

Streamr

Data Unions research
Summary
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Early Adopter profile

Advanced technology user:

- Good level of applied technical skills - e.g. coding, IT hardware self-building.
- Uses multiple devices every day.
- Understands how blockchain works and how to use it.
- Understands cryptocurrency - might even have some crypto.
- May be very security conscious - using encryption?
- Uses beta versions.
- Gets excited about new tech.
- Does not require slick UX or product design to use a product of service.
- Opinionated about data ownership when prompted.
- Understands Data Union concept - once explained.
- Prevalence in general population - estimated 13.5%.

We spoke to:

- 11 people - 4 women, 7 men.
- Ages ranging from 19 - 48 years.
- From UK, Spain, Malaysia, France, USA, Bangladesh, Sweden, Brazil/Italy.
- Working professionals and students.
- Earnings from less than £10k to +£40k per annum.
- Using a wide variety of devices and technology brands including
 - Samsung, iPhone, Huawei phones
 - Self build, Mac and HP laptops
- Most value connecting with friends and family, streaming and easy access to entertainment and ease of travel online.
- The least favourite aspects of digital life are sense of addiction and related health problems, fake news, unwanted opinions, spam / popups / malware.



Early Majority profile

Confident / proficient technology user:

- Uses mainly cloud-based tools and apps for their work or leisure activities.
- Has multiple online subscriptions to services and tools.
- Regularly shops online for most products and services
- Multiple device user.
- Gets excited about new tech, but only once it is proven to work.
- Good UX and design is important - will not put up with anything clunky or technically challenging to use.
- May not have fully formed opinions about data ownership - is aware that there is a debate.
- Wants to keep using platforms like Google and Facebook - because they are convenient, but doesn't want to be part of the machine?
- Doesn't like "tyranny of T&Cs"?
- Does not yet realise they have a need around data ownership and Data Unions.

We spoke to:

- 10 people - 4 women, 6 men.
- Ages ranging from 18 - 54 years.
- From UK, Germany, Czech Republic.
- Working professionals and students.
- Earnings from less than £10k to £30 - £40k per annum.
- Using a wide variety of devices and technology brands including
 - Samsung, iPhone, Huawei, Sony, Google phones
 - Self build, Mac, Acer, Dell, Toshiba, Asus, HP laptops
- They most value connecting with friends and family, and access to entertainment in their their digital lives.
- There are many annoyances about digital life for these users - from targeted advertising to filter bubbles and echo chambers to listening devices.



Early Adopters - what do we know now?

Want to own / sell their own data - but many don't know this yet

- We saw high levels of interest and engagement with the idea of data ownership and trading at an individual level.
- However we did not see evidence that this is an idea that is already on people's minds.

Are comfortable with the idea of crypto

- This was true even for Early Adopters who had not used crypto before.
- They were happy to receive payments via DATAcoin and had no problem researching the token to understand value in most relevant FIAT currency for them.

Are less interested in talking about blockchain tech than you might expect

- While crypto was discussed in detail with Early Adopters, no one mentioned blockchain or asked questions about it.
- Education around this may help build trust in the integrity of Data Unions' technology with this group - as they do have lots of questions about the "how" of a Data Union.

Feel that there's no infrastructure protecting individuals' rights - and that no one cares

- The sense of disempowerment among Early Adopters was clear and palpable - and at the heart of their interest in the Data Unions idea alongside the potential to earn some money.

In the future **this will be standard** - my grandkids will be **shocked by the lack of control** we have had.
- Leo, 19, Brazil & Italy

Corporations, because of law, they have things in place to protect your data but they often breach these. They often do because they know they can get away with it. **What's a fine of a few million to them, they'll make a billion tomorrow.** - Nish, 19, Bangladesh



Early Majority - what do we know now?

Want a sense of control

- This was the most powerful attitude across all those we spoke to, whether they were Early Majority or Early Adopters.
- It's potentially the greatest emotional lever to activate engagement with Data Unions. But demonstrating that individual control and regaining of power is possible is not simple.

Do not feel there's a contradiction between data principles (privacy, ownership) and their conveniently fluid online lives

- Rather they have persuaded themselves they don't need to worry because they're involved in a fair exchange or "too unimportant" to be at risk from data malpractice.
- If they are feeling any conflict, they are looking to regulation such as GDPR to resolve it on their behalf.

Will use DUs when their friends recommend them

- Recommendation alone may not be enough, however. They will also need a lot of information to support their decision to join a Data Union.

Will use DUs when scale = anonymity

- This is more strongly correlated with Early Adopter attitudes, but does stand for Early Majority too.
- Also important is that scale will create a viable 'crowd' which means the Data Union will have a viable product to sell.

Essentially it's up to them what data they put out and **if they're to use a service** or something that requires that data **that is on the individual who's using it** to decide to put up that data or not. - Walter, 20, UK

It's **important that the government have legislation** in place. The **Data Protection Act**. That's become a little easier. ... I know that's changed a lot in the last year or so, with all the **websites having to explain what their policies are**, what they hold about you, and I think that's really important.
- Trudi, 54, UK



What do people think about when deciding to sell their data onwards?

- Most people are **not yet aware that data trading at an individual level is possible.**
- The majority of people involved in this research are **not actively thinking about data privacy or what is happening to their data** in their day to day lives - though it is a low-level concern for Early Adopters.
- They need to be **made aware of the possibility and have the concept of data monetisation, trading and Data Unions explained** to them.
- For both Early Majority and Early Adopters **questions** fell into three broad categories:
 - **Money and rewards** - how much and the mechanism for receiving it
 - **How it works** - in particular how does a Data Union help them exert control over their data?
 - **Specific functionality** - around privacy settings and what is and isn't being shared
- **For Early Adopters explaining the idea is not a particularly difficult task** - a straightforward explanation of a tool like the Swash plugin is sufficient for them to grasp the idea.
- **Trying it for themselves - and finding it easy to use** with a clear financial return - is enough of a proof of concept.
- To keep using the tool they will **need to see continuing rewards** and also have **clear and transparent information** about **how the technology works, who is involved** in creating this technology, and **who they are trading their data with.**
- For the **Early Majority the task is more challenging.**
- They need **a lot of information** covering everything from high level explanations about the **concept and potential benefits of a Data Union** to the finer detail of **how cryptocurrency works** and the **individual settings** inside a Data Union tool.



What are the motivators to trading data in a Data Union?

Once they grasped the concept and had the information they needed most respondents were engaged and enthusiastic about the idea of trading their data.

Motivators

- Initially the most appealing idea for respondents was the opportunity to take control of where and how they were sharing data
- The idea of **earning some money for “just doing what I am already doing”** was a **motivation** that appealed initially and continued to motivate respondents through the process of learning about the tool.
- **Early Adopters were quick to take the plunge** and install the Swash plugin, while **Early Majority respondents needed to be prompted** - but both groups found **the process relatively simple and painless** and this also motivated them to stick with it.
- There was some **interest in the idea of charitable giving** and fundraising via data trading, but **it did not emerge as a key motivator** in this research.
- Curiosity about **learning about their own data sharing “seeing what happens”** - i.e. learning about how much they can earn from their everyday online activity also motivated interest.
- To this end, the **transparency of the tool** - the possibility of seeing exactly what data is being collected and of settings that operate at a granular level - was also a motivating factor in feeling comfortable with keeping the plugin installed beyond the research.

One of those **brilliant ideas** where you think “**why didn’t I think of this** first?”

- Nish, 19, Bangladesh

I think I've just become **a bit more aware of what's going on**. I didn't really realise that there was any way for us to be **able to get paid for this data that was kind of stolen**. So it's quite interesting.

- Tori, 20, UK



What are the barriers to trading data in a Data Union?

Lack of understanding was the key barrier to trading data for most of the respondents - although one participant did report that the more he learned the less likely he was to trade his data.

Barriers

- A majority of people reported **concerns about the lack of transparency around who they would be trading their data with** - and one otherwise enthusiastic participant refused to install the plugin as a result of this.
- For most it would be **important to be able to vet and veto** data buyers.
- Early Majority respondents with less of a grasp of how data trading works were put off by the idea that the **plugin might be sharing personal or sensitive information in Google Docs or Dropbox** despite an explanation of the wildcard and masking settings - and security was a general concern.
- Some respondents were interested in understanding **whether they would experience performance issues** as a result of using a data trading plugin - this would be a barrier for some.
- For a majority, what were regarded as **“false promises” or “just marketing” messages** relating to the possibilities for regaining individual or collective control over data were off putting - because most respondents weren't able to see how they could be fulfilled via the tool that they tried out.



A passive relationship with personal data is the biggest barrier

- Perhaps the biggest barrier was the **unspoken passivity** that most respondents revealed in response to questions about **data privacy and the current power balance between individuals and corporations**.
- A number of participants did spontaneously mention issues relating to data and privacy when asked to consider the negative aspects of their digital lives.
- This tended to manifest as **annoyance with targeted advertising** or concern that **devices are listening** without permission.
- Responses became more muted at an individual level when they were asked how important an issue online privacy is to them.
- **Personal responsibility or action is limited** on the whole - although some use ad blockers and incognito browsing in order to protect themselves.
- Early Adopter respondents were more likely to express a sense that **they know they should be concerned, but in reality it's a low priority** for them because **they don't know how** to address the problem.
- Early Majority respondents were more likely to say there's **little to worry about** at an individual level, that there's **a fair exchange** happening between service providers and individuals and to express **trust in regulation** such as GDPR.

We have **no choice - you just have to accept Ts&Cs** and you miss out if you don't use the apps.
- Nick, 18, UK

The thing is **that data I've already shared is out there now** and I have no control over it. So it's almost making me **feel like I give up**. What can I do?
- Leo, 19, Brazil & Italy



Does the type of data make a difference?

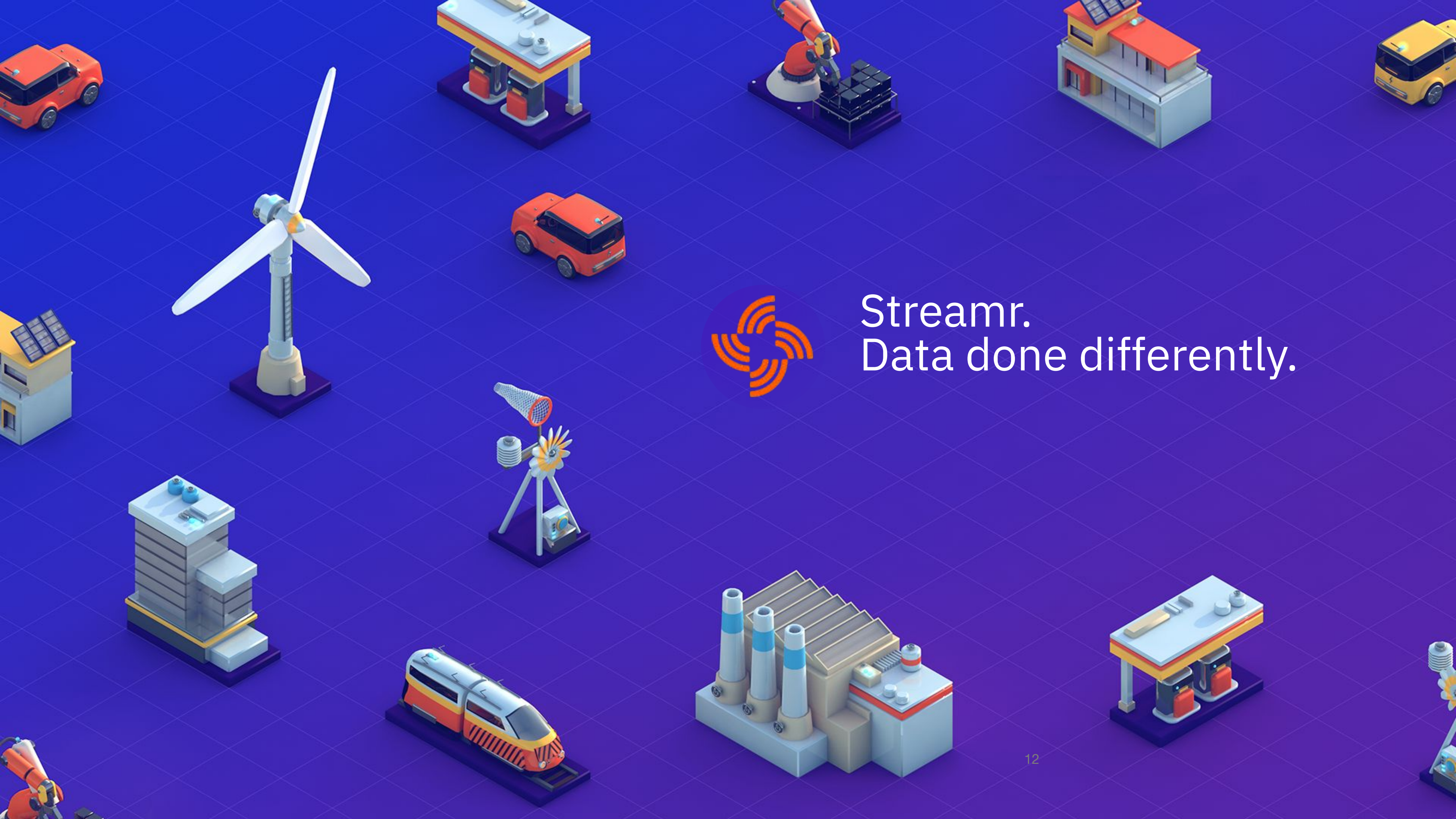
- The participants were most alert to data privacy issues when they considered sharing **financial and banking** information, **location data** (especially GPS data) and information that makes them **personally identifiable** (eg name, address, contact details).
- Generally this group of people showed much **more likelihood to share and trade data about what they do** online (e.g. streaming, surfing, searching, shopping) than **who they are** (finances, location, social relationships).
- When considering data sharing and trading in theory, **everyone was comfortable with sharing their music** listening data (e.g. Spotify activity) - and they had a reasonably clear sense of the value of this data based on the price they pay for music streaming services.
- 12/21 people said **they wouldn't share or trade financial data under any circumstances** - seven of these people were Early Adopters.
- When it came to actively switching on data modules in Swash, everyone except one person switched on data sharing and trading for their **Surfing and Search activity**.
- All bar one of the Early Adopters also turned on the **Amazon data module** and most also elected to share **social media data** (although three turned off Facebook).
- Early Majority respondents were a little **more cautious overall**.
- Comparing the theoretical preferences and what people did in practice with Swash data streams highlights **some inconsistent behaviours** - and speaks to the point that many people haven't given the issue of what data they feel comfortable sharing much thought, perhaps because of the sense of powerlessness around the issue as a whole.



How much is enough?

- While there was a keen sense that **“it would have to be worth it”** for an individual to join a Data Union and begin trading their data in this way, **people found it particularly difficult to quantify** their expectations for earnings.
- Many expressed interest and curiosity about **the value of data in a marketplace** - tempered with **a sense of realism** about what it might be possible to earn in practice.
- When asked to put a price on data streams such as music streaming, financial activity, online shopping and social media activity there was **considerable variation** - banking data valued highest, music the lowest.
- When asked to consider their **hoped-for earnings for Swash the figure averaged around £4 a month** - much lower than the value expressed for theoretical sales of specific data streams.
- Early Adopters had lower earnings in mind than Early Majority.
- Generation Z participants had the lowest earnings in mind of all.

	Average (£) per month	Median (£)
Spotify / music streaming	5.5	5
Banking data	11.9	7.8
Amazon	8	5
Social media	10.4	5
Hope to earn from Swash?	4	



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