

Data analysis: Gaining insights from your numbers and stories

with Community Action Redbridge



What we'll cover today

- ✓ Quick conversations
- ✓ Framing your questions
- ✓ Quantitative data analysis using Excel
- ✓ Qualitative data analysis intro techniques
- ✓ Other tools



Data analysis quick conversation



- Individually pause and reflect
- Join a breakout room in a pair
- Answers in chat when you come back to the main space
- [Check out some Liberating Structures engagement methods](#)



Question
to chat
about

Why do you analyse
your data?
And what do you do
with any insights?



Quick questions in Chat

- ✓ What tools do you use to store and analyse data
- ✓ How would you describe your Excel skills?

Pause and think, then share in Chat, separately!



Low cost off the shelf online databases



[Choosing and implementing a database](#)



A 7 step process for choosing a database

50% of work			10% of work	40% of work		
1. Scope	2. Plan	3. Specify	4. Select	5. Prepare	6. Test & train	7. Implement
Taking stock – what have we currently got?	How are we going to approach it?	What do we need the database to do?	Which database should we choose?	Get everything ready	Put it to the test	Use it everyday
Time & budget Attitude towards change Technical skills Data stakeholders Software & equipment audit Outcome & evaluation framework	Appoint Project lead Timeline Staff & Volunteer buy-in	Mapping data to outcomes Reporting needs User requirements	Explore database options Map how the new database will fit in with your current systems	Database customisation Data clean up and migration User materials New working processes	Testing & fine tuning User training	Full roll-out Ongoing user support Database maintenance Continuous improvement

[Read our guide](#)

What is quantitative data?

- ✓ Numbers and statistics about people's opinions, experiences, feedback
- ✓ Often collected through polls, surveys, feedback forms, counting people, monitoring data
- ✓ Responses to 'closed' questions with fixed responses (e.g. Yes / No, or tick box in survey)
- ✓ Things we count, measure or translate into numbers (e.g. 80% agreed)
- ✓ Can be benchmarked / compared (e.g. validated scales, national averages)
- ✓ Can be 'found' in secondary data / open data sets
- ✓ Often used for monitoring data and reporting to funders
- ✓ Often taken more seriously as 'evidence'

Today's data

Music Mentors work with young offenders in prisons. People sign up to take part in group sessions where they work together with other offenders and mentors to write, play and record music.

The data we are using today is fictional data for the programme which we have created for training purposes.



Getting your data in order

- ✓ Using Tables
- ✓ Checking for errors
- ✓ Linking / bringing data together
- ✓ Using correct data formats



Why use Tables?

- ✓ **Quick Styles** – Add colour, banded rows, and header styles with just one click to style your data.
- ✓ **Table Names** – Give a table a name to make it easier to reference in other formulas.
- ✓ **Auto Expand** – Add a new row or column to your data, and the Excel table automatically updates to include the new cells.
- ✓ **Filters & Subtotals** – Automatically add filter buttons and subtotals that adapt as you filter your data.
- ✓ **Calculated columns** – Enter a single formula in one cell, and then that formula will automatically expand to the rest of the column by itself.
- ✓ **Dynamic Pivot tables** – Using an Excel Table for the source data of your pivot table, the data range becomes "dynamic" so the pivot table will always be in sync with your data.



Other useful functions

- ✓ Conditional formatting
 - ✓ Highlight cell values
 - ✓ Duplicate values
 - ✓ Remove duplicates
 - ✓ Colour scales
- ✓ Find & replace
- ✓ Split columns



Topic 1: Sorting your data

- ✓ Simple sorting A Z and Z A
- ✓ Multi level sort
- ✓ Sorting on a range of criteria



Topic 2: Filtering your data

- ✓ Simple filtering – single & multiple options
- ✓ Text filtering – simple and complex
- ✓ Adding a slicer



Topic 3: Pivot tables

- ✓ Total rows
 - ✓ Simple pivot tables
 - ✓ More complex multi correlation pivots
 - ✓ Pivot charts
-
- ✓ Adding a slicer



Gaining insights & taking action



[Reframing data:
ideas, expectations
and stories](#)

See a theory of
change working in
action and watch the
videos.

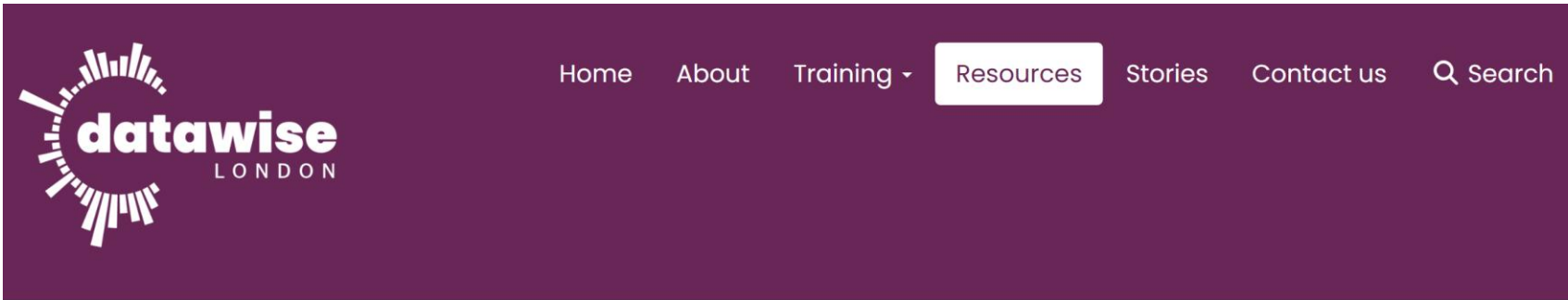




What is qualitative data?

- ✓ Talk and text about people's experiences and opinions
- ✓ Responses given to open questions (e.g. Why? Tell us about?)
- ✓ Qualitative data can be gathered as:
 - ✓ Verbal (e.g. audio and video of interview talk, feedback given in person, focus group talk)
 - ✓ Written (e.g. feedback forms, open questions in surveys, zoom chat, client notes)
 - ✓ Visual media (e.g. drawings, photographs, video)
 - ✓ Social media (e.g. posts, comments)
- ✓ It is typically changed into text for analysis (e.g. transcribed, written notes, client notes)

Intro to qualitative data



A guide to what qualitative data is, tools and techniques with examples

Written by [Nissa Ramsay](#) for Datawise London



<https://datawise.london/resources/qualitative-data-analysis>

Visually spotting themes

Read your quotes or interviews and **identify themes** or patterns:

- Topics which are discussed most

- Common terms, phrases or words used

- Topics discussed by a specific group (e.g. new to data, smaller charities)

- Clear differences of opinion/experiences

- Your research question or purpose

- You're own experience of the subject

- Sector and wider knowledge of the topic

Coding qualitative data

What is coding?

Nothing to do with computers or website development (but software / tools can help)

Coding is a process to help you organise and digest qualitative data

You can do this on paper, on a document or using specialist software

You can keep this as simple or as sophisticated as you like

You decide how to do it!

Code = a word or name for a theme (you decide what this is)

Coding = A process of 'tagging' text to a code (word) that you have created

Analysis = Reviewing quotes tagged with each code to identify key insights



When to code qualitative data?

This approach adds value when...

- Lots of interviews or quotes
- Wide ranging / varied responses
- It is a large project
- You plan to collaborate on analysis
- You need confidence in process
- High value projects (cost, funding)

When not to code

- Small volume of data
- Poor quality data (missing responses)
- Responses lack relevance to Q
- Responses don't look meaningful
- No time!
- No need for extensive process



Different approaches to identify codes

Top down

Codes directly relates to research questions or interview questions

Can also relate to broader sector discourse / sector research

You decide them in advance - what you want to know

Bottom up

You identify the codes, while / after looking at the data (e.g. a list of quotes)

Think about what is important to participants

Reality

Both approaches apply, quotes contain multiple codes

Do what makes sense for your data and work

Important to document your codes and what they include / exclude



Analysing open ended questions example

- ✓ Add a text box to your sheet to record notes
- ✓ Identify the key recurring themes
- ✓ Assign a numerical code to each theme e.g. 1 = Instrument choice/availability
- ✓ Go through all the answers assigning codes to each answer
- ✓ Add your coding to the text box so you can refer to it



Open text questions

✓ How to code open or free text answers for analysis

What do you think would improve the sessions?
More instruments
Less people in the group, the mentors don't have enough time to spend with everyone
More drums & better heating in the winter & sessions at the weekend
Too much noise from the courtyard
Longer sessions
My welfare officer told me I couldn't attend them anymore
Weekly sessions, once a month isn't enough
The room we practice in is next to the rubbish bins, in summer it stinks and the keyboard is broken
More choice of instruments & a mentor who knows how to play drums
We need a piano!
The heating has broken again & could we get drums?
Why are there only 2 mentors? They are always busy with the beginners and never with the more experienced
Freezing cold room - can you get the heating fixed
We should do a show in the school holidays so my kids can attend

What would improve the sessions?

- 1 = Number/availability of Instruments
- 2 = Number/suitability/training of mentors
- 3 = Length/frequency of sessions
- 4 = Rehearsal space
- 5 = Number/timing of performances
- 6 = Other



Ref	What do you think would improve the sessions?	Instruments	Mentors	Venue	Sessions	Other
1	More instruments	Yes				
2	Less people in the group, the mentors don't have enough time to spend with everyone		Yes		Yes	
3	More drums, better heating in the winter, sessions at the weekend	Yes		Yes		
4	Too much noise from the courtyard			Yes		
5	Longer sessions				Yes	
6	My welfare officer told me I couldn't attend anymore					Yes
7	Weekly sessions, once a month isn't enough				Yes	
8	The room we practice in is next to the rubbish bins, in summer it stinks			Yes		
9	More choice of instruments & a mentor who knows how to play drums	Yes	Yes			
10	We need a piano!	Yes				
11	The heating has broken again & could we get drums?	Yes		Yes		

How to analyse this

Thematic analysis

Look at all your quotes for a code

Identify themes (see earlier [theme summary](#) side)

Example: Instruments code

Most common response

Participants overwhelmingly wanted a wider range of instruments, as well as better instruments

Example finding

Instruments are a key source of frustration, preventing people from enjoying the sessions. This could lead to people dropping out in future.

We need to invest in more high quality instruments, as well as replacing older instruments

Ref	Code = instruments
1	More instruments
3	Wider variety of instruments
9	More drums
10	The keyboard is rubbish
11	More choice of instruments
15	We need a piano!
16	Could we get drums?
17	More choice of instruments
20	Better instruments

Need some more Excel skills?



Follow along with our practical Excel videos

- ✓ [Excel Bite-size 1](#): Managing your data ([guidelines/data](#))
- ✓ [Excel Bite-size 2](#): Creating a workable data set ([guidelines/data](#))
- ✓ [Excel Bite-size 3](#): Analysing your data ([guidelines/data](#))

Or join our Getting started, Next steps 1 and Next steps 2 tutor led sessions on Zoom.

[Summer series starts in June](#) / get in touch for a 1:1
clarechamberlain@superhighways.org.uk



AI tools for data analysis

- ✓ Useful to create summaries, identify themes, find quotes, draft report structures
- ✓ Generative AI tools (e.g. [Claude](#), [ChatGPT](#))
- ✓ AI embedded in other tools (e.g. [Miro](#), [OtterAI](#))

Challenges

- ✓ Inconsistent: Can give different results each time
- ✓ Misleading: Authoritative tone is hard to ignore
- ✓ Prompts: It only knows what you tell it, you have tacit knowledge
- ✓ Literal: Analyses common words and clear content, missing broader themes

Top tips

- ✓ Get to know your data – never rely on it alone
- ✓ Never enter personal or identifiable data
- ✓ Learn about and get confident with prompts
- ✓ Save your prompts and outputs



Reference: Example AI prompts

- ✓ The following transcript is from a research project about
- ✓ The following quotes are in response to the [question] from a survey with
- ✓ Summarise the key themes in this text
- ✓ Which are the most prominent 3 themes in this list
- ✓ Can you give me three example quotes for each theme
- ✓ List all the quotes that mention [training]
- ✓ Did any of the participants discuss [issue]
- ✓ My hypothesis is [x] Do the responses support or reject this
- ✓ What are the 3 top [recommendations/barriers] identified
- ✓ List 3 positive and 3 negative quotes about x



Example 1

If you could make one ask of funders, to help you move forward with digital, what would that be?

“Funders, please understand that our organisation cannot operate without our digital infrastructure, which enables us to reach out to those needing our support. Please fund this!”

“Funders, commit to funding digital costs by incorporating it within grant applications.”

“Allow us to bring in external expertise to give us capacity to implement an ethical and nature led digital strategy.”



Example 1

AI findings
Funding for digital infrastructure, equipment, and software.
Training and capacity building
Digital staff and expertise
Digital strategy and planning

- ✓ [Claude](#)
- ✓ Specific and practical asks
BUT missed frustration with funders
Simplified asks

Manual analysis findings
Understand digital costs and why they matter
Fund digital costs as a core cost
Make it easier to include digital costs in application forms
Support us to develop our organisation

- Manual analysis
- Interprets emotion
- Brings knowledge of context / audience
- BUT some confirmation bias



Example 2

We uploaded a redacted data (no personal data) set containing recent attendees survey results and asked Claude:



For this task act as an expert in: online training, uk charities, data analysis, technology available to charities in the uk for free.



You will need to be: creative, honest.



Your task is to: Give me a summary of the attached survey data which is feedback from attendees on our online courses held in the UK between May 24 and July 24.



We want to know the summary of the replies, what can be improved, what attendees liked, what they didn't like, which course seemed popular, which seemed unpopular, what courses we should consider running next.



For each result please give the number of survey responses that have helped you come to that conclusion. Give the output in the format of a table

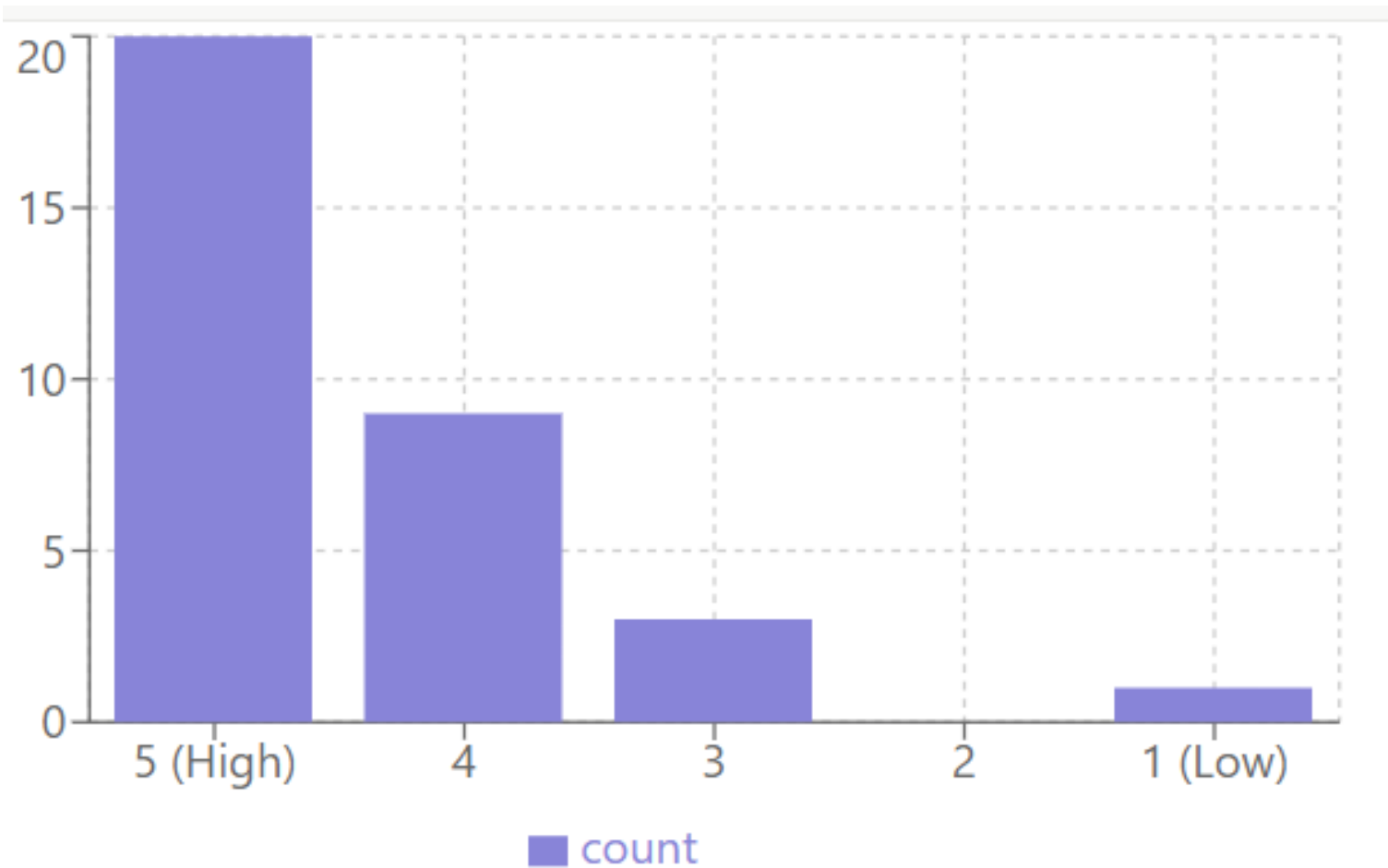


Initial Response

Overall Satisfaction	Most attendees rated the sessions highly, with many giving 4 or 5 out of 5	29 out of 33 responses rated 4 or 5
Knowledge Gain	Majority reported gaining "Some knowledge" or "Good knowledge"	28 out of 33 responses
Session Pitch	Overwhelmingly positive, with most agreeing it was pitched at the right level	30 out of 33 responses agreed or strongly agreed
Confidence in Applying Skills	Generally positive, with most feeling confident to apply the knowledge	27 out of 33 responses agreed or strongly agreed
Meeting Organization Needs	Mostly positive, but some neutral responses	25 out of 33 responses agreed or strongly agreed
Popular Courses	"Cyber security basics" and "Editing your Voice website" series seemed most popular	11 responses for Cyber security, 9 for Voice website
Less Popular Courses	"Microsoft Teams Meetings & Calls" and "Introduction to M365 apps" had fewer attendees	1-2 responses each
Suggested Improvements	More time for complex topics, inclusion of breaks, more hands-on practice	Mentioned in 7 responses
Positive Aspects	Knowledgeable trainers, practical content, good pacing	Mentioned in 12 responses
Suggested Future Courses	GDPR compliance, AI in charities, advanced Excel, Google Forms	Mentioned in 6 responses



Overall satisfaction ratings



Suggested strengths & improvements

Strengths to Maintain:

- ✓ **Knowledgeable Trainers:** Many positive comments about trainer expertise and approachability.
- ✓ **Practical Content:** Attendees appreciated the actionable insights they could apply to their work.
- ✓ **Good Pacing:** Generally, the pacing was well-received, though some complex topics might benefit from more time.

Areas for Improvement:

- ✓ **Time Management:** Some attendees suggested longer sessions or splitting complex topics into multiple sessions. Consider extending the duration of more technical courses.
- ✓ **Breaks:** Incorporate short breaks in longer sessions to maintain attendee focus.
- ✓ **Hands-on Practice:** Increase opportunities for practical application during the sessions.



Next session

Presenting data in engaging ways

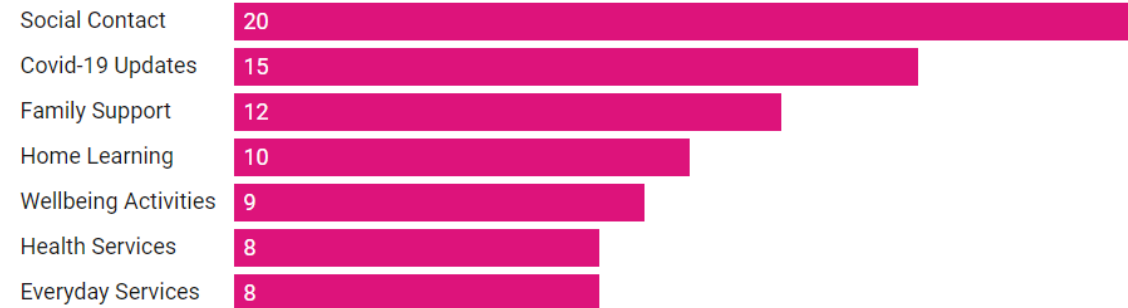
Datawrapper



Word
It Out

What are digitally excluded people missing out on?

■ No of times coded



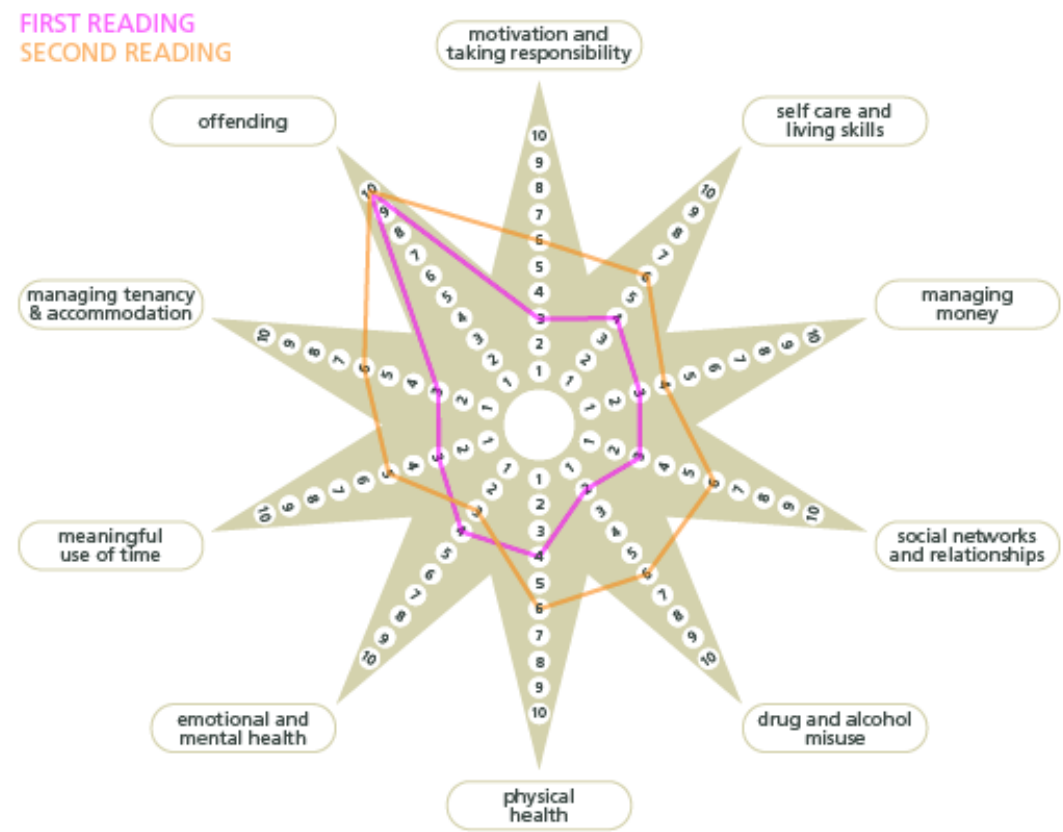
[Download image](#) • Created with [Datawrapper](#)



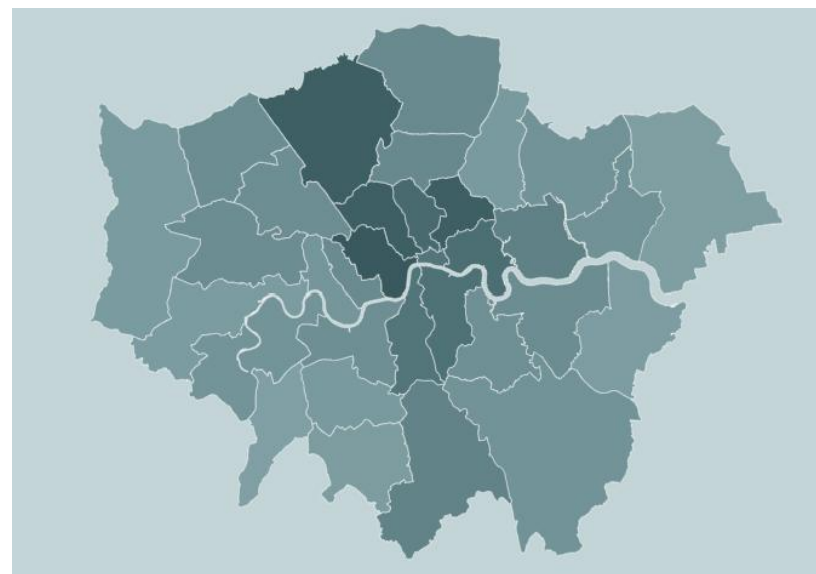
**3 out of 5 people are
missing social contact**

Wellbeing activities
Covid-19 updates
Job search
Employment
Decision making
Family support
Benefits
Social contact
Online shopping
Funding
Everyday services
Consultations
Health services
Home learning

Other tools



The Outcomes Star - Homelessness version



Related training & extra resources

- ✓ [Watch this video](#): Using your Data to Evaluate your Impact, Explore Options and Drive Change
- ✓ [Look at our current training offer](#) and add yourself to the waitlist if sessions show as full.
 - ✓ [Next Choosing and implementing a CRM session June 17th](#)
 - ✓ [Next Excel 3 part series starts June 26th](#)
- ✓ [Download our Favourite Apps](#) for data collection & storytelling tools sheet
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Thank you for taking part today

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