Jimmy Tidey, PhD

DESIGN PORTFOLIO

Hello, I'm Jimmy.

I bring 15 years of industry experience, academic rigour (PhD in design research), and hands-on technical skills to design.

I love working at the intersection of cultures and specialisms; my diverse background has helped me to make unique contributions in academia, startups and at Google.

An emergent theme in my work is working with products built on large, complex datasets.

I think of my skill set as combining **core design skills**, **tech skills** (including an AI focus) and **business skills**.

Skill Set
Core Design Skills

- Leading & coordinating design research deploying qual and quant methods.

- Interface design in Figma, including working with design systems.

- Analysing behavioural data (Google Analytics, logs) to inform product decisions.

- Presenting research findings for senior managers, product managers and externally.

- Codesign and participatory design.

- Literature and policy reviews.

Skill Set
Tech skills

Development & data analysis

- Python - strong knowledge of python for prototyping and data analysis (Pandas, NumPy, Flask, FastAPI).

- Typescript React (example).

- Complex SQL - Postgres / PostGIS, BigQuery, Neo4j graph DB.

- Cloud environments - Google Cloud, AWS, Docker.

AI specialism

- Courses including Stanford Deep Learning for NLP course [Coursework], Andrew Ng's ML course.

- Strong fundamental knowledge of linear algebra and neural network architectures.

- Python: LangChain, SciPy, PyTorch - building RAG pipelines

- Writing about AI & design

- Underway - AI for engineering simulation
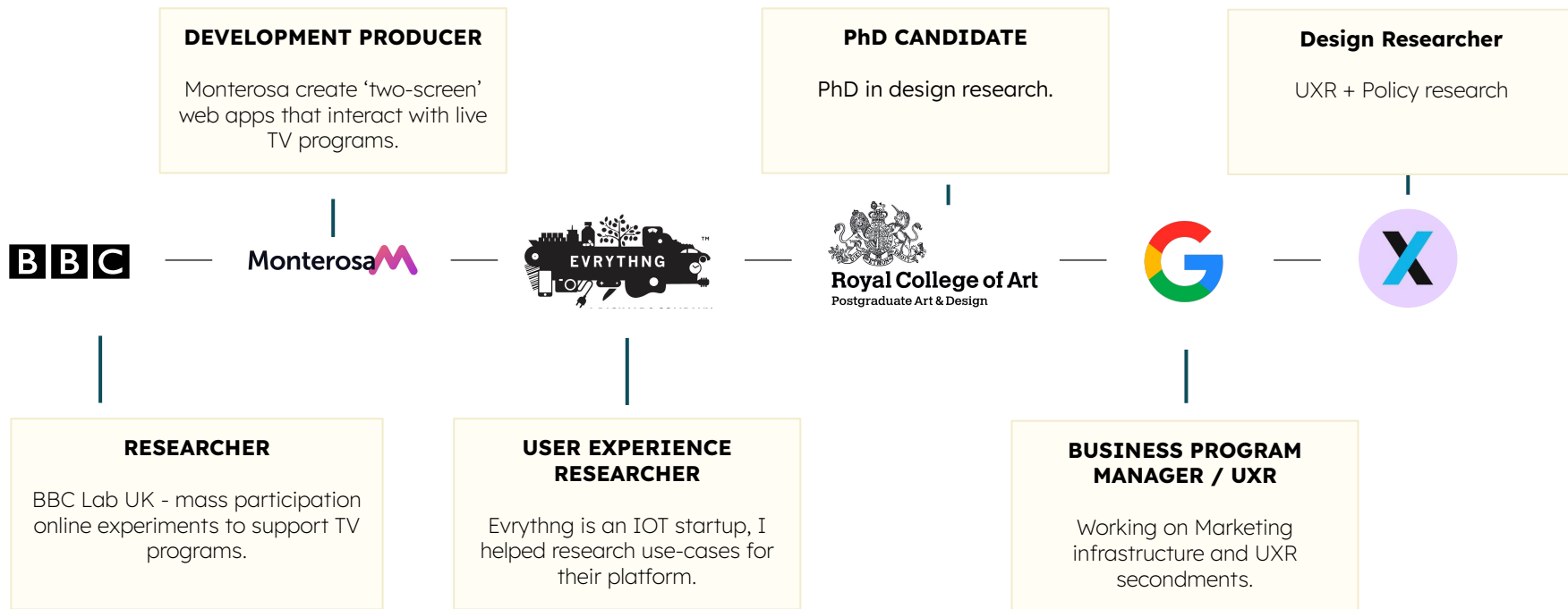
Skill Set
Business skills

My 'soft skills' don't lend themselves to bullet points so easily, but I consider them one of my key strengths.

- I particularly focus on understanding the political and business context of design briefs.

- Working in business environments from Google to startups.

- Deep knowledge of enterprise internal systems.

Employment history

(Summary)

DEVELOPMENT PRODUCER

Monterosa create 'two-screen' web apps that interact with live TV programs.

PhD CANDIDATE

PhD in design research.

Design Researcher

UXR + Policy research

RESEARCHER

BBC Lab UK - mass participation online experiments to support TV programs.

USER EXPERIENCE RESEARCHER

Evrythng is an IOT startup, I helped research use-cases for their platform.

BUSINESS PROGRAM MANAGER / UXR

Working on Marketing infrastructure and UXR secondments.

Portfolio summary

PROJECT 1

Open Digital Planning (2024)

Leading design research on a geospatial Open Data project with the UK Government.

- Design research ops
- Surveys
- Hi-fidelity prototyping
- Codesign

PROJECT 2

Internal Google HR tool (2022)

A case studying following my response to specific, detailed feature request.

- Senior internal clients
- Prototyping in Figma
- Data analysis
- User interviews

PROJECT 3

PhD Research (2013-2018)

Demonstrating a self-led, long term design process across multiple institutions.

- Qual & quant research
- Lit reviews
- Front & backend dev
- Physical prototyping

Open Digital Planning

My Role: Leading design research

Team: Project includes 30+ developers, designers, policy specialists and comms officers

Duration: 12 months (my involvement)

Outcome: Moved dataset delivery from ~3 per month to ~6 per week

Context

[Open Digital Planning](#) is a platform developed by the Ministry of Housing, Communities and Local Government (MHCLG).

The platform's goal is to move the planning system in England from 'document driven' to 'data driven' - specifically becoming a single source of geospatial planning data.

My team's work focused on collecting data from Local Authorities. ODP needs to collect planning data (eg. listed buildings, conservation areas) from 330 Local Authorities across England.

70 'pilot' authorities have been given grants to publish their planning data according to an open data specification so the platform can consume it.

Key challenge
Despite funding, at the outset of the project, few Local Authorities were providing data to the platform.
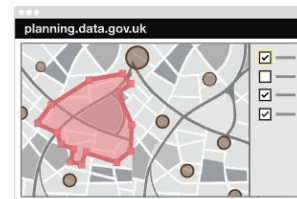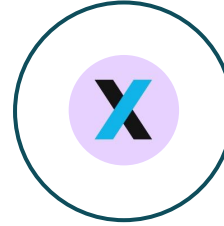
Team & stakeholders

Throughout the project I led design research, working with user researchers, service designers, developers,interaction designers, community managers across TPX & MHCLG.

I led design research / UXR across the project.

Eight person
product team from
TPXimpact

I worked with a product manager, interaction designers and developers.

Ministry for Housing, Communities and Local Government

The client, including a wider team of around 40 devs, community managers, policy experts and data analysts.

Research Methods

Analysing the landscape
Survey of the previous research on the project and geospatial research across TPXimpact.

Concept testing & usability testing
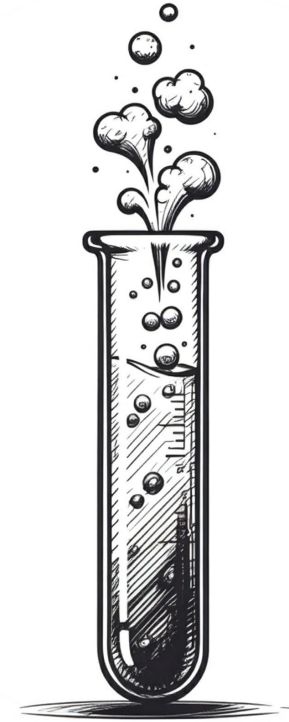Iterative user-centered design.

Codesign
Building on and enhancing the ODP community, I codesign sessions every two weeks.

Survey
I piloted, administered and analysed a survey investigating success factors and clustering.

Prototyping
2 x AI prototypes, using Python (LangChain), React, Postgres/PostGIS, and OpenAI.
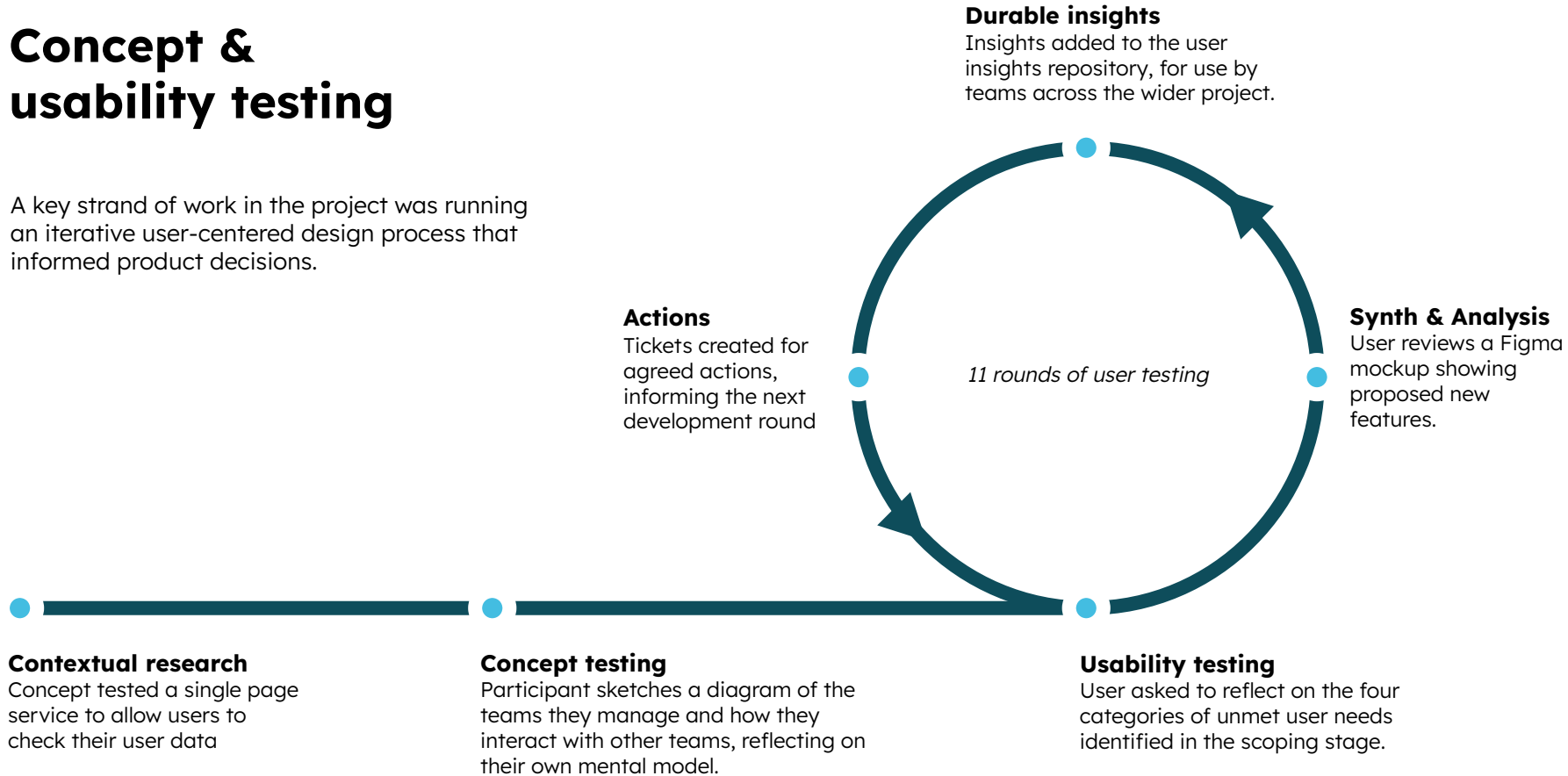
Researching the planning landscape

Understanding the research context and building on previous research is a key aspect of research leadership. At the outset of the project I undertook a review, including:

- Identified 18 projects across TPXimpact focusing on geospatial data and the built environment, and reviewed research from these projects.

- Identified and reviewed previous ODP user research, prototypes and design anthropology.

- Gained high-level familiarity with the ODP codebase, including getting the pipeline running locally.

- Reviewed planning legislation and used podcasts to get a sense of contemporary planning debates.

- Installed and used geospatial software used by Local authorities.

Concept & usability testing

A key strand of work in the project was running an iterative user-centered design process that informed product decisions.

11 rounds of user testing

Durable insights
Insights added to the user insights repository, for use by teams across the wider project.

Synth & Analysis
User reviews a Figma mockup showing proposed new features.

Actions
Tickets created for agreed actions, informing the next development round

Contextual research
Concept tested a single page service to allow users to check their user data

Concept testing
Participant sketches a diagram of the teams they manage and how they interact with other teams, reflecting on their own mental model.

Usability testing
User asked to reflect on the four categories of unmet user needs identified in the scoping stage.

Documentation & Recruitment

Leading research across a large project required careful organisation. Key processes included:

- Dovetail was used to store videos of interviews, analyse transcripts and act as a repository for user research primary materials.

- ConsentKit was used to track participant consent forms.

- I maintained a user insights spreadsheet tracking hundreds of insights for use across the project, linking each back to time stamped sections of video and other evidence sources.

- Recruitment was a major issue, I drew on MHCLG's panel of experts, the ODP community and asking participants to provide contacts for colleagues. I maintained a contact sheet used by teams across the project to track how 100+ participants were

Type	Origin	Example	User Journey Stage	Evidence	Status	Ticket link	RAG	Scope	Description
Usabilit…	Polly's research	link	Global	-				Global	Our identity is not strong and gets lost
Usabilit…	Polly's research	link	Global	-				Global	We need to make sure we have systen
Usabilit…	May Round 6	link	Global					Providers / Datades	Many LPAs work in OSGB coordinates
Usabilit…	Aug 24 user testing	link	Dashboard	1/4 participants	No ticket			Providers	Colour of status tags is confusing to us
Usabilit…	Aug 24 user testing	[Refused recording]		1/4 participants	Ticket …			Community manage	Would like to have a way to share FME
Usabilit…	Aug 24 usability test…	link	Dashboard	2/4 participants	Ticket …			Providers	Tags are different between dashboard
Usabilit…	Aug 24 usability test…	Barnet 19:49	Dashboard	1/4 participants	Ticket …			Providers	Status tags do not always indicate if a
Usabilit…	Aug 24 usability test…	Barnet 12:45	Dashboard		Ticket …			Providers / Commur	When users see our dashboard, they r
Usabilit…	Aug 24 usability test…	Barnet 12:45	Dashboard	3/4 participants	No ticket			Providers / Commur	Wonder why they haven't seen the nev
Feature…	Aug 24 usability test…	CoL 13:39	Data details	2/4 participants	No ticket			Providers	As a user, if I have submitted a dataset would like to be able to see the correct to be fully compliant
Usabilit…	Aug 24 usability test…	Barnet 16:18	Errors page	3/4 participants	No ticket			Providers	When there are very large numbers of
Usabilit…	Aug 24 usability test…		widespread	No ticket			Global	Users are confused by data.gov.uk & p
Usabilit…	Aug 24 usability test…	Barnet 12:00	Dashaord	2/4 participants	No ticket			Providers	Users do not understand how tags on t
Usabilit…	Aug 24 usability test…		widespread (Round9 7 & 9)	No ticket			Global	Our data specifications give the impres
Feature…	Aug 24 usability test…	(declined to be record	Dover declin	1/4 participants	Ticket …			Data design	As a user, I would like a page specifica supply compliant data
Usabilit…	Aug 24 usability test…	Polly's research		widespread	No ticket			Global	Confusion about the open data goals c
Usabilit…	Aug 24 usability test…	Redbridge (35:40), als	Guidance	widespread	No ticket			Data design	Confusion between document_url and
Usabilit…	Jul 24 usability testing	New Forest 12:31	Dashboard	1/5 participants	No ticket			Data design	User confused to see so many dataset
Usabilit…	Jul 24 usability testing	Peterborough 30:00	Dashboard	1/5 participants	No ticket				User confused by the 3 TPO datasets
Usabilit…	Jul 24 usability testing		Dashboard	widespread	No ticket			Provide / data desig	Confused about the names of the data
Feature…	Jul 24 usability testing	Bolton 38:00	Submit	3/5	Ticket …			Providers	As a user, I would like to supply a grou
Usabilit…	Jul 24 usability testing	K&C 48:30	Submit	3/5	No ticket			Providers	User confused about how submission r
Usabilit…	Jul 24 usability testing	K&C 41.30	Submit	1/5	Ticket …			Providers	Expected a drop down to select LPA
User in…	Jul 24 usability testing	Bolton 17.30	Submit	3/5	No ticket			Proviers	Why do I have to fill in details again for
User in…	Jul 24 usability testing	New Forest 55:30	Errors	1/5	Ticket …			Providers	Thinks data with issues will not have b
User in…	Jul 24 usability testing	New Forest 16:00	Dashboard	3/5	No ticket			Providers	Various explanations of what an issue

Codesign

ODP has a community of 70 Local Authorities who attend a video call every two weeks (typically ~30 participants at a time.

During the calls I ran sessions to:

- Review error messages
- Pilot a survey
- Review copy
- Playback changes we'd made based on the codesign sessions

The codesign sessions fed into product decisions and helped build community collaboration, a key goal of the wider ODP program.

We also ran three in-person workshops.

September 2024 workshop

Outcomes

- Established research infrastructure used across the wider team of 40 staff.

- Product went from inception to allowing users to validate, upload and review their datasets.

- Data submission rate increased 10x.

- Codesign catalysed community cohesion.

Screenshots of the 'publish' service.

Survey

Anticipating scaling our service, I began developing a survey that could help us gain insights into Local Authorities not participating in the pilot phase. We suspected that the pilot LAs had higher data science sophistication than the wider LA population.

The research design initially included two phases:

1. Piloting the survey through six in-person sessions and a codesign session.

2. Publishing the survey through our comms channels, with around 40 responses.

Survey findings

- Pilot study surveys revealed the range and complexity of organisational structures at Local Authorities, a finding that influenced the survey design and reconfirmed trends that emerged in previous testing rounds.

- Survey analysis drew on four dimensions: **Local Authority structure**, **software ecosystem**, **dataset quality** and **political factors**. Analysis indicated that the strongest predictor of Local Authorities submitting data was the quality of their internal datasets.

- Clustering analysis suggested that the type of Local Authority (district, London Borough, etc) was a strong predictor of other relevant characteristics.

Prototype 1

Local Plans are published by every Local Authority, roughly every decade. They indicate the Local Authorities strategy for the built environment and are around 500 pages long.

TPXimpact is working on a project to make authoring Local Plans easier, and to increase transparency around the authoring process.

I built a Retrieval Augmented Generation (RAG) tool to demonstrate how Large Language Models might be relevant. The prototype uses Pinecone as a vector store and chatGPT turbo 3.5 as an LLM. The front end is built in React.

Github

Demo

RAG prototype

Prototype 2

In England, planning policy is driven by the **National Planning Policy Framework**, which informs **Local Plans**, which in tern inform **Neighbourhood Plans.**

This prototype explored using LLMs to summarise across hierarchical, geospatial policy documents.

Focusing on planning documents for Leeds, the prototype allows users to see a summary of all relevant planning policy for a specific location, and the geospatial extent of planning documents that mention that location.

Filter by topic:

economy

Summary   Prompt

Summary

The economic landscape of the Meanwood Valley and Meanwood Valley Trail is informed by a variety of policy frameworks and planning documents. According to the "Core Strategy for Leeds," the Meanwood Valley includes important green spaces and is part of a wider network of public rights of way that supports both the local economy and quality of life (Appendix 4).

The "Housing Market Characteristic Areas - North" document highlights the

LAND AT MEANWOOD VALLEY, Meanwood Valley Trail

Prototyping Outcomes

- Prototyping led to a pitch for a new stream of work around applying AI at the Ministry of Justice.

- The AI prototype has helped catalyse a process of bringing data science and design research closer together at TPXimpact.

Google Team Management tool

My Role: Leading the project as a User Experience Researcher

Team: Support from a UX manager, working with a UXR and engineering team.

Duration: 8 months (40% commitment)

Outcome: Internal team management tool upgraded to better support ~3000 engineers

Context

Google has an internal tool for managing teams. Teams are represented as a tree, where every team has a single 'parent' team.

A VP of engineering made a feature request for the tool to allow teams to have two parents to reflect the way teams work.

The request implied a major change to the UX and underlying data model.

Key challenge

Taking a tighty-specified but hard-to-implement feature request from a senior stakeholder, using UXR methods to find a deliverable, usable solution that meets the requester's original intentions.
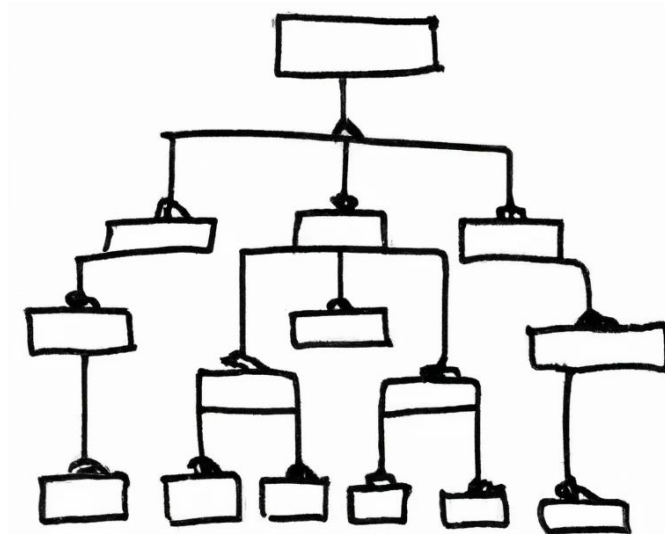
Some details, including the original assets, are sensitive and cannot be included.

What I did

Working with the engineering and UXR teams, I led the project, including:

- Understanding the context of the 'two-parent' feature request.

- Running a scoping phase to frame the problem in terms of user groups and their user needs; building a mockup of how the 'two-parent' solution could work.

- Evaluating the 'two-parent' solution through in-depth user interviews.

- Building a case to address the 'two parent' feature request with a combination of existing features and incremental improvements.

Team & stakeholders
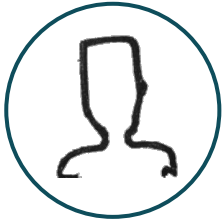
"The client" - a VP of an engineering department

Me

UX manager

UXR advising on integration into existing UX programs

Engineering team

Research structure

At the outset of the project, I ran an extensive scoping phase to define a research question based on specific user needs, deliberately moving away from the implementation details of the initial feature request. We then ran in-depth interviews to validate the user needs and concept-test the original feature request.

Iterative Scoping

In-depth interviews & concept testing

Recommendations

Iterative Scoping

Five iterations of scoping were required to define the user group and user needs that best reflected the goals of the feature request.

In each iteration, we discussed different criteria for teams that might benefit from having two 'parents'. My data analysis is described in more detail on the next slide.

I also used **Figma to generate mockups** to generate consensus around how the original feature request might work.

Proposed set of **user needs** that the research should focus on.

Data analysis estimating the number of teams who would benefit from a proposed change.

Figma mockups to provide concrete examples of potential UX changes.
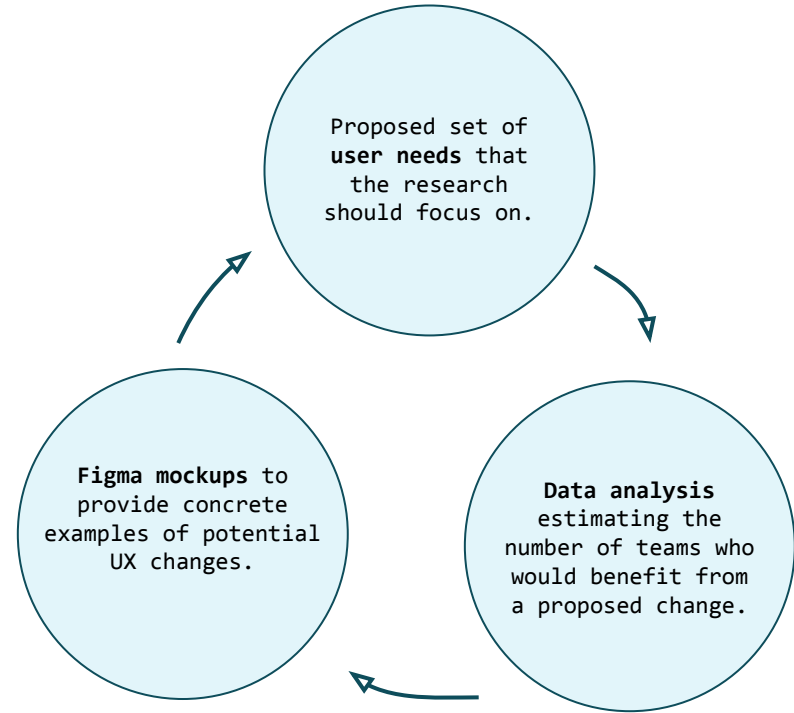
Data analysis

I used BigQuery and Jupyter Notebook scripts to estimate how many users would benefit from each iteration of the 'two parent' function. (eg. '132 teams at Google have staff from two or more departments'). The analysis ensured ensure any new features would benefit a broad user base.

The data was in the form of two 'graphs' (sets of nodes and edges); I wrote complex SQL queries to discover which teams had particular properties (e.g. 'team with at least three subteams with distinct groups of team members)

I used the Python NetworkX library to simplify the graph data and the Gephi visualisation tool to create network diagrams that articulated different team structures at Google.
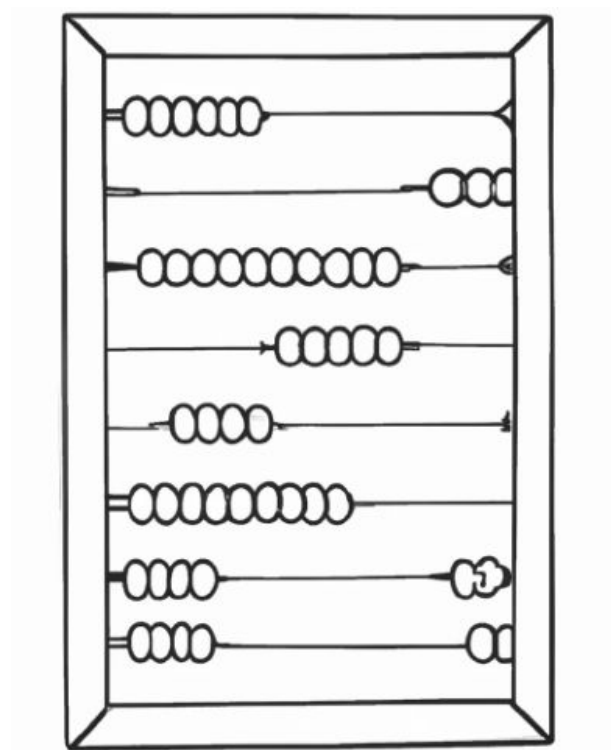
Scoping outcomes

- **Four categories** of potential user benefits for senior managers were identified which we could test in the in-depth user interviews.

- The initial brief anticipated benefits primarily for **individual team members**. By systematically considering user benefits, we identified that **senior managers** were, in fact, the most important user group. This informed who we included in user testing interviews.

- I iteratively developed a mockup of the proposed feature, which we subsequently used for **concept testing.**

User interviews - recruiting

I created a recruiting survey and sent it to ~300 engineering team leads. We wanted to get a representative sample of team leaders with respect to tenure, region and team structure - categories we identified as strongly shaping users' experience of the Team Management Tool.

I ensured that all stakeholders approved our sampling method while guarding against manipulation of the sampling process.

Eight users were selected for interviews.

Mockup of the recruiting survey with selected questions

Engineering team leads UX interview invite

The Team Management Tool user experience team are looking for engineering leads to participate in a 45 minute remote interview about the way you use TMT. Please complete the form below if you are interested. As thank you gift, we'll make a donation to a charity of the participant's choice.

What is the composition of the team(s) you lead?

☐ One or more of my teams have a mixture of different types of engineers

☐ My teams are mostly or completely composed a single type of engineer

☐ Other:

What region do you work in?

☐ US / AMER

☐ EMEA

☐ APAC

☐ Other:

How long have you worked at Google in engineering?

◯ One year or less

◯ Between one year and three

◯ Longer than three years

In-depth user interviews

I conducted eight semi-structured remote interviews, including moderating them and writing the script.

The interviews were recorded with engineering team leads from across Google. We planned to consider a second wave of interviews, however, after the first wave a clear picture had emerged.

Interview structure

CONTEXT

Participant describes themselves and their work.

SKETCHING

Participant sketches a diagram of the teams they manage and how they interact with other teams, reflecting on their own mental model.

USER NEEDS

User asked to reflect on the four categories of unmet user needs identified in the scoping stage.

CONCEPT TESTING

User reviews a Figma mockup showing proposed new features.

Interview Findings

- The sketching phase indicated that participants' mental models of their team structure were highly diverse and complex - much more complex than would be captured by allowing teams to have two parents.

- The sketching phase also indicated that team leads would likely use the 'two parent' functionality to create extremely confusing team hierarchies.

- In the concept testing phase of the interview, almost no support was found for the prototype version of the feature request.

- Over half the users were not aware of an existing 'partnerships' feature that could be used to indicate collaborations.

Impact

Product impact

- The original feature requester agreed that a naive implementation of their request would not meet their goals.

- A small extension to the existing data model was suggested using 'tags'.

- We identified a set of users who should be using an existing 'collaboration' feature and suggested a strategy for promoting this feature to them.

- This approach will benefit teams across Google, specifically thousands of engineers who use the system.

Further work
Producing a guide or set of templates to articulate best practices for using the team management tool was identified as a next step.

Breaking the 'tree-based' data model

Significant UI changes

Data model lightly extended with 'tagging'

Strategy for promoting existing features

Original feature request

Recommended Solution
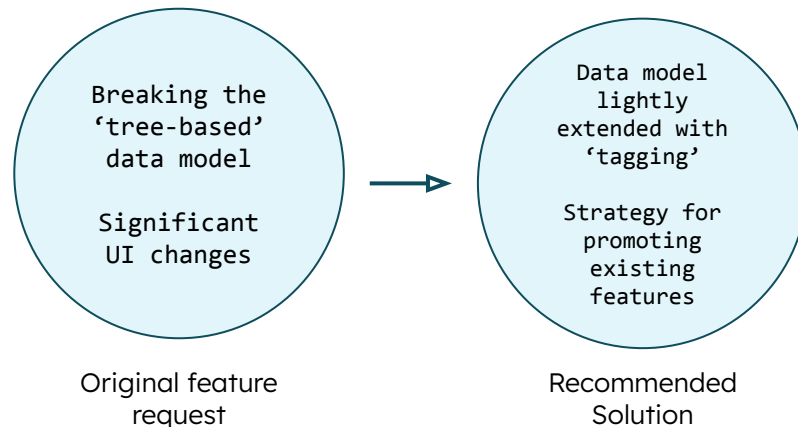
UXR secondment background

My secondment arose from an on-spec research project, demonstrating my ability to use speculative design and editorial writing to initiate and build momentum for research projects.

Speculative design

What we miss about the office, an 'on spec' research project about opportunities for collaboration during the covid lockdown, which circulated to hundreds of Googlers.

Research methods: speculative design, literature review.

Tech skills: BigQuery analysis

Research article

Article in an internal journal discussing my research.

Research methods: editorial writing

Tech skills: Network visualisations using Python Networkx library & Gephi

UXR secondment

My article led to a project with an infrastructure team to improve an internal collaboration tool used by over 2,000 engineers.

Research methods: Figma mockups and concept testing.

Tech skills: BigQuery analysis

PhD Research

My Role: Researcher / doctoral candidate

Team: Multiple collaboration, including with a regional NHS Trust and central government.

Duration: 4 years

Outcome: a paid-for software product, a set of design principles, a doctorate

Context

My PhD was part of the Creative Exchange program. It was funded by the Arts and Humanities Research Council to explore 'digital public space'. There were 21 other doctoral researchers in the program.

The research program was a collaboration between the Royal College of Art (where I was based), Newcastle University and Lancaster University.

The Creative Exchange program acted as a hub between many other institutions. My collaborations were predominantly with local government institutions.
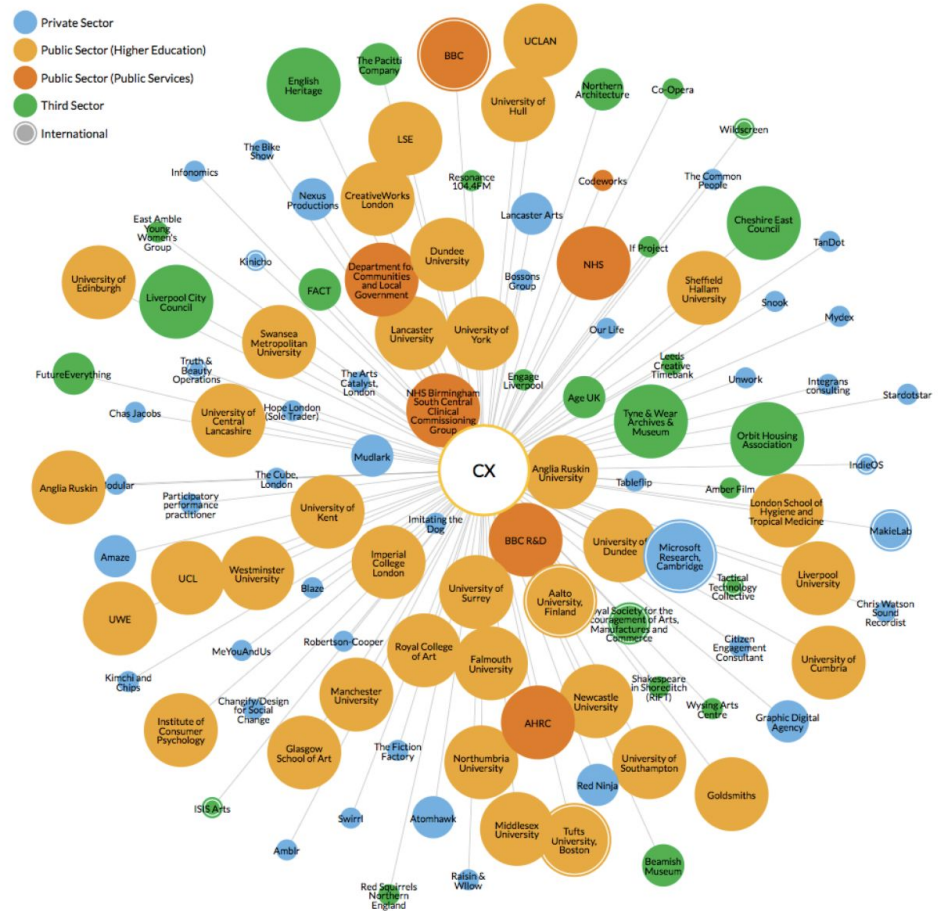
PhD Summary

Real-world problem

My PhD developed a social media analytics tool for local government. Social media hosts many conversations about topics relevant to local government - local planning issues, crime, the environment etc. However, local government rarely uses social media analysis as a means to understand the communities they serve.

In my PhD I built and tested a Twitter analytics tool (*LocalNets*) to explore social media analytics as a tool to support local government policymaking.

Theoretical framing

Drawing on design research methods, my PhD was highly interdisciplinary. The project was framed in relation to the concept of collective action from the discipline of political economy and used tools from network science to detect communities and process data.

Outcomes summary

1. A social media analytics product. Three organisations **paid a monthly subscription** to continue using my tool after the research completed.

2. A **set of design principles** for social media analytics for local government as a contribution to design research.

Research structure

My research used the Action Design Research framework, a cyclical approach to analysing software in context. The research consisted of three research cycles, each with the same ADR structure.

Exploration phase

Data validation ADR cycle

Prototyping ADR cycle

Contextual evaluation ADR cycle

Define/refine Research question

Literature review

Build / modify software

Deploy software 'embedded' with the partner organisation

Evaluate software performance in the context of the research question

ADR cycle structure
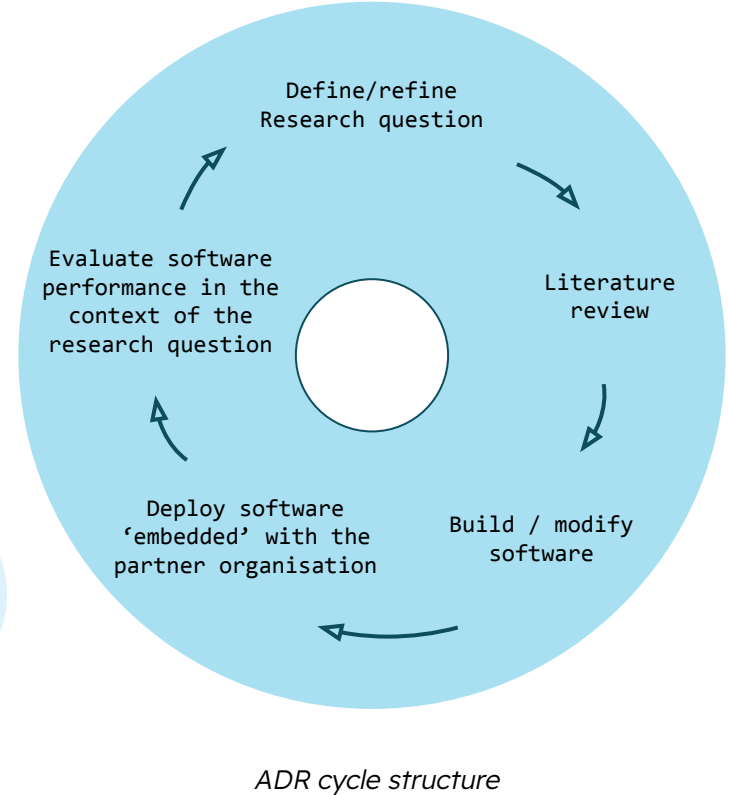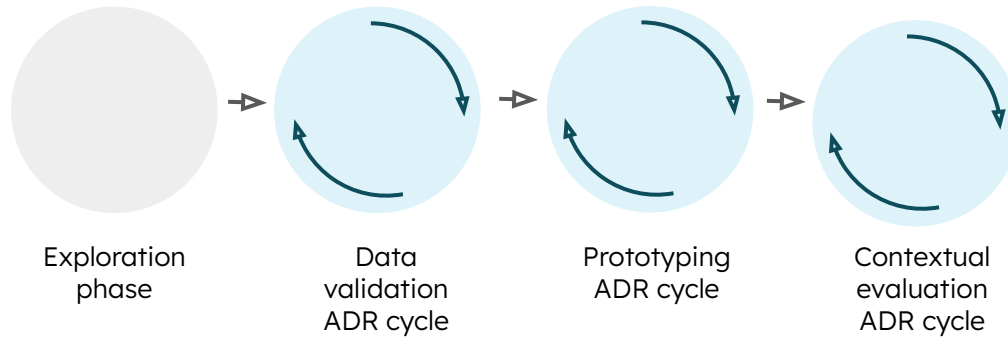
Research cycles & partner projects

My PhD developed the LocalNets analytics software through
a series of projects with partner organisations.

EXPLORATION	DATA VALIDATION	PROTOTYPE	CONTEXTUAL EVALUATION
Partner: *Kensington & Chelsea borough council* **Research methods:** Physical prototyping, data exploration **Tech skills:** working with Raspberry Pi / hardware. Web scraping.	**Partner:** *Hounslow Borough Council, RSA* **Research methods**: data analysis **Tech skills:** natural language processing, graph databases	**Partner:** *Peterborough City Council* **Research methods:** focus groups, sociometric survey **Tech skills:** front end development, network visualisations	**Partner:** *NHS Birmingham* **Research methods:** contextual inquiry, structured interviews **Tech skills:** front end development, network visualisations

Exploration phase - data sources

At the outset of the project, an exploration phase investigated a wide range of options for using social media analytics in the context of Local government.

One strand of the exploratory phase considered I explored using data from 'hyperlocal' blogs and forums.
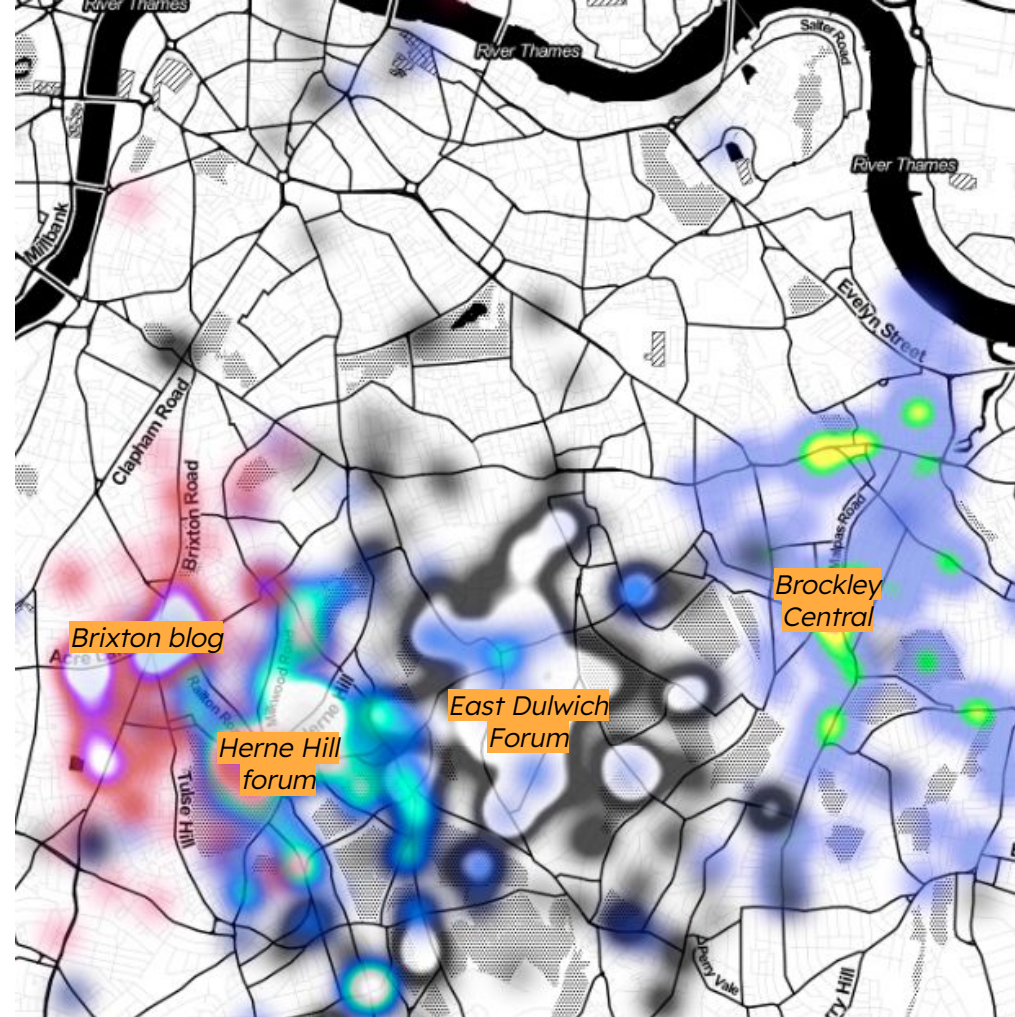
Exploration phase - tweet-based newspaper

As part of the exploration phase I created a tweet-based 'newspaper' (using the *Little Printer* receipt printer).

It was deployed in various locations, including in the staff canteen of Kensington & Chelsea borough council.

Tweets were selected manually for local relevance.

Printing an 'instant newspaper' using Twitter data. →

Printer in action. ↓

Kensington and Chelsea News

House of commons debate of Earl's Court Exhibition Centre

Tags: Planning, saveearlscourt.com (21th Jan)
http://bit.ly/1cPC854

Make your creativity pay! Join the Goldfinger Factory in Golborne ward for a talk on how you can get creative.

Tags: Community Events, Art
City Living Local Life (21st Jan)
http://bit.ly/1bbAtHk

Richard Strange's Cabaret Futura returns tonight to the Paradise by way of Kensal Green!

Tags: Theatre, Community Event
The Hub via Twitter (20th Jan)
http://fb.me/6ud5wfneq

My Chelsea and Westminster Hospital show, Public Exhibition space, 369 Fulham Road 5th-18th June if you are in the area

Tags: Art,
Krishna Leon via Twitter (20th Jan)
http://bit.ly/1bApaw1

Prototyping phase
selected findings

- In comparison with the Twitter API, collecting data from 'hyperlocal' forums is complex, and geographic coverage is poor. Based on the exploratory work, I decided to further investigate data from the Twitter API.

- In Kensington & Chelsea, there was a significant corpus of locally-oriented Twitter activity that was of interest to K&C staff.

- Taken together, these points supported the idea that Twitter analytics might be relevant for local government.

Quantitative data validation phase

My second project was with the Royal Society of Arts (RSA) and Hounslow Borough Council.

I built a data analysis pipeline to add metadata about the locations and topics mentioned in tweets.

As part of their research, the RSA prepared a detailed asset map (a list of community centers, community events, community organisers etc.) of a single ward in Hounslow through a door-to-door survey.

In this phase of the research a comparison of the manually gathered and Twitter-based data was made, and explored visualising the data.

There was overlap between the manually mapped assets and the assets from the Twitter corpus (~10%).
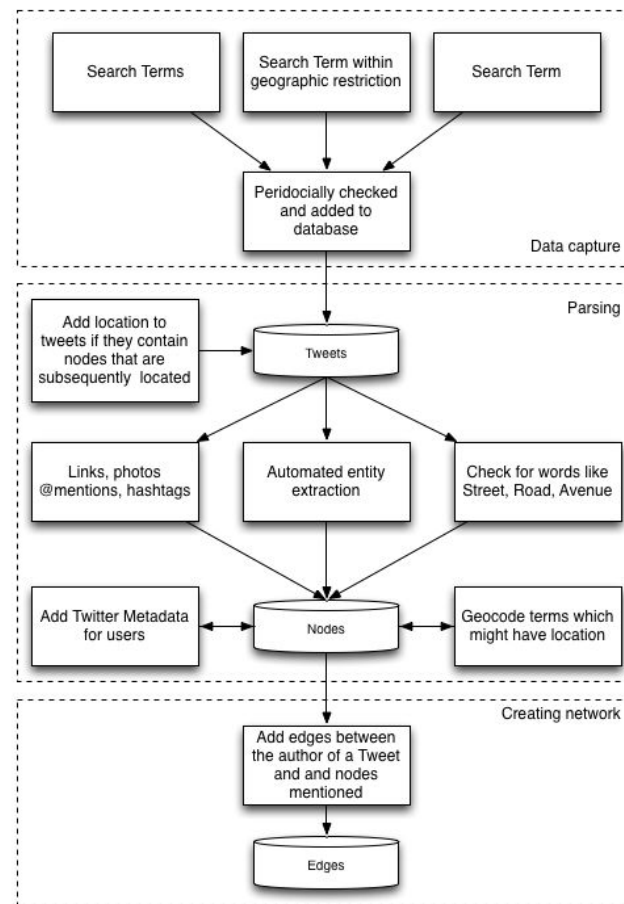

Software architecture diagram

Data Analysis

My PhD research drew on a number of data analysis techniques, including:

- **Natural language processing.** I used an NLP library to parse tweets for entities (eg. locations, people and institutions mentioned in tweets).

- **Network analysis.** Data from Twitter was stored in both a Mongo database and Neo4J graph database. Neo4J stored Twitter users and entities as nodes and mentions as edges. Using Neo4J I ran community detection algorithms (see next slide) and performed queries on properties such as betweenness and centrality.

- **Geolocation.** Localnets inferred the locations that tweets referred to by geocoding extracted location entities. It also inferred areas that specific Twitter users were connected to by aggregating their geolocated tweets. Geolocating

Community detection and geolocation were subsequently used to allow Localnets to find Twitter users to participate in local government focus groups.
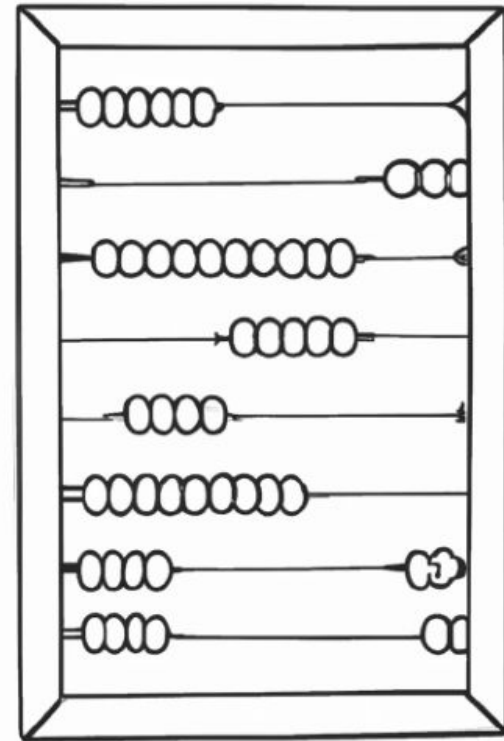
Data visualisation

To visualise the data collected by LocalNets, I created network diagrams of local communities. Within the LocalNets software, network analysis algorithms were used to discover relevant Twitter accounts. They were also used as part of the UI.

This diagram shows interactions between Twitter accounts in Hounslow, where nodes are accounts and the thickness of the edges shows interactions.

Colours show algorithmically detected communities.
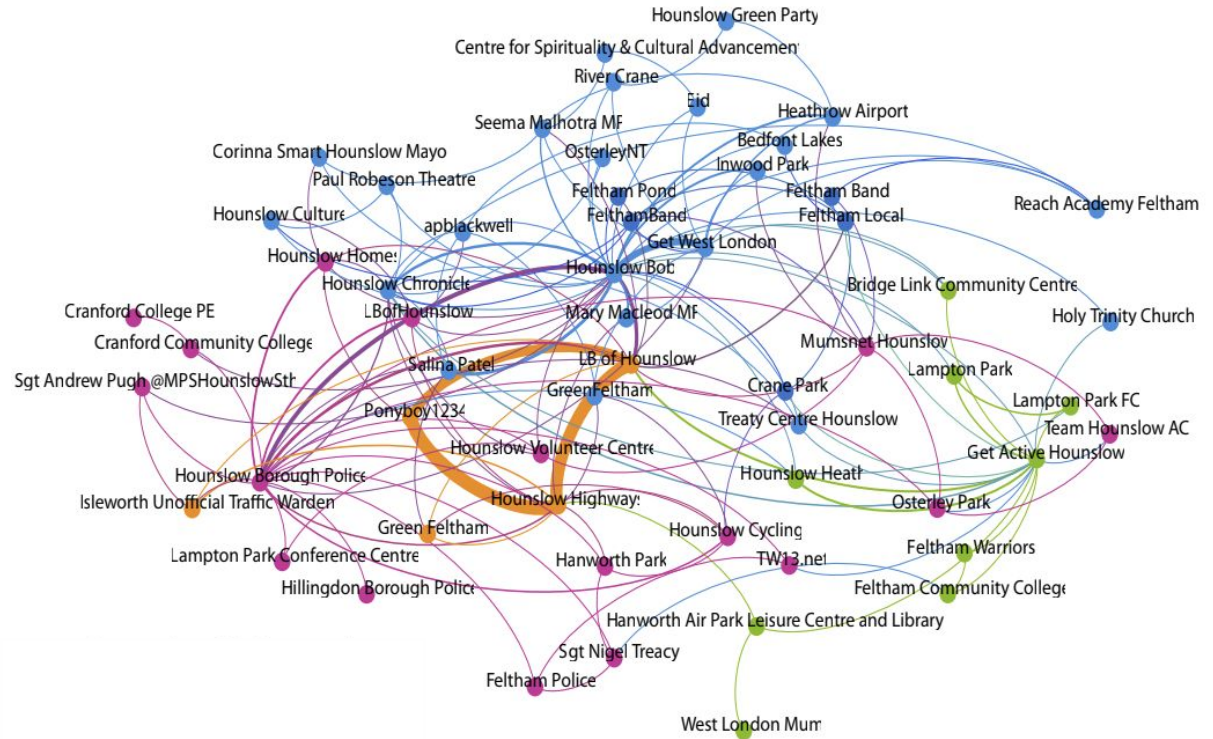
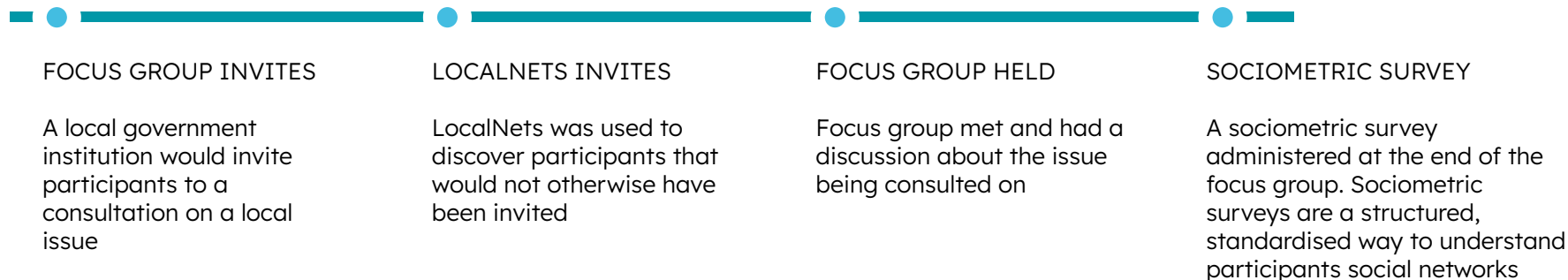*Network map of community asset Twitter accounts in Hounslow.*

Data Validation Findings & outcomes

- Tweets were successfully tagged and geolocated to specific areas using natural language processing and network analysis.

- There was overlap between the manually mapped assets and the assets from the Twitter corpus (~10%).

- Individuals, as opposed to locations or events, were best represented in the Twitter data.

- **Outcome:** The data suggested that a potential use-case for LocalNets would be finding participants for local government consultation programs. The Twitter was able to find many individuals who were highly engaged in local topics (eg. traffic management) and lived locally in Hounslow.

Focus groups

The data validation phase indicated that LocalNets data might be effective at finding participants for local consultations. This led to the development of a method for using existing local consultation focus groups to evaluate LocalNets.

The method was designed to evaluate how LocalNets could contribute to broadening focus group participation and strengthening community connections.
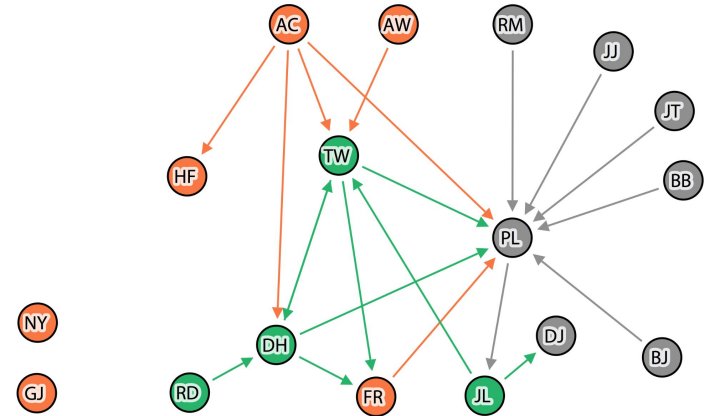
FOCUS GROUP INVITES

A local government institution would invite participants to a consultation on a local issue

LOCALNETS INVITES

LocalNets was used to discover participants that would not otherwise have been invited

FOCUS GROUP HELD

Focus group met and had a discussion about the issue being consulted on

SOCIOMETRIC SURVEY

A sociometric survey administered at the end of the focus group. Sociometric surveys are a structured, standardised way to understand participants social networks

Sociometric surveys

This slide describes in detail how sociometric surveys were administered and analysed to evaluate LocalNet's impact.

	Anton Coles	Hugh Franklin	Andrea Warner	Tina Jones
Please indicate how familiar you are with today's focus group participants.				
I know this person from Twitter				
I know this person, other than through Twitter				
I have previously worked with this person				
I would like to keep in touch with this person				
Would like to work with this person in the future				

Example of a sociometric survey question

Sociogram of a focus group in Hounslow. Nodes indicate participants, Arrows indicate who previously knew whom. Orange nodes were invited through LocalNets. Grey nodes were invited by Peterborough City Council. Green nodes were invited through both.

The diagram shows that LocalNets may have helped invite users who would not normally be part of the social group that attends local focus groups.

Findings & outcomes

- This sociometric surveys built a picture of how LocalNets contributed new participants to the focus groups, indicating that many new participants were known to existing ones.

- Despite not delivering a wholly new set of participants, local government organisations valued the ease with which they could extend focus group participation.

- **Outcome:** The findings built confidence that LocalNets could address a genuine user need for local government organisations, and supported moving to a more detailed review of how LocalNets would be used in context by Local Government staff.

Contextual evaluation

A contextual evaluation was conducted with three partners, with NHS Birmingham testing the final iteration.

In this stage of the research, the tool was used by NHS Birmingham staff to select participants in a local consultation about an underperforming medical practice.

I used semi-structured interviews to understand their experience of using LocalNets. The interviews were in person and took place in the user's workplace.
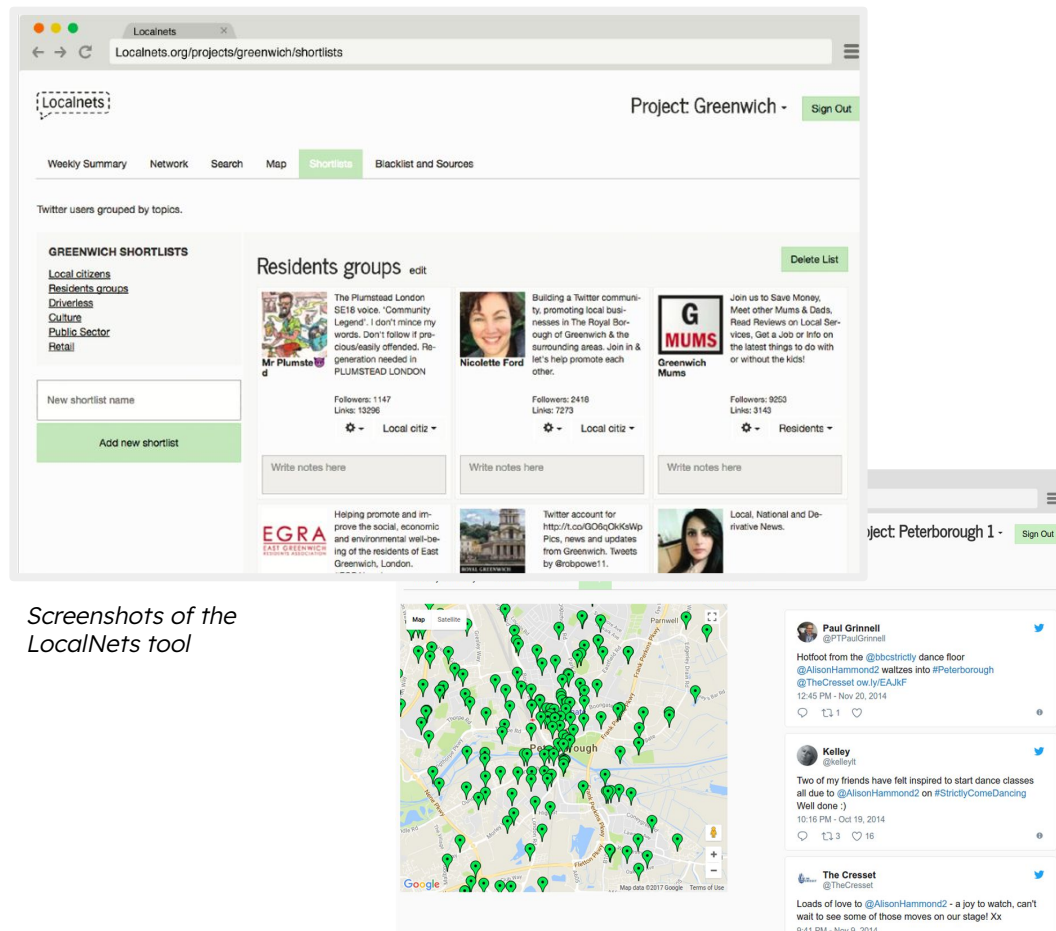
Screenshots of the LocalNets tool

Contextual evaluation outcomes

- Network diagrams, which were presented as part of the interface, were rarely used. While they convey a 'summary' of the data LocalNets, when it came to task completion, such as selecting participants, they are too complex to convey sufficiently precise information.

- On the basis of these interviews, functionality was added to create shortlists of potential participants, responding to a need to generate and review multiple sets of potential invitees.

- I also added functionality to export shortlists to Excel, which was the most common means for sharing and discussing potential participants within the local government institutions I worked with.

Impact

My PhD research resulted in:

- LocalNets - a working web app, with three institutions signing up to pay a monthly fee to use it.

- A set of four design principles for social media analytics tools for public sector institutions.

- Avenues for further enquiry, including the use of network algorithms to detect communities in the context of local government consultations.

- A set of situated design findings based on the specific set of case studies where it was tested.

- A doctorate.

END