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BUILDING A USER CENTRED SEND TOP-UP TOOL

Beta phase report, November
2022

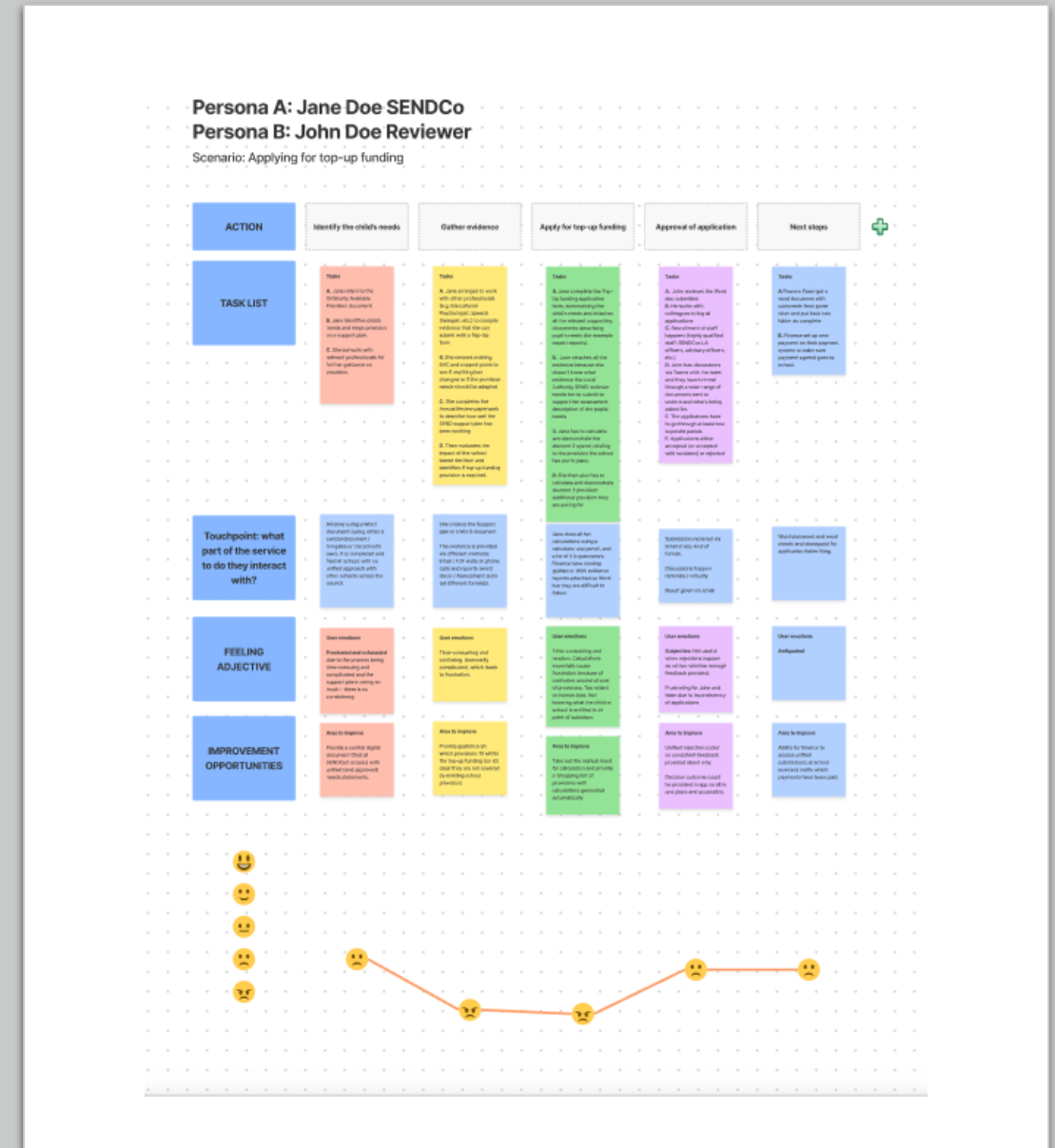
The problem

The SEND Top-up process provides a way for schools to 'top-up' base level SEND funding up to three times a year.

When SENDCOs (Special Educational Needs and Development Coordinators) identify a child or young person with needs that exceed the current provision within the school, they can provide evidence and ask for further funding.

The problem is that the process of applying is manual (and messy) and **83% of top-up applications made by SENDCOs take more than 4 hours to complete**, with 40% taking up to 8 hours - time SENDCOs just don't have.

The application review completed by the panel can take **up to 45 minutes per application** submission. Furthermore, funding can inconsistently distributed across schools and pupils.

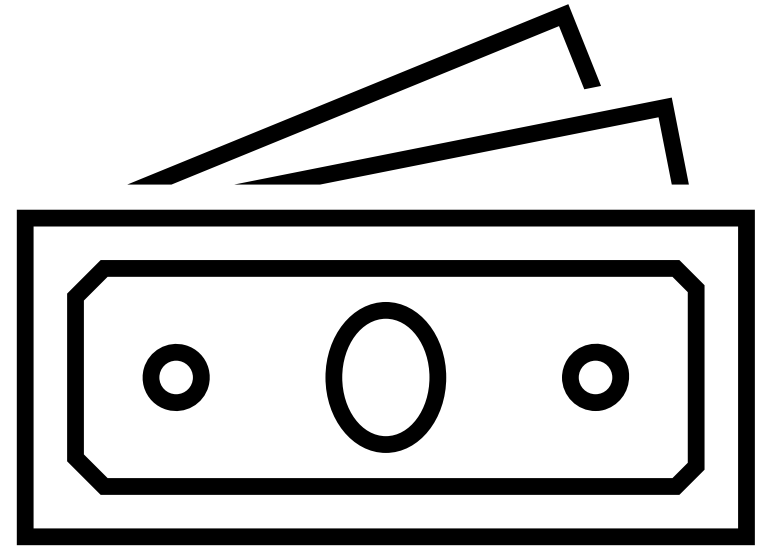


What is Top up?

Top Up is a process that allows schools to apply for additional funding for children and young people with special educational needs and/or disabilities (SEND).

It is separate from the EHCP and allows schools to 'top up' their base level SEND funding outside of the EHCP process.

- Not all Local Authorities have a Top Up process implemented
- Some Local Authorities have identified a need for Top Up, but do not know where to start or how to implement the process
- Top Up funding can help distribute SEND funding in a fair and consistent way



The Vision



To simplify and unify the SEND top-up funding service across schools, by designing and building a reusable and accessible web-based application for SEND Coordinators, administrators and reviewers.

Benefits

- Reduces **time taken** for SENDCos to assess and apply for top-up funding by up to 4 hours
- Possible average saving of £17 per hour per SENDCo*
- Reduction in the number of assessments rejected. This is a metric we will monitor.
- Monitoring funding consistency, but already proven that costs are standardised and more accurate

*based on average SENDCo annual wage (ref. Glassdoor.co.uk) to calculate average hourly wage



The Team



Alison Hendy – SME, Project Manager

Jude Liberman – SME, Educational Psychologist

Amy McGuire – Digital Product Owner

Monika Swiatek – Senior UX Designer

Matthew Benton – Developer

Vasanth Kumar – Developer

Kristian Banks – Tester

Nick Swailes – Delivery Manager

What was addressed in Alpha

- Standardised need assessment statements
- Standardised list of provisions relevant to the needs of the child
- Automation for selected provision costs
- Clear overview of needs and selected provisions (for the assessment panel)

The alpha prototype was a spreadsheet

Matrix of Needs - Summary Sheet

Identified Level of Need	Available Provisions (By Level)			Identified Provision
	A	B	C	
Communication and Interaction Expressive Communication Receptive Communication	Level C	A B C	A B C	Provision for Communication Interaction needs
Cognition and Learning Behaviours for Learning	Level B	A B C	A B C	Provision for Cognition and Learning needs
Social, Emotional and Mental Health Social Understanding and Interaction Behaviour, Emotional and Mental Health Needs		A B C	A B C	Provision for social, emotional and mental health needs
Physical and Sensory Physical Vision Hearing Sensory Processing		A B C	A B C	Provision for Physical and Sensory needs

COMMUNICATION AND INTERACTION

Expressive Language and Communication

Targeted Needs	A	B	C
1. STATE OF COMMUNICATION Needs to be able to communicate with others in different contexts and situations. Sometimes gets it wrong, but notices and tries to change or rephrase.	Does not communicate with others in any way.	Communicates with others in a limited way.	Communicates with others in a range of contexts and situations.
2. VOCABULARY AND SENTENCE STRUCTURE Can express their needs and wishes verbally.	Does not use any words or phrases.	Uses a few words or phrases.	Uses a range of words and phrases to express their needs and wishes.
3. RECEPTION Can understand simple spoken language.	Does not understand any spoken language.	Understands simple spoken language.	Understands a range of spoken language.
4. SPEECH Can produce speech sounds and words.	Does not produce any speech sounds or words.	Produces some speech sounds or words.	Produces a range of speech sounds and words.
5. NEEDS RELATING TO OTHER PEOPLE Can understand and respond to the needs of others.	Does not understand or respond to the needs of others.	Understands and responds to the needs of others in a limited way.	Understands and responds to the needs of others in a range of contexts.

Summary: Handling summary P1 P2 P3 P4 N1 N2 N3 N4 N5 N6 N7 N8 N9 2. Specialist Prof. Involvement 3. Group Individual Interact 4. Additional Staff Support 7. Support in non-teaching Tim

What we did: from Alpha to Beta

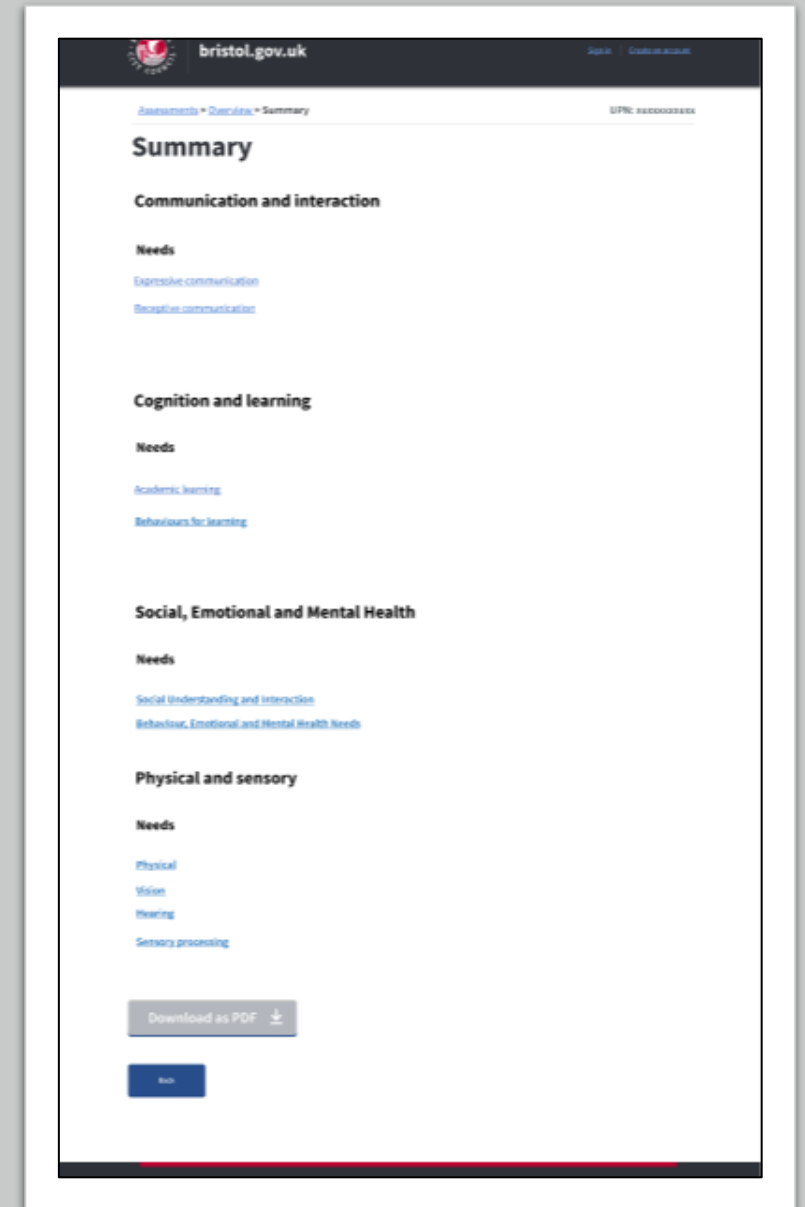
During discovery and Alpha phases a spreadsheet was created as a prototype to unify and simplify need statements against the relevant provisions and add costings.

Multiple workshops and testing highlighted that a spreadsheet had too many limitations, and so wireframing and further prototyping for a digital tool commenced based on a strong understanding of user needs.

We wanted to create a centralised web-based application for SEND Coordinators, administrators and reviewers to record the needs of children and establish the provisions needed.

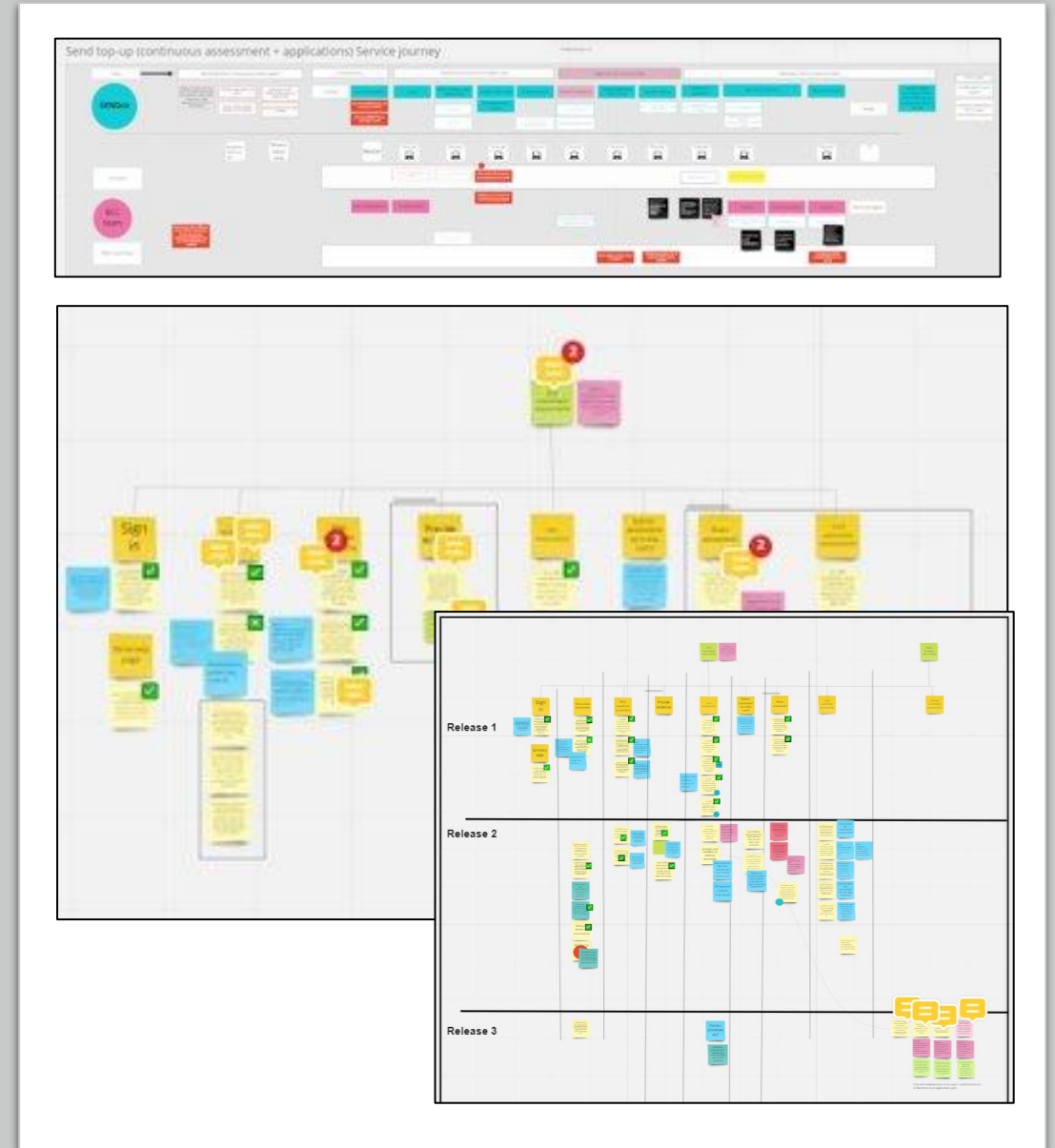
The Beta solution is an application that simplifies the process for all parties involved by unifying the need statements and provisions lists.

Funding is automatically calculated based on selected provisions, which will ensure consistency of funding, and ultimately better tailored support for pupils.



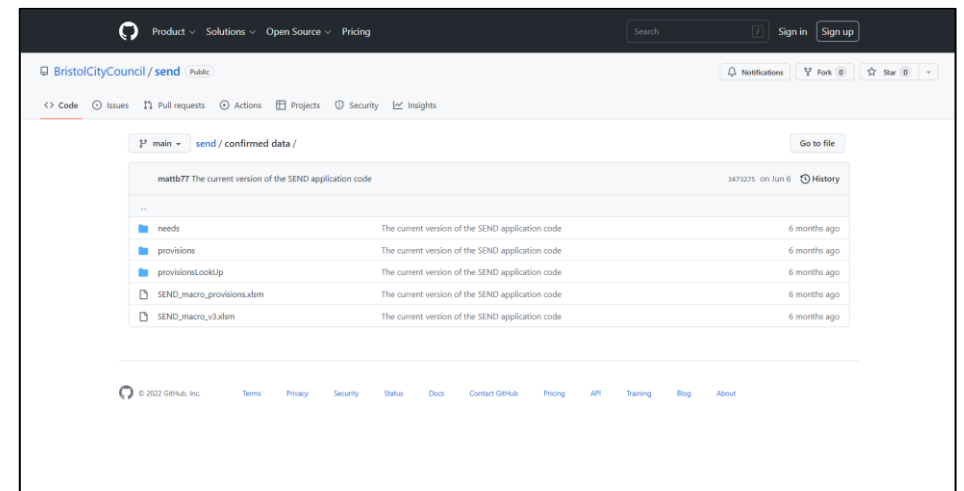
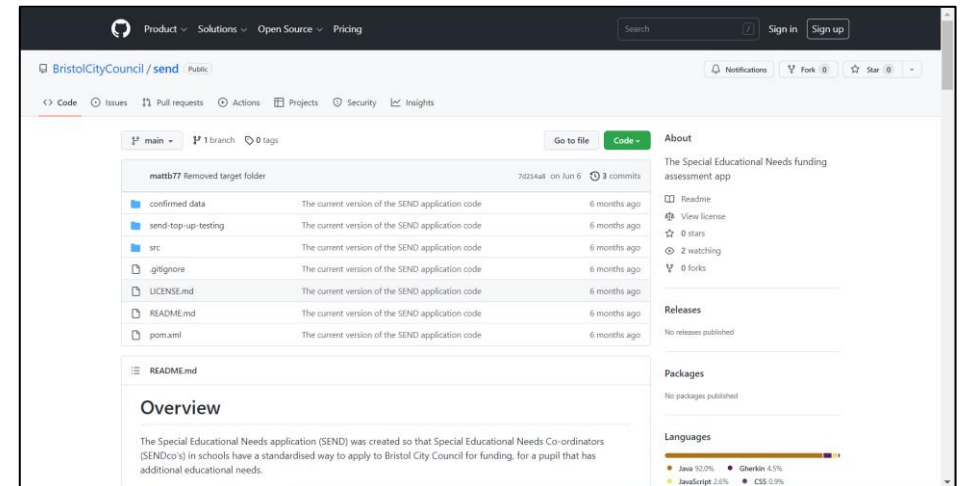
Planning for Beta

- After talking to stakeholders, we mapped out the ideal journey, and looked for opportunities to improve the application process for all actors.
- We then created a service journey map and a user-story map
- The user-story map was further split out into three phases, helping us establish which user-stories should go into specific sprints (helping with sprint-planning), and which would form part of the Beta MVP.



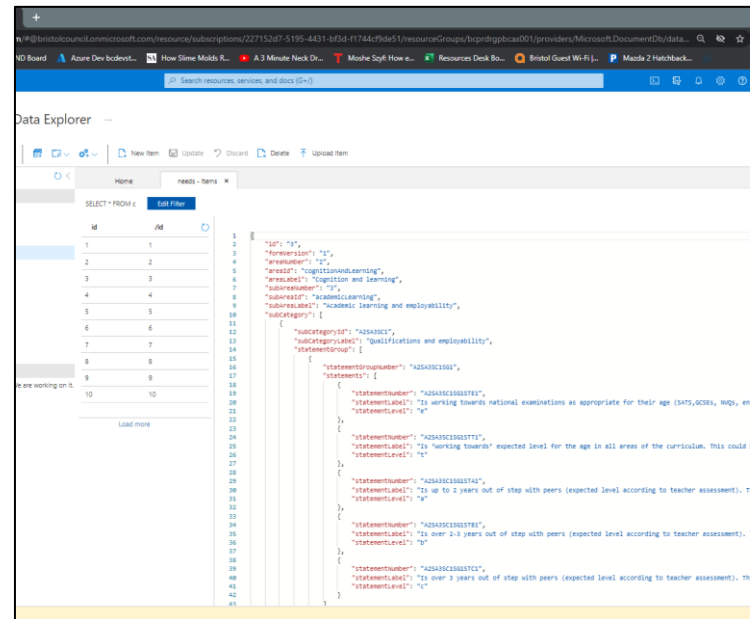
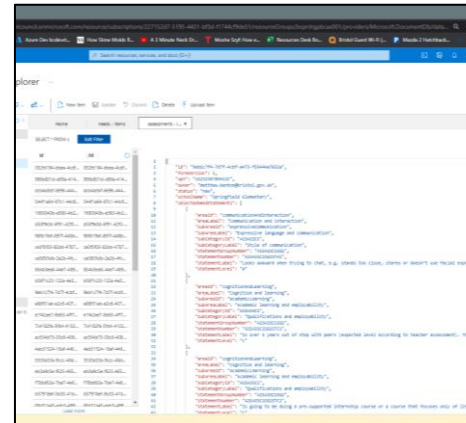
We built working software

- We built an open-source Spring Boot application, which doesn't require specific server infrastructure and runs separately from the council website
- We used a backend Azure Cosmos DB (nb. this could easily be adapted to Mongo DB)
- We used Microsoft AD accounts for secure user login. It could however be adapted to other methods of authentication.
- We built with Cloud-based hosting on Azure
- We used open standards of JSON to store the data, and coded in Java as a common language
- We have published the open-source software as a GITHUB project
- Styling can easily be substituted for other council's styling
- Continuous deployment: automated deployment on Azure to enable the delivery and testing of features iteratively



We built a database

- Large amount of **read-only text data** (764 specific need statements).
- We are using 'flat' **.json based tables**, not a relational database, as the relationships between the tables are quite simple.
- We used **Azure CosmosDB**, (but could replace with MongoDB which is very similar).
- The main challenge was converting rows and columns from 'source of truth' into .json files for database. This required a custom macro written in VBA.
- All the tables have a **'formversion'** property. if the structure of need statements changed significantly we would need a new 'formversion'. The 'formversion' property allows for reconstruction of assessments created before the data structure changed.



Review View Help		
General		
Sensitivity		Number
ations with learning		
G		H
Targeted 1	Targeted 2	
ometimes checks or asks for help but not persistently and may struggle with a task for a while before asking.		Does not know how to ask for help
usually checks when they aren't sure what to do. May look nervous or worried and need prompting. Needs to be sure before		Frequently asks for help
will accept following adult instruction though occasionally reluctant and frustrated.		Prefer to be instructed
can organize a task or tasks into a series of logical steps and work through these steps. It cannot explain the thought process		Can't explain the thought process
an occasionally forget equipment.	Is able to organise him/herself to travel on public transport independently to school/college	Who has problems with public transport
has strong areas of interests and is prone to distraction if the areas of interested are visible/mentioned. However, he/she is able to maintain focus on the learning in hand with minimal prompting or redirection		Has areas of interest
lacks flexibility and creativity in thinking		Rigid in thinking
can sit and read or seem restless/bored if asked to sit still for over 20 minutes. Is easily distracted and can be easily reengaged. Could be linked to an ADHD diagnosis.		Find it difficult to sit still
reluctant to accept risks or challenge with learning. Needs prompting and encouragement to do so.		Find it difficult to learn
may be slightly upset by making a mistake but bounces back and tries again.		Could be easily discouraged
oyabili	Behaviours for...	Behaviour, emo

We built a secure app

- The App does not store any personal data at any point - only **school name** and **UPN**.
- App users must have valid BCC or BCC **Guest account in AD**.
- To access the app, this AD account must be added to a specific security group.
- Every time a page loads, the app checks the user has a **valid identity token**.
- Only assessments created for the account are **visible to that user**.
- The app uploads documents into SharePoint in the background. **Users have no direct access to the SharePoint** folders used by the panel.



How we tested

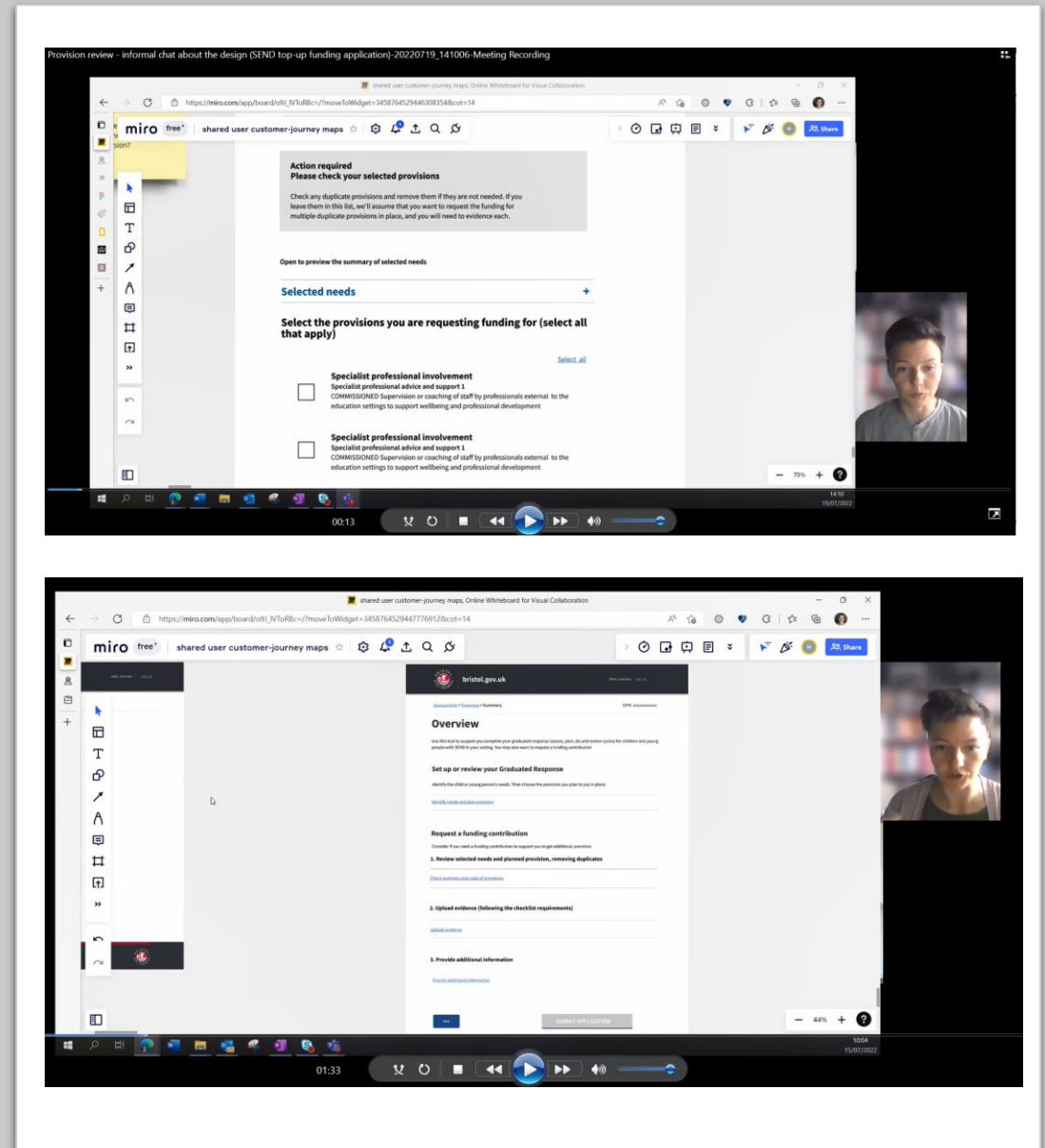
We already had all the feedback and insight from the Alpha phase and **12 workshops** that had been run across 1.5 years

When we started wireframing a digital solution we recruited a group of **30 SENDCo 'champions'** who have been our early adoption group of users.

Throughout we have:

- Run 3/4 show and tells
- Run one survey alongside a demo and set tasks
- Run 3 one-to-one feedback sessions online

It has enabled us to iterate the prototypes (about 1-2 iterations per sprint) and either make the changes immediately or add them to a backlog for future phases.



MVP: two phase approach

Once the requirements had been mapped against the user stories, we mapped those into three phases. Phase one was live by April 2022, phase two was live by November 2022. Phase three features / user stories are currently in the backlog and may change with feedback now the product is being used as Beta.

Phase one high-level features include:

- The ability to start an assessment
- The ability to select need statements
- The ability to select provisions to meet those need statements
- The ability to download the assessment as a PDF

This meant the app was delivering value to SENDCos from March and could simplify the process by unifying need and provision mapping across different schools.

The screenshot shows the 'Start a new assessment' page on the Bristol City Council website. The page header includes the Bristol City Council logo, the URL 'bristol.gov.uk', and a user greeting 'Hello, Amy McGuire' with a 'Sign out' link. The main content area is titled 'Assessments' and features a 'Start a new assessment' heading. Below this are two input fields: 'UPN' and 'Name of school'. A blue button labeled 'Create new assessment' is positioned below the input fields. The 'Your assessments' section lists three existing assessments, each with its UPN, school name, and edit date, along with 'Edit' and 'Delete' links.

bristol.gov.uk Hello, Amy McGuire [Sign out](#)

Assessments

Start a new assessment

UPN

Name of school

Create new assessment

Your assessments

UPN: J222222222222
School name: Test school
Edited on: 22/11/2022
[Edit](#) [Delete](#)

UPN: H222222222222
School name: Test
Edited on: 22/11/2022
[Edit](#) [Delete](#)

UPN: R333333333333
School name: tests school
Edited on: 26/09/2022

MVP: two phase approach

Phase two high-level features include:

- The ability to choose the provisions you want funding for
- The ability to see the maximum funding available for these provisions
- The ability to upload evidence, a support plan and an application form
- The ability to agree to terms and conditions and submit application

By the end of phase two the app adds further value by taking the assessments (which are now unified across schools) and provides an automated application process. This also includes automated costs rather than SENDCos having to guess and calculate those costs individually.

The screenshot shows the Bristol City Council website interface for starting a new assessment. At the top, the Bristol City Council logo and 'bristol.gov.uk' are visible on the left, and 'Hello, Amy McGuire | [Sign out](#)' is on the right. The main content area is titled 'Assessments' and features a 'Start a new assessment' heading. Below this, there are two input fields: 'UPN' and 'Name of school'. A blue button labeled 'Create new assessment' is positioned below the input fields. Underneath, a section titled 'Your assessments' lists three existing assessments. Each entry includes a unique UPN, the school name, the date it was last edited, and links for 'Edit' and 'Delete'.

UPN	School name	Edited on	Actions
J222222222222	Test school	22/11/2022	Edit Delete
H222222222222	Test	22/11/2022	Edit Delete
R333333333333	tests school	26/09/2022	

From Beta to maturity

The plan is to monitor the application through at least two live top-up application rounds and understand what is working and what is not working when applied to real life scenarios.

Epics (known high-level epics that could be in scope for a future iteration):

Epic	Detail	(estimated) Effort
A data dashboard	We know there will be value in the aggregated data insight from SENDCos completing assessments and applications. The data will allow the council to pre-empt where funds need to be distributed, allowing forward-planning. It will also give an aggregated view of needs across the LA. As data is being captured already - we want to investigate ways to surface that insight, which may be looking at integrating into the council's data insight platform Power Bi.	High
Improve the styling	As we are mid-way through re-doing our internal design system, the styling is using some of the older style sheet code and not fully linked to the new in-house design system. We also want to make it easy for other councils to apply their own styling to the product.	Medium
Further automate the admin process	We believe there is value in the whole application process happening within the app – from review to approval. There would likely be a lot of effort needed for this to happen so it's important we validate the assumption first.	Medium
Expand into Early Years / EHCP	There is potential for the assessment statements to be expanded to help meet Early Years and EHCP which needs further investigation and validation.	Medium

Outstanding user stories

Non-exhaustive **list of features** outstanding from phase two development. Not critical to a working MVP, but possibility of delivering value.

Feature	Validations required	Priority	Complexity
Version control As a SENDCo, I want to view versions of the assessments completed for each child, so that I can see how needs have progressed	We need to understand how important versioning is, or whether it's more important to ensure the continuous assessment cycle ties up with the application rounds. This is still an unknown.	Medium	Medium
Status update As a SENDCo, I want to indicate if an assessment is ready to be assessed, so that it doesn't get assessed whilst I am mid-way through completing it	We need to verify that this is actually important. Currently only SENDCos have access to their assessments, so this will only be needed if they leave and it is transferred to another SENDCo. Low priority	Low	Low
Status update As a SENDCo, I want to view the list of assessments I have submitted (and what I have submitted) to the LA, so that I know it has become an application	As the number of assessments submitted for funding increases this feature will be more needed, otherwise it will become hard to track. More refinement is needed to understand how to split out the plan, do, review stage from the application itself.	High	Medium

Outstanding user stories

Non-exhaustive **list of features** outstanding from phase two development. Not critical to a working MVP, but possibility of delivering value.

Feature	Validations required	Priority	Complexity
UPN database As a SENDCo, I want to choose from a list of pre-defined UPNs so that I don't have to try and remember each of my UPNs or risk mistyping them	Further understanding of one database that holds all UPNs and how it is managed centrally (i.e. when a SENDCo leaves a school for example). Implementing it into the 'start assessment' page so that automated selection can happen.	Medium	High
Export need statements As a SENDCo, I want to be able to export all, or only the selected, need statements in a CSV or similar, so that I can work them into my support plan	Feedback provided shows that the need statements themselves can help the SENDCos with assessments and EHCPs in general. The need is there to enable the ability to export the statements in short-term, or incorporate the support plans/ EHCP into the tool.	Low	Medium
Add logic to submission steps As a SENDCo, I want to know when I have completed a step and can progress onto the next step	As SENDCos won't always be completing the assessment and submission within one session, we need to understand how to add logic to the submission steps, so that the next step is only accessible once the previous step has been completed.	Medium	Medium

Artifacts



[Sprint notes and project documents](#)

Figma designs (in project page)

[Github page](#)

[Final show and tell video](#)

[Benefits metrics](#) (Local Digital permission needed)