

Alistair Ruff

User-centred design & research

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I design and prototype services, interactive products and user interfaces based on running and analysing effective user research. My experience includes consumer electronics, medical devices, financial services and work in the public sector.

I work closely with stakeholders ensure shared project understanding and that the results of research and design projects are communicated successfully. My roles have made me comfortable discussing the value of the work I perform in a business development and internal context.

I am also studying for a Professional Doctorate part-time, exploring approaches to prototyping in service design.

PBS First Home Buyers (2017- 19)

User research and design of service for Principality Building Society. to support people saving for their first home

Principality Building Society offer savings and mortgages, and wanted to grow both amongst younger consumers. Initial desk research identified the challenges first time buyers faced in saving for and buying their first home. Further user research identified uncertainty

around how much they needed to save was a barrier to starting to save, and the cause of nasty surprises when they reached the stage of buying. First Home Steps is a digital service and savings account that makes planning saving for your first home simpler and removes confusion.

Approach

Project Kick-off

Co-facilitated by me

Remote Interviews

Led by me

User Research workshops

Co-facilitated by me

Concept Design

Collaboration with design team, leading visual

Concept development

Working in-house with propositions team

Product Testing

Led by me

Workshop with client team to understand 'opportunity areas', audit existing internal knowledge and surface assumptions, business goals etc.

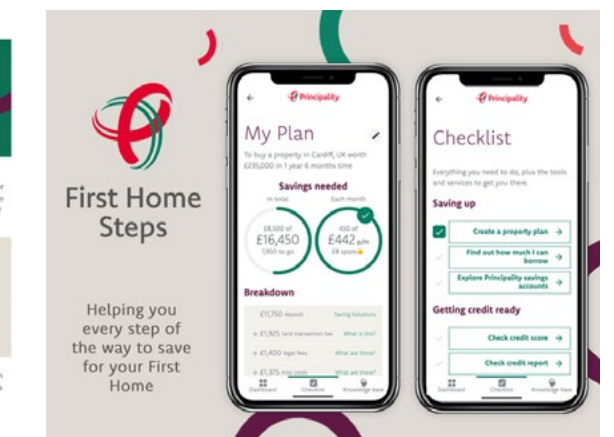
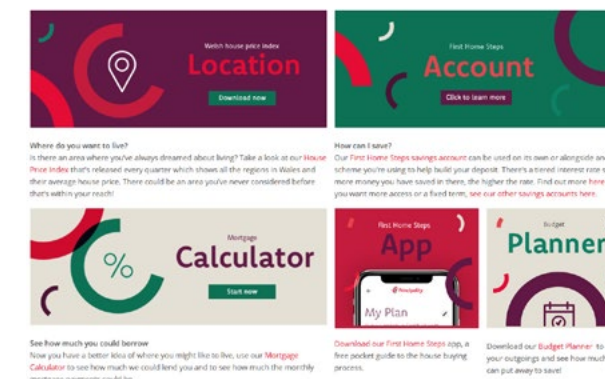
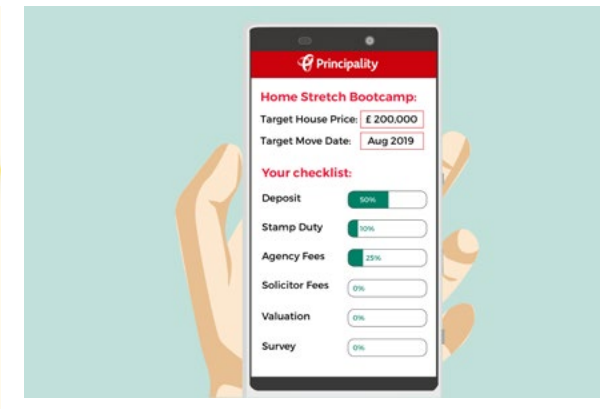
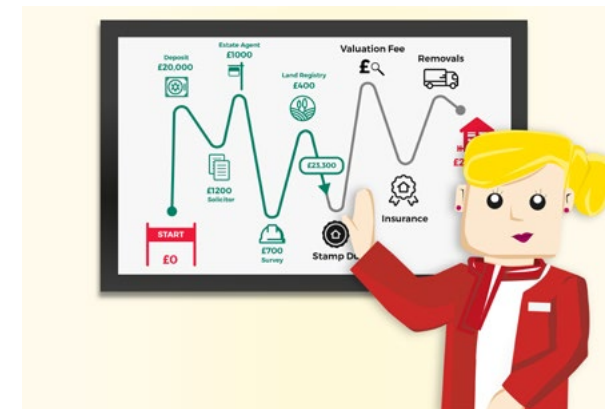
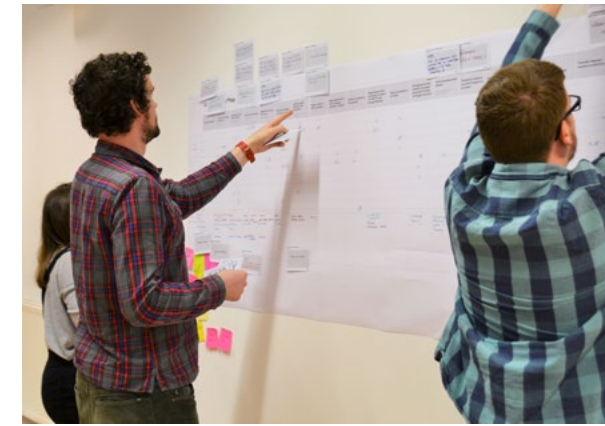
Qualitative interviews with people in the process of buying their first home, identifying the steps they had taken and difficulties faced.

Research and co-design sessions to map the experience of first time buyers, the barriers they faced and co-create initial concepts.

Development of 7 concepts based on user research, filtered for feasibility with client and visualised through illustrated storyboards.

Once concept was selected through quant testing. After a project pause I worked in-house with propositions team to define a final service design alongside a broader customer strategy.

1:1 research sessions exploring specific service features, e.g. which costs were people aware of, what savings benefits would meet their needs best to inform final product and service.



<https://www.principality.co.uk/first-home-steps>

Outcome

First Home Steps was launched by Principality in 2019, this included a dedicated app for those saving for their first home, a savings product designed to meet their needs and associated content that responded to uncertainty identified in user research.

Customer strategy work informs ongoing service design and proposition development.

PBS Young Savers (2016- 20)

User research and service design of new propositions for young savers with Principality Building Society.

Supporting children, and the people who care for them to save money for their future is core to Principality's values, but also supports their business goals of growing their younger customer base. The project initially sought to understand the barriers that people face for

saving for children, what motivates them to do so, and how their relationship with money changes as a child grows. This developed into dedicated savings accounts, digital and analog tools to support children's financial literacy and savings behaviour as part of a wider strategy.

Approach

User Research Workshops

Led by senior colleague

Collaborative user-research workshops with parents and grandparents to uncover how their financial priorities changed, impacting upon their savings behaviour as children grew up.

Concept generation

Collaboration with design team

Translation of insight into 'How might we' statements, ranked by client staff then turned into 10 service concepts, visualised through illustrated storyboards, animated by me.

Prototyping and testing

Collaboration with design team, digital prototyping led by me

Creation of branch, paper and digital prototypes for testing with users. I built three lo-fi digital prototypes, planned and moderated the research, coordinating sessions over 2 evenings, gathering qualitative feedback.

Concept Development

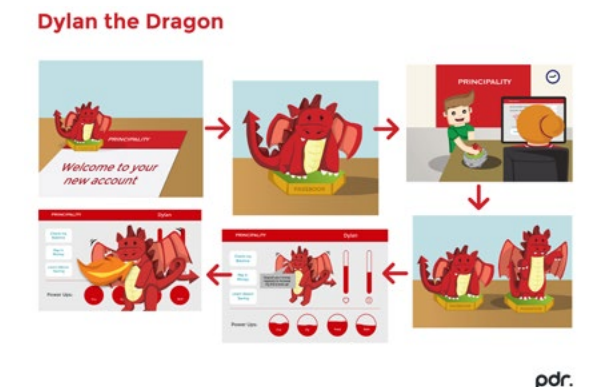
Led by senior colleague

Refinement of concept with clients, forming service blueprints and documentation for implementation.

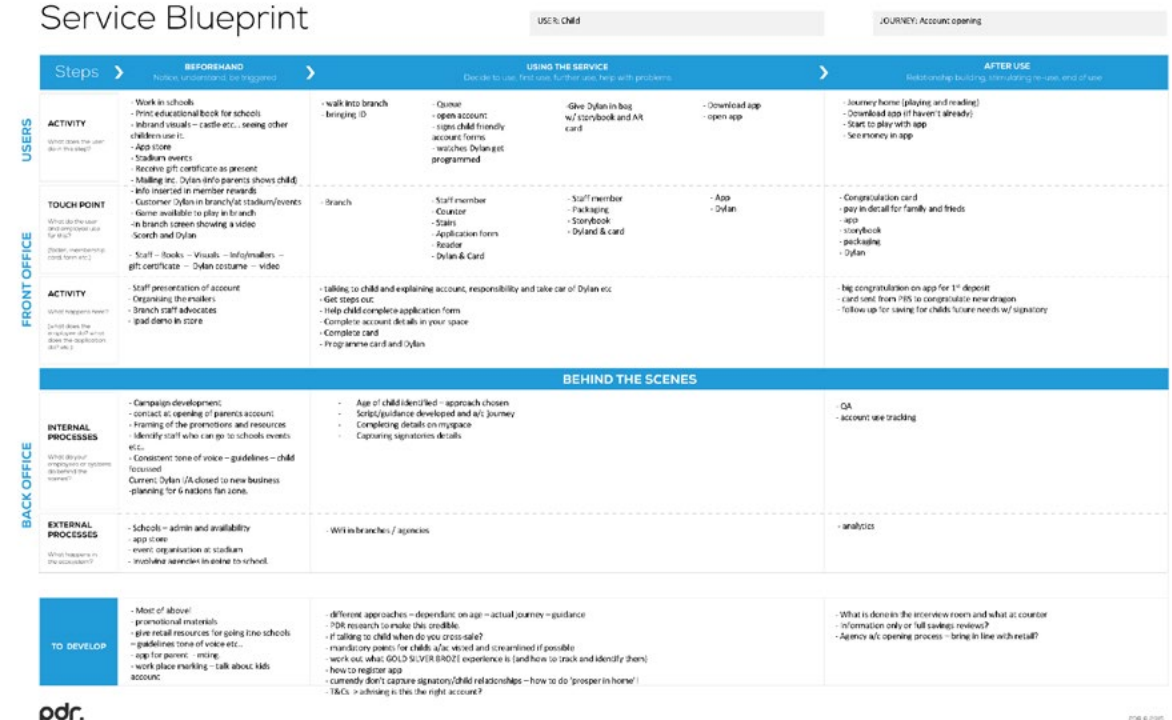
Implementation

Working in-house with propositions team

After a project pause, I identified an opportunity to use existing insight in another project and influence stakeholders whilst in-house to push for MVP launch and supporting a roadmap for app and fin-ed content.



Service Blueprint



<https://www.dylansavingsquad.co.uk/en/>

Outcome

MVP paper tools launched 2019 as 'Learner Earner' account, which was over-subscribed, with

'Dylan's Saving Squad' app and fin ed digital content launched August 2020.

Protoytping Branch Interactions, paper materials and digital tools

All digital and graphical design is my work.



First Iteration of 'in-branch' interaction.



Higher-Fidelity iteration of in-branch prototypes being trialled with families.

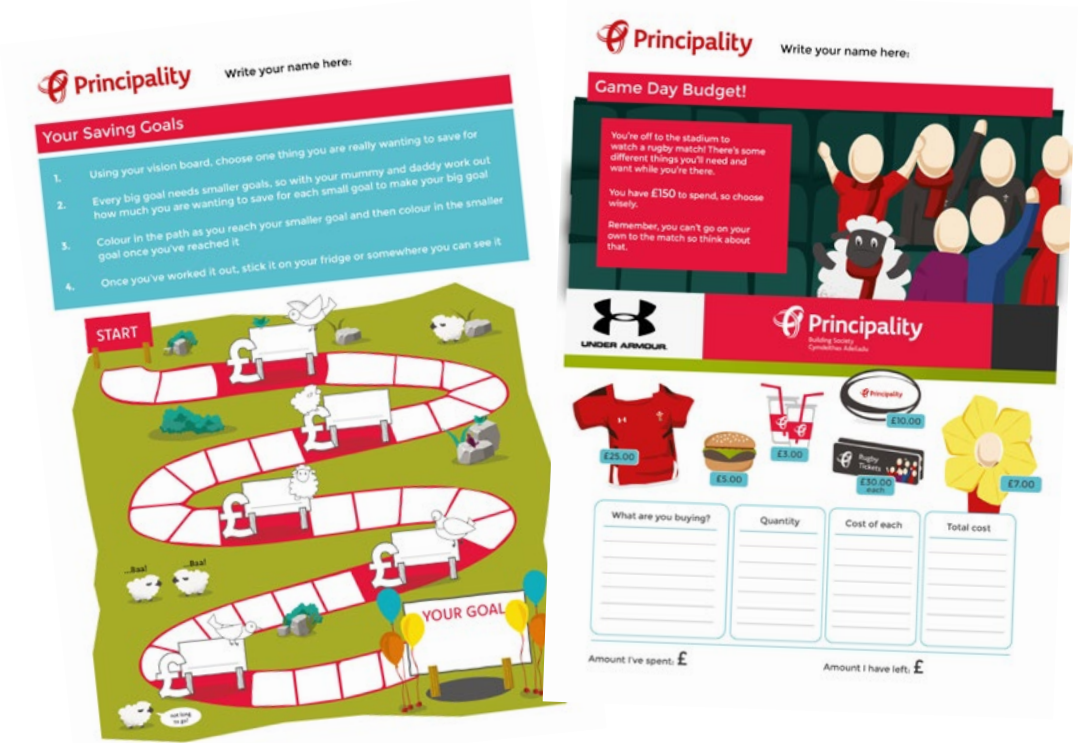


Associated account materials for testing.

Lo-fi app prototype tested with children.



MVP paper versions of children's finance materials for 'Learner Earner'



Cooltone by Coolsculpting (2019)

User interface, product interaction design and prototyping for cosmetic medical device.

Coolsculpting are the industry leaders in Cryolipolysis (Fat Freezing) technology. Their market share in the US was strong but global reach was limited. We Identified opportunities for business growth and worked with them to design and develop next generation products.

Approach

Global research

Collaboration with team

Concept Translation

Service & Interaction concepts led by me

Concept Development

Collaboration with Industrial designer and Design Engineer

Visual Design

Led by me

Interactive prototype

Collaboration with Design Engineer and Software Developer

The first of these is 'Cooltone', a supporting product to their flagship. I worked alongside PDR's Industrial Design and Design Engineering team to design the interactions for the product, with a focus on the touchscreen user interface.

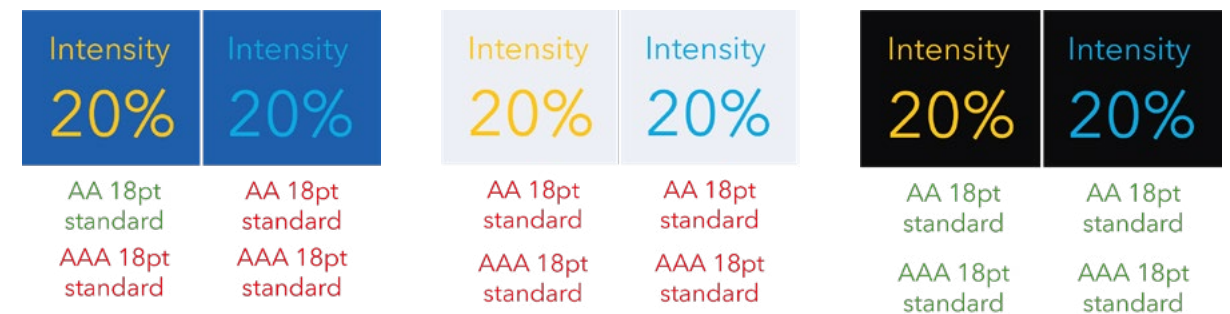
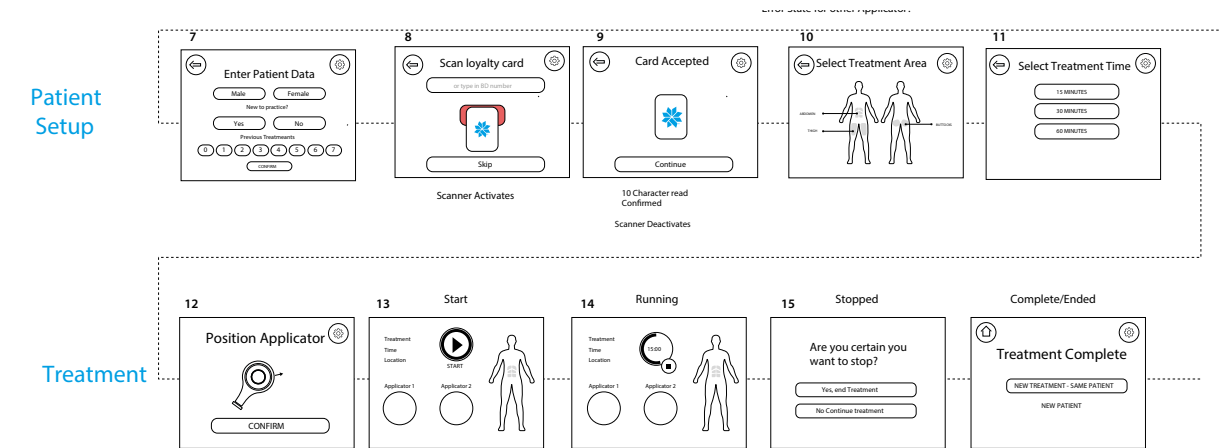
Research in established and growth regions to identify new product and service opportunities

Translating research into suite of concept opportunities for continued business growth. Merging physical, digital and service opportunities.

Developing product vision for identified product. Generating and communication interaction concepts for digital and physical touchpoints.

Defining visual style of UI elements, including developing client brand guidelines to meet WCAG requirements for digital interface.

Planning and building 'looks-like' prototype using off the shelf screens to incorporate high fidelity digital UI prototype into sales prototype to indicate functionality.



<https://vimeo.com/375642182>

Outcome

Product has been soft-launched to clinics/consumers including all proposed designs & utilising prototypes at National Sales Meetings.

Full Product launch in 2020



Interactive user interface prototype for 'Looks like' sales model.



DHS Smart Pump (2017)

Design and interactive prototype of a connected pressure area care mattress pump

Direct Healthcare Services (DHS) manufacture and provide pressure area care solutions, with a portfolio of innovative, award-winning products including mattresses, cushions and overlays. However they had not previously developed their own dedicated product from scratch.

I was part of a 3 strong product design team, tasked with developing their new product, with market leading connectivity and design from concept to interactive prototype to launch at a trade-show.

Approach

Design Concept

Collaboration with Industrial Designer

Proposing integrated product and interface design concepts to client, ranging from full touchscreens to discreet hidden-to-lit display

Prototype Planning

Collaboration with Design Engineer

Identifying appropriate interactive prototyping approach for selected design concept, including technology required to provide desired visual and functional outcome.

UX Design

Led by me

Defining user flows and service that sits alongside the pump, incorporating mobile app controls.

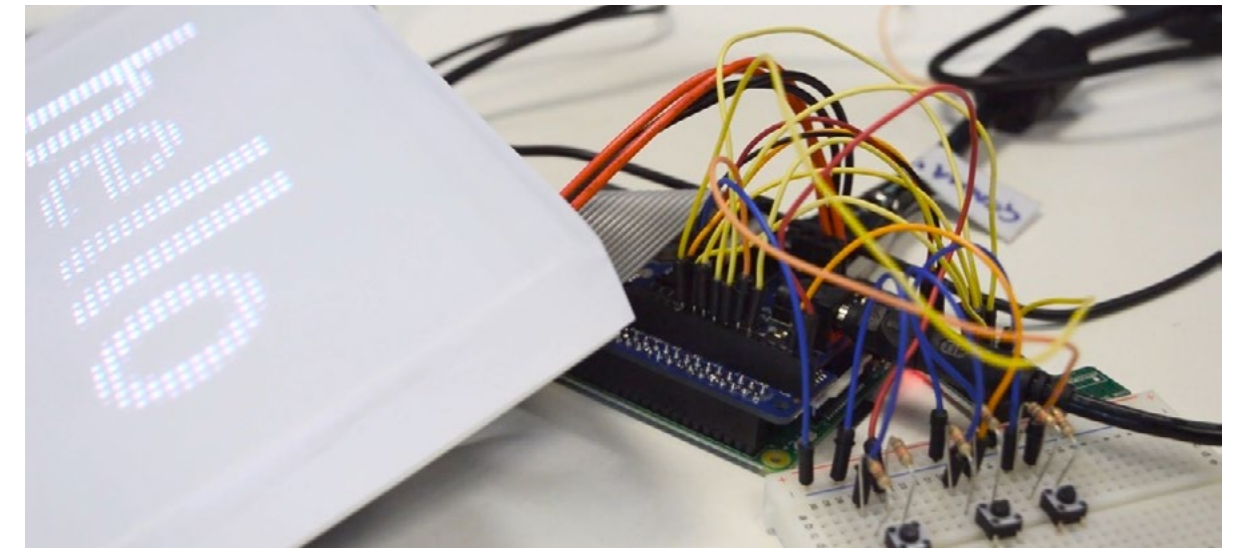
Interactive prototype

Collaboration with Design Engineer and Software Developer

Planning and building 'works-like' prototype using arduino, raspberry pi, wireless plugs and app to control a pressure area care mattress live at the trade show.

Challenges:

- Using a 'dumb' prototype to control two existing pumps to simulate full functionality of new device.
- Connecting LED Matrix, Multiple LEDs and wireless plug controls to Raspberry Pi due to GPIO port constraints.
- Communicating intent to sub-contracted software developer



<https://vimeo.com/224300454>

Outcome

Prototype completed to deadline, and performed as required at trade-show generating a lot of positive interest.

Product remains in development with the client.

P1vital Predict (2018)

Research, design and usability testing for a digital depression treatment monitoring system

Based on research conducted at Oxford University, P1vital's product brings together decades of clinical research and proven artificial intelligence to deliver digital tools that help improve recovery rates for depression sufferers whilst reducing the overall cost of treatment.

Approach

Internal knowledge audit

Led by senior colleague

GP Skype Interviews

Led by senior colleague

Visual Design

Led by me

Interface Design and Prototype

Led by me

Usability Testing

Led by me

Handover Documentation

Led by me

As a Class I medical device P1vital had more considerations than a standard consumer focused website. I was involved in a user-centred design approach to understand how both NHS staff and patients would use the website and wider system.

Using P1vital's expertise and existing research to avoid duplication and inform research methods & content.

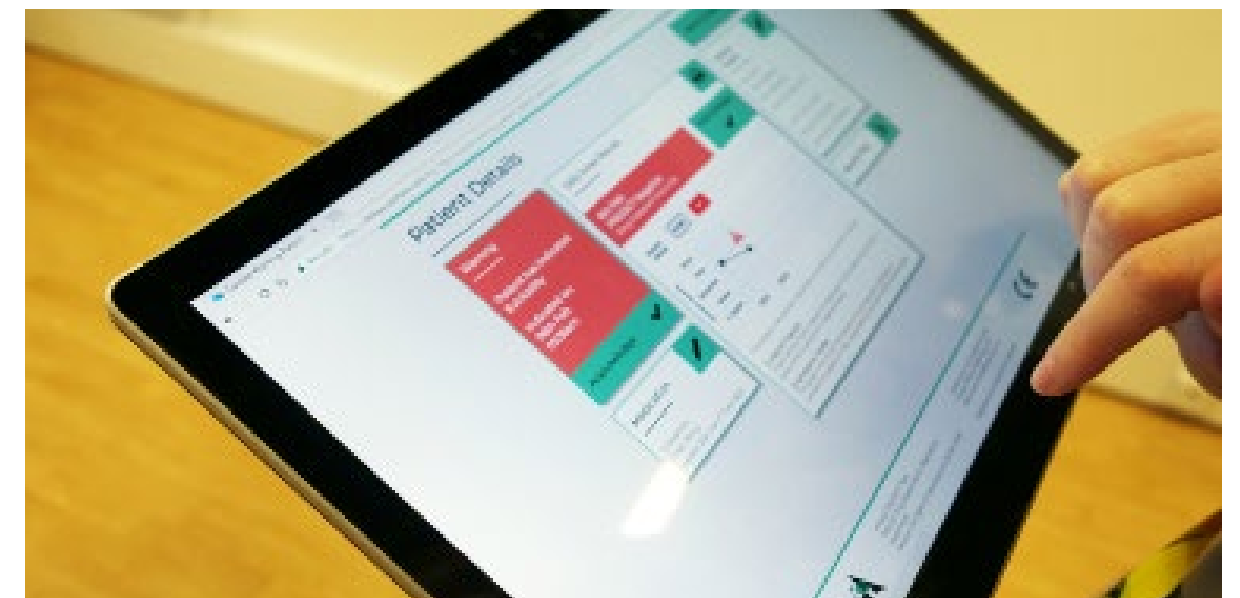
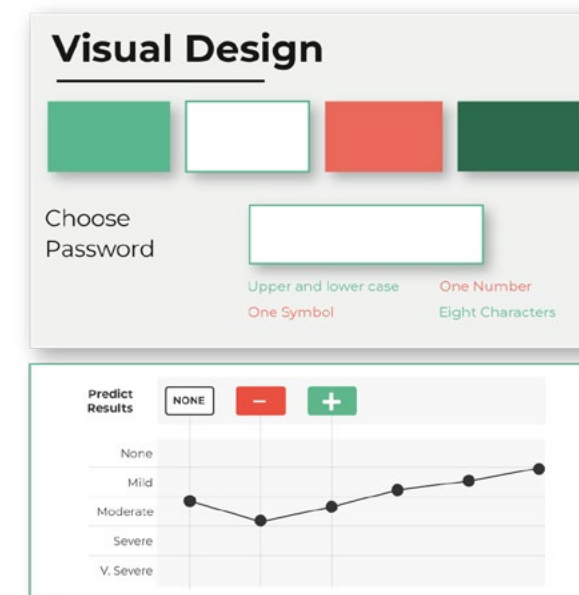
Cost effective, allowing for regional NHS variations and fitting into busy GP's schedules. Semi-structured interviews around how P1vital system could sit within their workflow.

Defining colour, grid layout and visual style for the system, informed by internal P1vital brand values.

Overall system architecture down to interaction details, prototyped to high fidelity in Axure. Radically streamlining existing clinical trial software for patient users, for desktop and mobile use.

Protocol creation of frequently used functions, recruitment of participants, facilitation of 1hr lab-based usability studies, analysis of results and subsequent design changes.

Creation of handover documents for P1vital and external software developers. Usability study results and resulting design guidelines alongside detailed design specifications.



Outcomes

Key findings:

- GPs need system to integrate with their existing NHS systems
- GPs desire for as few notifications / emails as possible
- Patients find system simple to use on 'good days' but 'tests' require a quiet space and concentration which those suffering with depression don't always have.

Product has been re-branded as 'i-spero', with ongoing work to integrate into NHS systems and continuing research to obtain patient results from a short a 'test' as possible. Trials remain ongoing and the product is available at www.i-spero.com/

Client returned for further work on their product

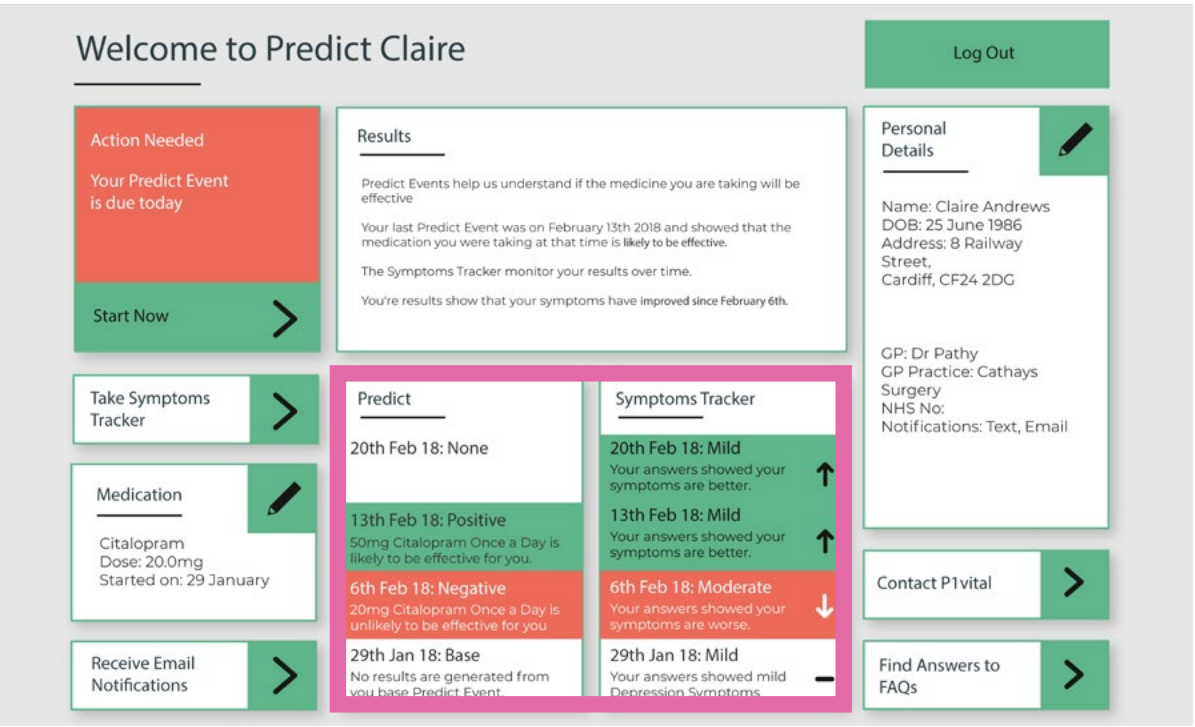
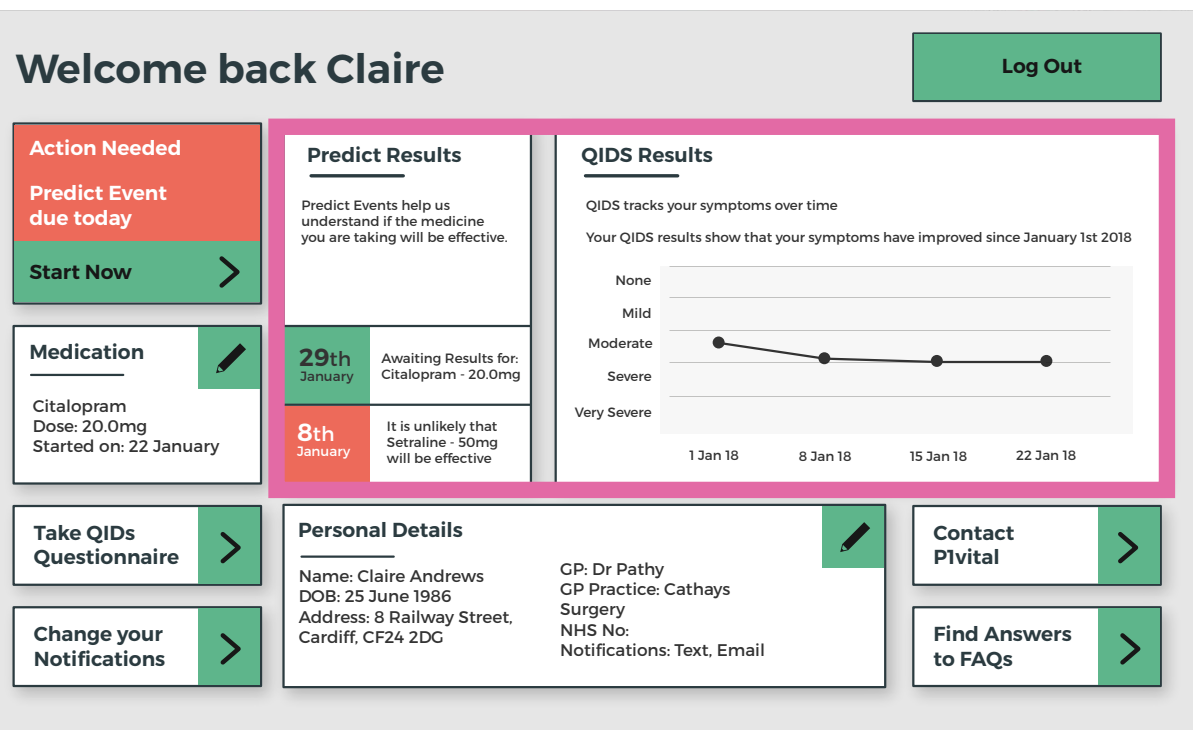
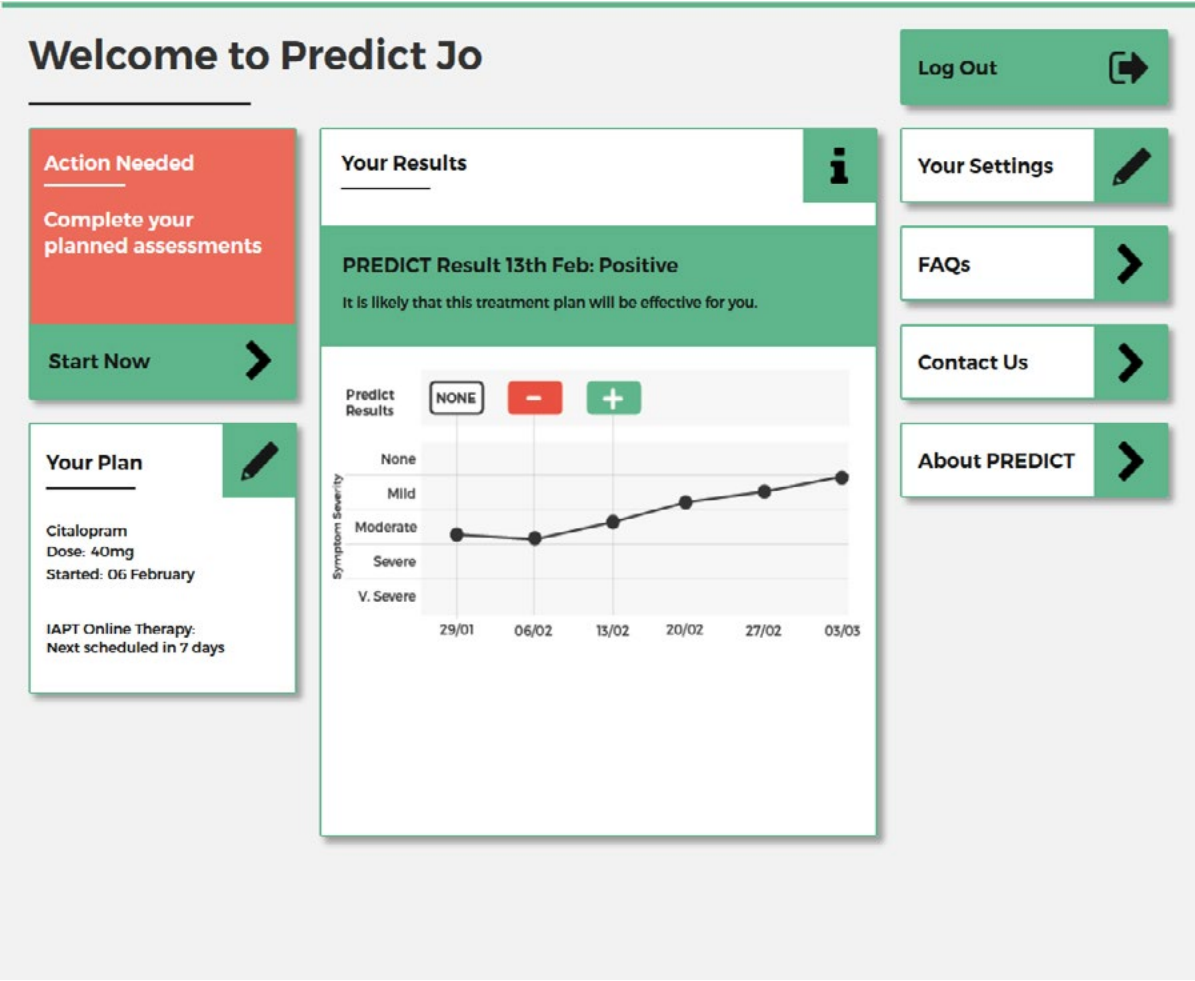
Design Challenge: Presenting Results to Patients

Results needed to be seen and understood as a high priority. As they combined two sets of data this presented a key design challenge.

The system generates ‘QIDS’ Symptom Tracker results, which are trended over time, and ‘Predict’ results which are positive or negative results calculated algorithmically by the system.

‘Predict’ results assess whether your current anti-depression medication is likely to be effective based on a combination of interactive tests (including the symptom tracker). This is only taken 7 days after a new medication has been started, whereas the symptom tracker can be done whenever desired by the patient which generates complementary but not directly related results.

Proposed Design



Design Iterations of results presentation (Pink highlight added). Designs that separated the results prevented the user cross referencing the dates of results. Where ‘Symptoms Tracker’ was not shown in a graph form, users found it more difficult to understand the trend.

Proposed design was both results presented over a graph layout. This represents the trend of ‘Symptoms Tracker’, shows date connection between any ‘Predict’ results from the same day and shows if it was positive or negative.

The interpretation of the results is presented in text form above for clarity.

Kenwood (2016)

Mapping the service touchpoints of blenders and food processors

Kenwood, a true household name in British kitchens, has been designing and manufacturing quality kitchen appliances since 1947. They identified the need to understand the experience of purchasing its kitchen products, through the eyes of the customers,

to help recognise areas of the journey that require greater attention. With the focus on understanding users values and priorities research was planned to identify both new product and service opportunities alongside iterative improvements for current products.

Approach

Mystery shopping / Store Safari

Collaboration with other UCD Staff

Semi-contextual Lab Study

Collaboration with other UCD Staff

In Home observation

Collaboration with other UCD Staff

Ideation and concept generation

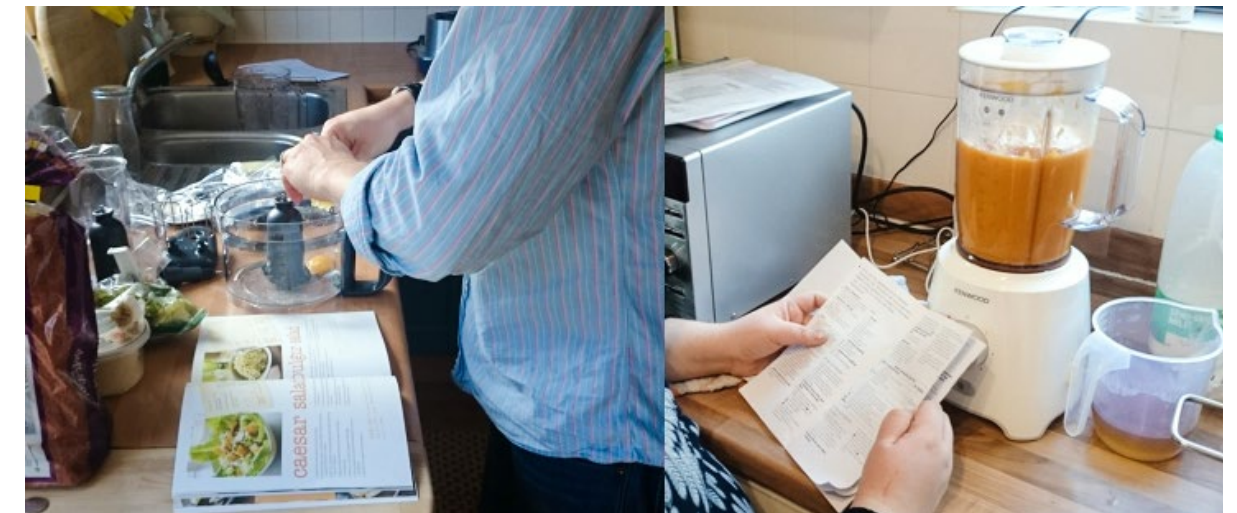
Collaboration with other PDR Staff

Analysing product presentation, categorisation and positioning with stores. Acting as purchasers to gather staff advice and input on products. Identifying difference in perception with competitor brands.

Study beginning with 'shopping process', identifying product touchpoints, comparison techniques and monitoring gaze through observation and behavioural coding. Followed by semi-structured interview to identify underlying motivations and decision making factors. Included value tasks, identifying customer expectations of costs and how they made these decisions.

5 participants provided with Kenwood devices, research session observed them from unboxing through preparing two dishes. Data recorded in video, images and notes. Analysis of how product translated in-store promise to in-home usage context.

Data refined into key insights for ideation process, generating a large quantity of different approaches to enhancing Kenwood's product and service offerings to improve the customer's journey with their products.



Outcome

Confidential

Customer continues to undertake equivalent projects with the us to drive their product and service innovation.

Huntleigh Sonicaid Team 3 (2014)

Design, prototype and test of a touch screen interface for a foetal heart monitor

Huntleigh saw the need for a user-centred approach to develop the interface for a new Foetal Monitor. The design was fundamentally different than any of its predecessors, with the inclusion of more powerful features and a touch-screen for the first time.

As the junior member of a team of 3 I was responsible for the visual styling and prototyping of the interface, working alongside others to define how the device's functionality would translate into the new interaction styles.

Approach

Existing Product Analysis

Led by senior colleague

Capturing the features and user flows of the current product, which was heavily defined by a restrictive interface.

Paper Prototyping/Card Sort

Led by senior colleague

Generative research approach used internally and with midwives, a 'jigsaw' interface and card sort approach defined priority features and information architecture.

Visual Design

Led by me

Defining colour, grid layout and visual style for the system, refining initial 3 concepts to one selected direction.

Interface Design and Prototype

Led by me

Planning in wireframes and sketchwork to define navigation and IA through to high fidelity prototype in Proto.io. Prototyped to demonstrate full functionality, interaction details and visual style.

Usability Testing

Led by senior colleague

Acting as note taker for usability studies, ensuring smooth running of prototype and facilitating later studies. 1hr studies conducted in lab environment with midwives.

Handover Documentation

Led by senior colleague

Creation of handover documents to communicate design intent to Huntleigh Development team. Presentation of results of work to client.



reddot design award
winner 2017



Outcome

Key insights that informed design direction:

- Midwives preferred large number display over graphed data
- 'Night Mode' proposed for monitoring when dark was preferred by some for all hours.

Product was launched in Q1 2017 winning Red Dot & Good Design Award

Cellnovo Diabetes Management (2016)

Formative usability testing for dedicated diabetes management system

Cellnovo had an existing product already on the market and were seeking to launch the second iteration. Prior to launching the updated hardware they wished to find out whether the proposed changes would impact upon the usability of the device.

Approach

Product and Risk Review

Led by senior colleague

Protocol Creation

Led by senior colleague

Usability Testing

Led by Senior Colleague

Results Analysis

Led by senior colleague

Results Presentation

Led by senior colleague

I acted as support for these usability tests, with no design input required. As with all medical device projects the testing and results analysis was conducted and captured to support the client's design history file for based on ISO 62366 / HE75 guidelines.

Understanding the product's key features, reviewing provided risk analysis and using these to define the required user flows and tasks to be tested in usability testing.

Translating user flows and functions into understandable and contextual tasks for users to perform. Preparing scripts, task assessment capture, ethics applications and participant consent/information sheets

Lab based usability testing including tasks for device power-up, insulin control and food tracking. This encompassed the main device and an accessory device. Task assessment results captured alongside qualitative feedback on the device and System usability scale questionnaire.

Identification and categorisation of usability issues, cross-referenced with qualitative data to understand user's experience at these points.

Presentation of usability testing results with initial design recommendations where necessary. System usability score used to benchmark overall usability of product.



Outcome

Usability testing results:

- Touchscreen was not on par with expectations of modern devices, users frequently compared how much easier their smartphone was
- Some interaction styles used across the device exacerbated the poor quality touchscreen resulting in input errors.

Cellnovo have now closed.

Pointr (2014)

Service and visual design of a digital tool to help young people find work, training or education opportunities.

A wide range of opportunities exist for young people not in education, employment or training. However they can be difficult to find for the target people as they are often promoted on website they do not visit, by organisations they are not aware of.

Approach

‘SPIDER’ Hack day

Led by senior colleague

Discovery Research

Led by senior colleague

UX Design

Led by me

Visual Design

Led by me

Development

Collaboration with software developer

Many of these sites had complex menu systems, prioritising organisational needs over the user's. Pointr was designed as an aggregator, bringing links to all services into one place, navigated using a simple question and answer interface.

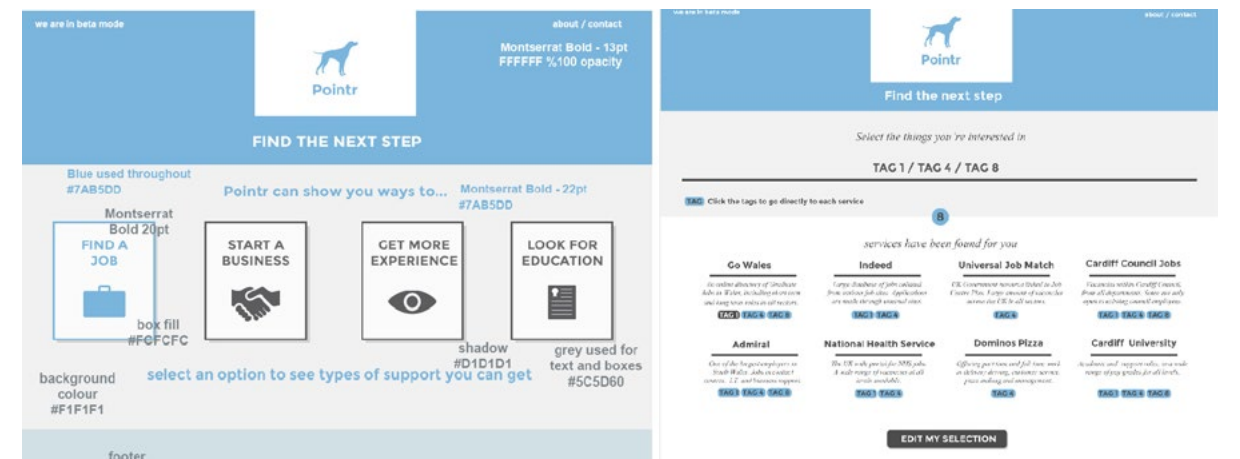
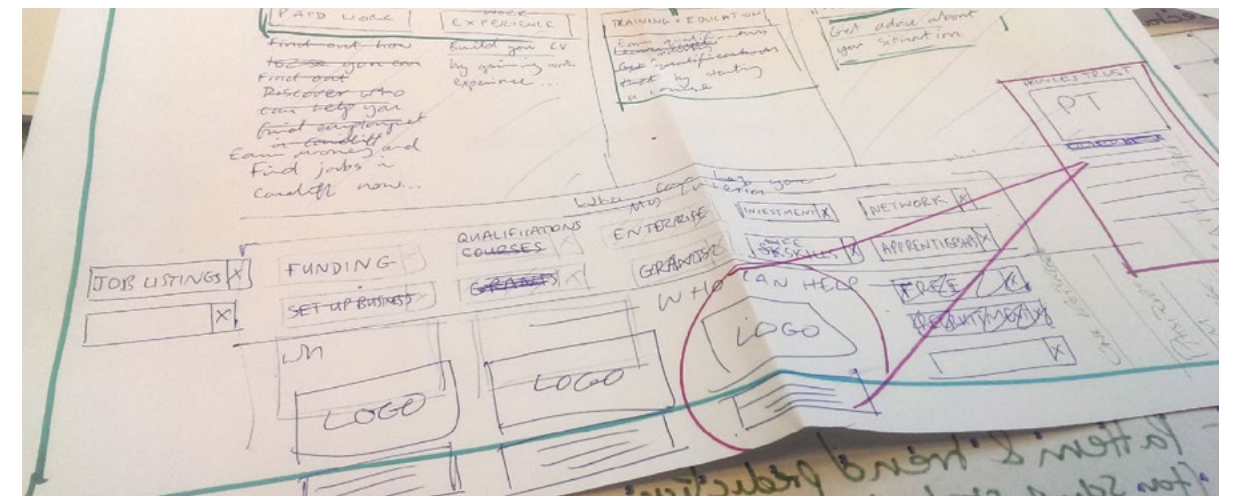
Initial event exploring various solutions to improve access to education, employment and training for young people. Leading to initial ‘Pointr’ concept.

Assessing young people's approaches to finding education, employment or training online. Understanding their trusted sites, and whether current support organisations featured in search behaviour.

Designing flow through site, prototyped in wordpress & Typeform before informal usability testing at local youth events. Iterating design based on observed use and user feedback from a range of stakeholders.

Defining logo, colour, layout and visual style for the service. Aiming to achieve a minimal design that enabled users to perform intended task with no distractions.

Communication of design intent, providing assets and styles to developer and iterating as necessary based on software constraints.



Outcome

I was responsible for securing the funding to put the prototype into development, with Cardiff Council then supporting a beta phase for the service. After an initial pilot, the service was ended.

Confidential Work:

Global Pharmaceutical Company (2017 - Present)

Strategic research and design project, identifying opportunities for growth in existing and emerging international markets

User research - Data analysis - Strategic concept generation

Design and Prototype of next generation flagship device

Interaction Concepts - User Experience Design - Interactive Product prototyping

International Medical Device Manufacturer (2018)

Redesign of GUI

Visual Design - Information Architecture - Management

International Consumer Electronics Brand (2017)

Research and design to inform next generation flagship computer peripherals product.

User Research - Concept Design - Product Design - Interactive Prototyping - Usability testing

International Medical Device Manufacturer (2018)

Research and design to inform next generation wearable product.

User Research - Concept Design - Prototyping - Management