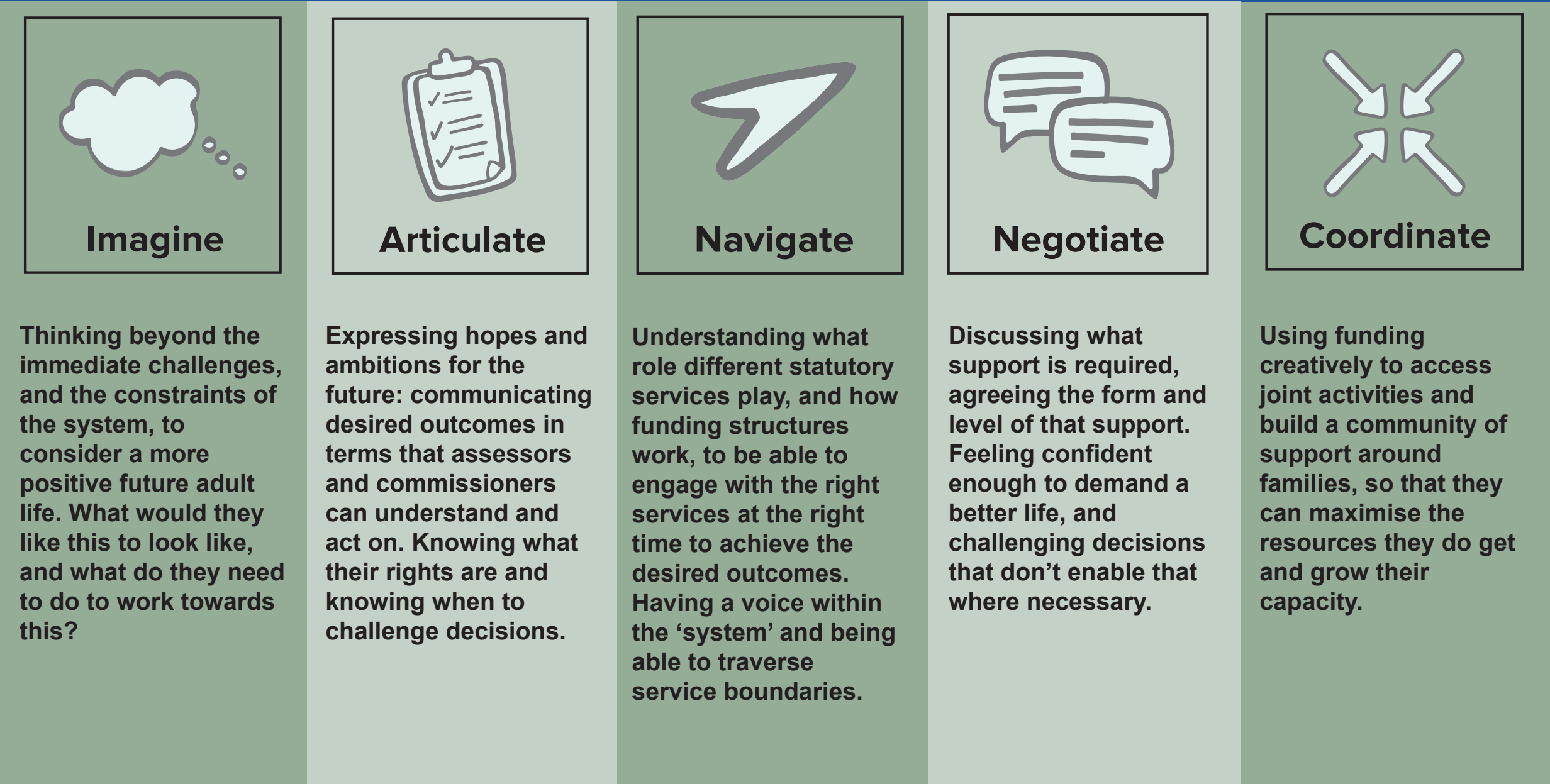
Comments from the families and young people are represented in the pink and blue tabs pinned to the persona and user journey pages. The chart in the centre represents the emotional highs and lows of the young person and their family as they sought to move into independent living.

Service model outline

This project focused on the idea of 'A better life' for young people with learning disabilities and their families and we produced a set of graphics representing the elements that they thought were important. We also helped Grapevine develop an outline of how their service model would operate at different stages of the journey.

Service model outline

Snook drew on the findings from the co-design workshops with families to design a service model, outlining what families felt they needed at different stages of their journey. We also outlined in detail what Grapevine’s service offering might look like related to three core themes of ‘Hoping for a brighter future’, ‘Getting the ingredients right’, and ‘Making the most of what I have’.



		Pre-school	Primary School	Secondary School	College	Young Adult Life
Raising Aspirations	Hoping for a brighter future					
Big vision:	Giving young people with Learning Disabilities and their families a brighter vision of what they could be and do as adults - not being defined by their disability; and how parents themselves can fulfil their own aspirations					
What that means in practice	Families start to think early on about more a positive future adult life; what they would like this to look like and what they need to do to work towards this	When families receive a diagnosis for their child they are directed to advocacy organisations and online resources that illustrate what young adults with Learning Disabilities have achieved in terms of a fulfilling life	Families are supported to recognise the abilities of their children and focus on the possibilities of what they can achieve in future.	Young people and families are made aware of all of the possibilities for the future and what the best routes to achieving the future they desire - whether this is college, apprenticeships, internships etc. They are helped to develop peer support and connected networks	Young people are given opportunities to engage in social activities and mix with wider social groups, not limited to others with Learning Disabilities. They have the chance to try some volunteering and work placements in the local community (depending on their ability)	The young person and their family have support and/or funding in place to enable them to lead a fulfilling life: to have a place they call home; to do things they enjoy with people they like to be with; and to be meaningfully engaged in work or volunteering (depending on their ability)
Who needs to be involved?	Social work; Education, Health, Mental Health, Commissioners (all as required throughout journey)	Peer support groups; advocacy organisations	School; Peer support groups; advocacy organisations	School; Peer support groups; advocacy organisations	College; Peer support groups; advocacy organisations	Employment support agencies; Voluntary and Community Organisations; Housing providers; Peer support groups; advocacy organisations
What specific role could Grapevine play to support families and young people?	Connections/contacts with other parents. Stories that illustrate fulfilment of aspirations and what 'a better life' looks like.	Imagine and Articulate: Produce resources for families that raise aspirations and highlight the possibilities for independent living in future for Young People with Learning Disabilities. Help families articulate what they would like in the future and create a route map to achieve that future.	Navigate and Negotiate: Support young people and families to engage with services and communities to determine how they can access resources to build capacity to achieve the future they imagine.	Imagine, Navigate and Negotiate: Support young people and families to manage the transition from children's to adult's services, and engage with services and communities to determine how they can access resources to build capacity to achieve the future they imagine.	Imagine, Navigate, Negotiate and Coordinate: Support young people and families to fully consider potential routes and resources to enable them to make steps towards independent living in the future.	Negotiate and Coordinate: Support young people and families to coordinate formal and informal support in the local community to allow the Young Person to lead an active, healthy life.

Impact

Evidencing the need

This project produced clear evidence of the need for a new support service. It also ensured that the service model was co-designed with the people who would actually use the services - meeting their needs.

Building understanding

Engaging young people and families in workshops with professional stakeholders allowed everyone to gain a deeper understanding of the challenges faced on both sides.

Funding applications

The findings from the project have been used by Grapevine Coventry to apply for funding to develop the service framework proposed.

MORE PROJECTS ON:

wearesnook.com

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Thank you!