

# Active Online Choices: Designing to Empower Users

Update report by the Behavioural Insights Team and Doteveryone for the Centre for Data Ethics and Innovation, November 2020



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Centre for Data Ethics and Innovation

# Contents

Executive summary	3
1. Background to the project	5
2. Barriers to active choice	7
People's experience	7
The industry view	11
Prioritising areas for improvement	13
3. Prototypes to take forward	15
4. Testing what works	20
5. Conclusion	22
Annex A: Approach to prototyping	23



### **Executive summary**

People cannot meaningfully shape their relationships with the digital technologies that underpin their lives. Products and services are designed on a take it or leave it basis so people have little option but to use them on the terms set by technology companies.

"You want to control it but you're almost out of control. You've got to do the little tweaks but I don't really think they make much of a difference if I'm honest."<sup>1</sup>

This work sets out to explore what it would take in practice to meet the growing public appetite to shape the online environment in line with people's own wishes. It builds on the Centre for Data Ethics and Innovation's recommendations around the use of data online,<sup>2</sup> and draws on the behavioural science expertise of the Behavioural Insights Team (BIT) and Doteveryone's understanding of the impacts of technology on society.

Our aim is to demonstrate how to create 'active' choices - choices where people are empowered and able to reflect their wishes without obstruction, based on an understanding of the consequences. We recognise that the creation of active choices is just part of the journey towards meaningful user empowerment online. But, alongside wider regulatory and industry change, active online choices can contribute to improving the technology landscape and create a positive shift in people's experience of using digital technologies.

Our approach combines primary and secondary research to explore the roots of the problem with prototyping and testing to demonstrate that alternatives to the status quo are possible. This preliminary report describes the research and prototyping undertaken and the planned testing approach.

A detailed write up of the primary and secondary research undertaken is published alongside this report. We found that the services people use in their daily lives are generally designed to default to the interests of the company that operates the service and make it difficult for people to control their experience. There's an associated widespread sense of resignation and disempowerment among the public. We also found that companies prioritise commercial interests and smoother user experience over giving people opportunities to actively shape their services.

Our prototypes focus on three mainstream online experiences - a social media feed, internet browser settings and a mobile operating system update. The sketches produced by participants in our workshops show that even in a small space of time it's possible to

<sup>&</sup>lt;sup>1</sup> Research participant, Doteveryone (2020). <u>People. Power and Technology: The 2020 Digital</u> <u>Attitudes Report</u>.

<sup>&</sup>lt;sup>2</sup> CDEI (2020). <u>CDEI Review of online targeting</u>.

reimagine the design of services to give people more say over the information they see, the adverts served to them, and the data collected about them online.

In the next stage of this work we will test our active choice prototypes against the status quo through qualitative user testing and online experiments. The experiments will recruit thousands of participants to generate robust evidence on the impact of different designs on people's understanding of choices, their sense of control and ability to express preferences.

Many technology companies deny their users active choices because they do not perceive a business imperative nor a clear regulatory need to change their current practices. In this report we show that an alternative future is possible. In the next stage of our work we will further develop the evidence base and give practitioners and policymakers actionable recommendations to implement the change.

## 1. Background to the project

Technologies affect almost every part of people's lives, but people cannot easily shape them to reflect their own values and preferences. For example, **89% of the public say it's important to choose how much data they share with companies but only 25% currently find that out. Nearly half (47%) feel they have no choice but to sign up to services despite concerns.<sup>3</sup> During the CDEI's public engagement research, among those who tried, most participants found it challenging to change settings and preferences, and questioned whether they offered meaningful control.<sup>4</sup>** 

It's important we address this for a number of reasons. Legally, active consent is a legal basis for the collection, processing and sharing of personal data under GDPR. Economically, the Competition and Markets Authority (CMA) has found that platforms' use of choice architecture and defaults affects user behaviour and inhibits competition.<sup>5</sup> And across society disempowerment fosters distrust: only 19% of people believe technology companies are designing their products 'with my best interests in mind'. It is pernicious for people to lack autonomy and agency over the digital infrastructure of their lives, especially as the coronavirus lockdown has accelerated people's use and reliance on digital technologies: adults now spend a quarter of their waking lives online.<sup>6</sup>

Echoing the CDEI's findings outlined above, Doteveryone and BIT have also found the public's desire to exert control over their digital experience is undermined by the way services are designed.<sup>7</sup> Trying to change settings, for example, is a time-consuming and often overwhelming experience and it can be hard to discern whether the process has had the effect that the individual intended.

It doesn't have to be this way. Technology companies go to vast efforts to design other parts of their services to optimise the user experience and maximise engagement. For example Google ran over 464,000 experiments on Google Search in 2019.<sup>8</sup> Yet, companies do comparatively very little testing when it comes to allowing people to exercise control over their experience of services.<sup>9</sup>

It's encouraging that Apple, Google, Facebook and others have both made recent amendments to the way they handle consents and controls (discussed in more detail later in

<sup>&</sup>lt;sup>3</sup> Doteveryone (2020). People, Power and Technology: The 2020 Digital Attitudes Report.

<sup>&</sup>lt;sup>4</sup> CDEI (2020). <u>Attitudes to Online Targeting: Public Engagement Research</u>.

<sup>&</sup>lt;sup>5</sup> Competition and Markets Authority (2020). <u>Online platforms and digital advertising market study final</u> report.

<sup>&</sup>lt;sup>6</sup> Ofcom (2020). Online Nation 2020 Report.

<sup>&</sup>lt;sup>7</sup> Doteveryone (2019). <u>Engaging the Public in Responsible Technology</u>. Behavioural Insights Team (2019). <u>The behavioural science of online harm and manipulation</u>, and what to do about it.

<sup>&</sup>lt;sup>8</sup> Competition and Markets Authority (2020). <u>Online platforms and digital advertising market study final</u> <u>report</u>. See paragraph 4.221 page 207.

this report). However until now these changes can be characterised as adjustments to the status quo. In this work we explore a more fundamental change in approach. We aim to:

- 1. Identify ways to design online controls that empower people to understand their choices and set their preferences to reflect their wishes.
- 2. Provide companies with evidence-based tools and techniques to design environments that will empower their users.

We do not try to match the level of design and user experience that technology companies would create with the talent, time and resources available to them. Instead our intention is to illustrate what is possible and to create artefacts that will provoke change.

As well as challenging industry practice, this project aims to contribute to the ongoing policy development around regulation including the forthcoming Online Harms legislation<sup>10</sup>, the Digital Markets Taskforce<sup>11</sup>, the Information Commissioner's Office's Age Appropriate Design Code<sup>12</sup> and the CDEI's review of online targeting.<sup>13</sup> These initiatives all recognise the need for clearer information and better choices to allow people greater control over the services they use and demonstrates that the public has a role to play - alongside regulation - in shaping and improving the tech landscape.

The civil society organisation 5 Rights Foundation has also published work in this space with it's Risky By Design website. Among other concerns, the site highlights various risk factors to children that arise from design choices and defaults present in many popular digital services. <sup>14</sup>

The work has the potential to cover a vast range of services and so we have focused our work on researching the most used types of service in the UK and developing prototypes for the most essential and commonplace aspects of choice in online services.

In the report that follows we:

- explore the existing barriers to achieving an empowering online environment that involves more active choices, by understanding people's current experience of making choices online as well as the industry approach to designing choice into products and services;
- describe potential prototypes that could overcome the barriers we identified;
- propose how to **test** the ideas that we have developed.

<sup>&</sup>lt;sup>10</sup> HMG (2020). <u>Online Harms White Paper.</u>

<sup>&</sup>lt;sup>11</sup> Competition and Markets Authority (2020). <u>Digital Markets Taskforce</u>.

<sup>&</sup>lt;sup>12</sup> Information Commissioner's Office (2020). <u>Age appropriate design: a code of practice for online</u> <u>services</u>.

<sup>&</sup>lt;sup>13</sup> CDEI (2020). <u>CDEI Review of online targeting</u>.

<sup>&</sup>lt;sup>14</sup> 5 Rights (2020). <u>Risky By Design</u>.

## 2. Barriers to active choice

'Active' choices are made when **people are empowered and able to reflect their wishes** without obstruction, based on an understanding of the consequences.<sup>15</sup>

Figure 1: Identifying three components of active choice



It is important to understand both where people experience barriers to active choices and what prevents industry from meeting these needs. We explored these questions through primary and desk research (a full write-up is published alongside this report)<sup>16</sup> as well as interviews with experts and practitioners. Based on this we identified the highest priority user contexts in which to develop and test prototypes.

### People's experience

Detailed information on people's experiences of online choices is not readily available as technology companies do not collect and/or publish data on levels of engagement with choices on their services, nor do they monitor people's satisfaction with the choices they make.<sup>17</sup>

In the absence of this information, we reviewed a wide range of settings and choices across services: account management, browser settings, ordering of content and search results, device set-up, voice assistants, privacy tools, pop-ups, controls and video calling/conferencing apps.

<sup>&</sup>lt;sup>15</sup> This definition is based on our primary research and review of the literature. It is intended as a pragmatic focus for the purposes of the project that encapsulates the needs identified in our exploratory work.

<sup>&</sup>lt;sup>16</sup> Behavioural Insights Team (2020). <u>Active Online Choices: Designing to Empower Users. Summary</u> of Desk Research.

<sup>&</sup>lt;sup>17</sup> Competition and Markets Authority (2020). <u>Online platforms and digital advertising market study</u> <u>final report</u>. See paragraph 38, page 14: "Most platforms only collect limited data about consumer engagement with their privacy settings and controls.", and paragraph 4.80, page 171 onwards.

This showed barriers exist both in being able to access opportunities to express a choice, and secondly in being able to understand and weigh up the trade-offs involved in choices once they are presented.

The high prevalence of defaults creates a significant inhibitor to people engaging in choices. For example, live streams are public by default on some social networks<sup>18</sup> and autoplay is the default on most video streaming services. People receive personalised advertising by default on Google Search and Bing and content is by default filtered and ordered on Twitter and Facebook by algorithms consumers know little about. Given people's tendency to stick with a default option, it was surprising how little transparency there was to justify a preset default choice and how this selection relates to the public's preferences. Defaults may reduce the effort required by users if set in line with the majority of people's preferences but are not a substitute for engaging people in proactive choice.

People are also inhibited from making choices because it's hard to navigate to the correct part of the service, as shown in Figure 2 for an Instagram user trying to change their advertising preferences. Prompts to change preferences are often offered at sign-in, the moment when people are generally most keen to access the service, meaning the urge to use the service is more likely to override engagement with settings.

These frictions and inconveniences have also been noted by the CMA.<sup>19</sup> Following a formal evidence gathering request it found that less than five percent of people who joined Facebook in February 2020 engaged with advertising preferences or privacy controls within 30 days of registering.<sup>20</sup>

<sup>&</sup>lt;sup>18</sup> Also reported in 5Rights Foundation (2020) <u>Risky-by-Design. Case Study: Livestreaming</u>.

<sup>&</sup>lt;sup>19</sup> Competition and Markets Authority (2020). <u>Online platforms and digital advertising market study</u> <u>final report</u>. See paragraph 37, page 14: "... we have identified many examples of how platforms' choice architecture and use of defaults inhibits consumers' ability to exercise informed choice and nudges consumers into making choices that are in the best interest of the platforms.".

<sup>&</sup>lt;sup>20</sup> According to data submitted to the CMA as part of their market study. Competition and Markets Authority (2020). <u>Online platforms and digital advertising market study final report</u>. Paragraph 38, page 14, and Table 4.2, page 175.

Figure 2: Example flow for a person trying to change their Instagram ad preferences

		<	Setting	S				
		Q Se	arch					
0	Settings	+은 Fo	llow and invite friends		5	About instagram aos		
5		() Yo	ur activity	<		We're working to make sure that ads stay true to the spirit of the Instagram community. Here's how they	×	About Instagram ads
-9	Archive	~		Ad activity		work.	Adjust you	ur ad topic preferences on Instagram
:5	Your activity	Ú No	otifications	Addenvity		Sponsored posts	You can cl	hoose to see fewer ads on Instagram related
0		A Pri	ivacy	About ads		You can tap on the menu icon to hide ads you don't find relevant.	to certain preference	topics through your Instagram ad topic es. Keep in mind, your ad topic preference
O	Nametag	🕝 Se	curity			How does Instagram decide which ads to show me?	selections Instagram	are only applied to your ads experience on
	Saved	🚍 Pa	yments			What can I do if I see an ad I don't like?	You can u you see o	pdate your ad topic preferences for the ads n Facebook and other Facebook Company
ŧΞ	Close friends	<pre></pre>			Does Instagram let advertisers use my photos or videos?	Products, but keep in mind your selections will not apply on Instagram. Learn how to update your ad topic preferences for the ads you see on Facebook and other Facebook Company Products.		
+උ	Discover people	(2) Ac	Account					
		(?) He	alp		5	Learn more about advertising on Instagram.		
		(i) Ab	oout		>			

Even where people do get as far as making choices, the explanations they are offered are superficial (e.g. "making advertisements more relevant") and it's hard to find deeper information about the purposes of different practices. For example, Facebook has a section about "Why you see a particular ad" that is located along the following path: "Settings" > "Ads" > "Ad Preferences" > "How Facebook ads work" > "Why you see a particular ad".

Our review of Safari and Firefox found that both browsers tell users that changing cookie settings may "break sites", without further information of what that entails or how making this choice would have this effect.

There are some isolated examples of good practices to engage people on privacy matters, such as Google's "privacy checkup" which uses simple language and frames statements around desired outcomes. However even in this case, like in the majority of services we reviewed, defaults were set in favour of greater data use when users may prefer the default to be more limited data use.

Overall our primary research found that in the current presentation of online choices people tend to lack:

- Useful guidance through choice settings including an architecture that is intuitive to navigate and presents practical, relatable information at the moment of choice;
- Prompts at convenient moments, when they are likely to have the time and motivation to engage, and opportunities for ongoing engagement.
- The opportunity to make proactive and forced choices over important features, such as the data shared with a platform, when these choices are subject to defaults and hidden out of sight.
- Balanced, Plain English explanations the inherent trade-offs in certain choices, such as personalised advertising, as well as a lack of transparency over why defaults are set the way they are.

These practical examples are reflected in wider research into what people say when asked about their experiences online. Numerous surveys across different aspects of online experience (including data, targeting, content feeds and algorithmic curation) show that people feel a lack of control.<sup>21</sup> Recently, for example, the CDEI found that only 36% of people feel they have "*meaningful control over online targeting systems*".<sup>22</sup> Only 33% of people believe that companies will actually do what users request through their settings and preferences.<sup>23</sup>

Figure 3: Percentage of people who do not feel in control over aspects of their online experience



Source: DMA (2018). Data privacy: <u>What the consumer really thinks</u>. Question: "How much control do you think you have over the following? Please use the scale from 1 to 10 where 1 is 'I don't feel I have any control at all' and 10 is 'I feel that I have complete control'". Graph shows the % who feel they are not in control (1-4). Sample size of 1,047.

Research also indicates a gap between people's stated preferences and their behaviours online, suggesting they are not able to make active choices. This is most starkly illustrated in the 'privacy paradox' in which people's stated level of concern about their privacy has very low or no correlation with their actual behaviour.<sup>24</sup>

Based on our research we found a number of issues may contribute to this, including limited understanding of the way online services work, impenetrable Ts&Cs, difficulty in identifying and articulating what their own preferences may be, and the lack of feedback about the impact of any choices. We also identified the influence of behavioural factors such as habit,

<sup>&</sup>lt;sup>21</sup> See, for example, DMA (2018). <u>Data privacy: What the consumer really thinks</u>.

<sup>&</sup>lt;sup>22</sup> CDEI (2020). Online targeting: Final report and recommendations.

<sup>23</sup> Ibid.

<sup>&</sup>lt;sup>24</sup> Baruh, L. et al. (2017). Online Privacy Concerns and Privacy Management: A Meta-Analytical Review. Journal of Communication 67 (2017) 26–53. <u>https://doi.org/10.1111/jcom.12276</u>.

status quo bias, overconfidence, and present bias.<sup>25</sup> All of these factors will need to be addressed to empower users to make active choices.

### The industry view

As well as considering the public's experience, we explored the tech industry's approach to user empowerment online.

As context, we know that there is a strong appetite for responsible practice within the UK industry: 80% of tech workers believe companies have a responsibility to ensure their technologies don't have negative consequences for people and society and 63% would like more opportunities to assess the potential impacts of their products.<sup>26</sup> Our work also coincided with announcements by Apple to introduce structured categories for data consents, <sup>27</sup> by Google to improve privacy controls and allow users to set their data to automatically delete after 3 or 18 months,<sup>28</sup> and by Facebook to guide users through privacy options via Privacy Basics.<sup>29</sup> Facebook also launched a whitepaper focused on working with regulators, governments and civil society to improve communication of privacy information, stating that people have to be "meaningfully informed, in a way that empowers them to make choices about how they participate online and share their data".<sup>30</sup> There are also ongoing initiatives such as those by Projects by IF and TTC Labs which are exploring greater user control (see Box 1).

#### Box 1: Two ongoing initiatives to improve the presentation of people's choices

**Projects by IF** have created a '<u>data patterns catalogue</u>' to help design teams determine how, when and why to collect data about people. The catalogue covers advantages, disadvantages and examples of different techniques (such as just-in-time consent) applicable to contexts such as giving and removing consent, getting access to data, and understanding automated decisions. It also helps users and educators by explaining a range of designs, processes and settings in a single shared language.

**TTC Labs** is a cross-industry effort created by Facebook to improve trust, transparency and control over data use and privacy in digital products. The lab has run workshops across the world and publishes outputs in an <u>open-source toolkit</u>. The toolkit includes design assets suitable for different groups such as young people and startups, plus tools for planning, discovery, ideation and prototyping new solutions.

<sup>&</sup>lt;sup>25</sup> Present bias is a tendency for people to give greater weight to immediate costs and benefits of an action, relative to longer term costs and benefits.

<sup>&</sup>lt;sup>26</sup> Doteveryone (2019). <u>People, Power and Technology: The Tech Workers' View</u>.

<sup>&</sup>lt;sup>27</sup> Apple (2020). <u>Apple reveals new developer technologies to foster the next generation of apps</u>.

<sup>&</sup>lt;sup>28</sup> Google (2020). <u>Keeping your private information private</u>.

<sup>&</sup>lt;sup>29</sup> Facebook (2020). <u>Guiding You Through Your Privacy Choices</u>.

<sup>&</sup>lt;sup>30</sup> Facebook (2020). <u>Communicating About Privacy: Towards People Centered and Accountable</u> <u>Design</u>, p.3.

In conversations with current and former employees at a range of technology companies<sup>31</sup> we found that barriers to empowering users grouped around three themes:

- Perceived design trade-offs between control and usability;
- Challenges when user control is treated as a siloed 'product' within organisations;
- Organisational culture.

#### Perceived trade-off between control and usability

Some tech workers told us they had to balance individuals' control with their companies' focus on achieving utility, convenience, and a smoother user experience.

Product designers generally wanted to create the best user experience for their product and were alive to concerns about how to integrate user empowerment features. They highlighted the challenge of explaining complex trade-offs in simple and understandable language. Designers felt increasing friction for users by adding more clicks, or having them read detailed privacy policies, was something "users wouldn't want".

Former employees suggested that the mindset of rapid user growth - and the excitement associated with it - often outweighed concerns for user control. Some interviewees suggested that designers do not have sufficient training to weigh up user empowerment relative to other priorities.

These findings echo Doteveryone's experience when working with organisations to apply responsible innovation approaches.<sup>32</sup> There is often no route for product teams to flag issues of concern within the organisation, incentives tend to focus on speed of development, and products are optimised for the needs of revenue generation (often through advertisers) rather than the needs of the users of a service.

#### Personalisation and privacy as siloed issues

Another common theme in our conversations was that personalisation and privacy settings are often carved out as standalone 'products', designed by specific teams and tested for success on their own terms. For example, users are shown the product's privacy settings and asked to complete certain tasks, rather than thinking about these issues holistically or integrating comprehension and choice into the core user experience. Some companies argued that users do not value user control highly enough to make it a core product feature or design consideration.

Siloed products may lack sophisticated higher-level or qualitative metrics that form part of a firm's assessment of whether a product fulfils users' needs and wishes. This means they may be less of a priority compared to other product design concerns such as user engagement and revenue generation. More fundamentally, it may be that commercial interests to collect

<sup>&</sup>lt;sup>31</sup> On a confidential basis, we spoke to individuals currently or formerly employed across seven multinational and UK-based technology companies. Some of these companies provide a large portfolio of products and services, others operate a single product. Most individuals and groups we spoke to were working directly on the products and services, although we also spoke to policy representatives and recent employees.

<sup>&</sup>lt;sup>32</sup> See Doteveryone work on <u>Responsible Innovation</u>.

and monetise data, for instance for personalised advertising, trump initiatives to allow consumers to make choices which may make revenue generation harder.

The separation of privacy from 'core' products has also been highlighted by the CMA when giving evidence to the House of Lords: "we were surprised to find out how little testing is done by platforms in relation to consumer control over data and use of privacy settings, which stands in stark contrast to the very extensive trialling done on a daily basis in other parts of the business."<sup>33</sup>

#### Organisational culture and integration of privacy and product teams

Even within the relatively small sample of organisations we engaged with, it was clear that different organisations had very different approaches. This is reflected in how their products work to empower users, protect privacy, and otherwise support people to pursue their interests. Differences in approaches may reflect organisational missions and cultures as well differering operational realities between larger and smaller and private and non-profit entities.

Some interviewees highlighted that both trust and security designers as well as company lawyers were usually involved throughout the product development process. This indicates that embedding specialists in user empowerment as part of the product design teams could be a starting point for integrating more user control into the core design and function of a service.

As examples of good practice, organisations pointed to an active 'data minimisation' approach and changing their products to bring user controls into more prominent and consistent locations. Others talked about 'layering' descriptions of what they do with data in order to provide graduated levels of complexity (from simple to more advanced).

In sum, our research with industry suggests that significant changes to how companies engage and empower users about personalisation, privacy, and other choices will require the product development process to consider users' experience of the service as a whole, rather than a series of separate user experiences. This is both to prioritise active choice as a user outcome (which doesn't need to come at the expense of usability) and drive the cultural and organisational change needed to implement new designs. Identifying and prioritising metrics for the quality of user empowerment achieved through settings could be a positive first step.

### **Prioritising areas for improvement**

Users encounter choices across a vast and diverse range of online products and services. This project does not aim to create solutions for every possible scenario. Instead we have explored the potential to reimagine the experience of making choices across three frequent, essential and commonplace contexts: the Android operating system, an internet browser, and a social media feed.

<sup>&</sup>lt;sup>33</sup> House of Lords Select Committee on Democracy and Digital Technologies (2020). Report of Session 2019-21. <u>Digital Technology and the Resurrection of Trust</u>. Paragraph 399, page 120.

These cover different levels of online experiences: device operating systems (which control settings across a phone), internet browsers (which control people's experiences on webpages), and individual social media platforms (which control a particular application). The three contexts also encompass a breadth of issues currently of concern to users, ranging from privacy to misinformation. Each also offers the opportunity to create a 'moment' where it's possible to engage people's attention with a choice.

Scenario	Example preferences to express		
<ol> <li>Updating smartphone operating system (OS)</li> </ol>	<ul> <li>Overarching privacy settings, e.g. giving apps access to location data, camera and microphone</li> <li>Default of normal or private web browsing windows</li> <li>Sharing phone usage data with Google</li> </ul>		
2. Web browser settings	<ul> <li>The information the user shares with the browser and the websites they visit</li> <li>How websites are presented to the user</li> <li>Ability to block particular types of website or content</li> </ul>		
3. Social media settings	<ul> <li>Organising feed content (e.g. chronologically or algorithmically)</li> <li>Filtering of untrustworthy sources and/or fake news</li> <li>Sharing settings to determine who sees content you post</li> </ul>		

Table 1: User contexts used to frame development of prototypes

### 3. Prototypes to take forward

We aim to reimagine the ways people are presented with choices in order to overcome the barriers identified above and enable people to make meaningful decisions. We have created prototypes that demonstrate active choices where people are empowered and able to reflect their wishes without obstruction, based on an understanding of the consequences.

We drew on a number of approaches to help frame this process and develop design sketches that promote active choices. Throughout, we drew on the behavioural science principles identified in our literature review, summarised in Table 2 below (further details of this are included in the full write-up that is published alongside this report).<sup>34</sup>

Principles Key behavioural insights Factors affecting effective information disclosure 1. Recognise users' limited Shorten and simplify information as much as possible Summarise information in bullet-points time and mental Present information in short chunks and 'just in time' • capacity 2. Maximise ease of Minimise the friction needed for people to find • information (e.g. no. of clicks) navigation 3. Consider the timing of Disclose information at timely moments, such as when a service changes disclosure Disclose information early in a journey • 4. Personalise the content • Tailor information to the user Only show content that is relevant 5. Make the information Make key information stand out • Use diagrams, visualisations or comics to help explain salient or visual concepts Factors affecting people's ability to express choice 6. Check framing and Set fair and transparent defaults Avoid steering decision making by removing defaults defaults and forcing choices Appreciate the nuances of framing, using existing research or by testing 7. Make the trade-offs Allow people to interact with, or experience, what the • choice means interactive

Table 2: Summary of principles to improve user disclosure and choice

<sup>&</sup>lt;sup>34</sup> Behavioural Insights Team (2020). <u>Active Online Choices: Designing to Empower Users. Summary</u> of Desk Research.

8. Find the right granularity of choice	<ul> <li>Give choices at a level of granularity which is meaningful to people and can be understood</li> <li>Offering additional choices can in itself can reduce privacy concern and increase willingness to disclose</li> <li>Intermediaries may usefully aggregate choices for people</li> </ul>
<ol> <li>Ensure comparability of options</li> </ol>	Allow people to make direct comparisons across options by providing consistent information
10. Allow people to help their future selves	• Offer tools for people to set reminders, commitments, or time-limits on the choices they set today

In workshops with the project team and external experts we came up with a large volume of potential ideas that aimed to address the challenges identified. We also drew on BIT's EAST (Easy, Attractive, Social, and Timely) framework for evidence-based techniques for encouraging behaviour change.<sup>35</sup> Building on the features in the table above, several common features appeared in the context-specific sketches:

- Integrate user choice into the core flow of the service rather than siloed in a separate 'settings' part of the app.
- Allow people to give a choice a 'trial run' and learn from experience, especially when the consequences of that choice may be hard to explain or not immediately visible .
- Design for the 'furthest first', ensuring that the status quo or default options will support the needs of the most vulnerable, where additional options allow more experienced users to customise their settings.

We then ranked the ideas according to their likely impact and feasibility (as outlined in <u>Annex</u> <u>A</u>) to produce the shortlist presented below. These tables set out our motivation behind aspects of the design, the key features, and further considerations (including limitations).

The designs selected are intended to demonstrate a broad spectrum of potential changes, from relatively minor interface redesigns and language tweaks, through to more foundational alternatives to the status quo. The core ideas presented - such as a recognisable 'private mode' or the ability for trusted third parties to set defaults - are shown in one of the three chosen contexts but intended to be transferable to other situations, such as the design of data intermediaries. While some designs are more radical, all are intended to be technically feasible for companies to implement.<sup>36</sup>

<sup>&</sup>lt;sup>35</sup> Behavioural Insights Team. (2014). EAST: Four simple ways to apply behavioural insights.

<sup>&</sup>lt;sup>36</sup> All designs are mock-ups at this stage. The designs have not been endorsed by Android or other digital services.

	\$	•	Your system has been updated		
	Privacy and personalisation	Your system has been updated Android can help you choose the privacy and			
	[Name], choose how this device and your apps can collect and use data about you.		you automatically choose your privacy and		
	It's quick and easy to control how much personal data is collected from your Android	Regular Private	View settings recommended by:		
	device.	Apps with permission <b>have access</b> to your camera, location and microphone at all times. New browser windows will open in <b>normal</b> <b>browsing</b> mode.	Which?		
	multiple setting at once.		& mind		
	Connected Palanaed Drivets	Personalised advertising based on your device information will be <b>on</b> .	Google		
	Connected Balanced Private	Usage data <b>will</b> be shared with Google.	Other options:		
	These settings are a starting point which you can <u>customise yourself</u>	Click here to customise these and other options	Choose another time		
Design	1A: Slider for app permissions	1B: 'Private mode' for smartphones	1C: Delegating choice to a trusted third party		
Key features and rationale	<ul> <li>Clear call to action and emphasis of ease of making changes.</li> <li>Bundling settings for multiple apps reduces user effort.</li> <li>Subsequent screens explain what will change and allow people to customise the settings.</li> </ul>	<ul> <li>The concept of a 'private mode' should be familiar to <u>~50% users</u> from private browsing modes on web browsers.</li> <li>Text appears below the selection to explain the consequences of the choice before people click "Confirm"</li> <li>Subsequent screens allow users to customise each of these settings.</li> </ul>	<ul> <li>Delegating to a trusted third party minimises effort to understand and enact default settings in multiple domains, which people can then customise.</li> <li>Suggestions from well-known organisations might increase people's confidence and trust.</li> <li>Text appears when an option is selected to describe the aim of the organisation and the changes that will be made.</li> </ul>		
Further thoughts	<ul> <li>The middle option allows some apps access to data when it is essential for basic app functioning (e.g. location for map apps)</li> <li>The default option selected is likely to have a big impact on people's choice and may be best presented as a forced choice. This should be determined through user engagement to reflect a common or typical user view.</li> </ul>	<ul> <li>A designer or policymaker would need to define the choices that are bundled within the 'private mode' toggle.</li> <li>The naming of the two modes might impact people's choices. For example, calling the first mode 'Regular' might signal that it is a default, normal or recommended option. If so, choosing 'Private' might be perceived as a deviation from the norm rather than an equally valid choice.</li> </ul>	<ul> <li>People may struggle differentiating or making a choice between the organisations, or rely on brand recognition rather than the substance of the third-party offering.</li> <li>People could be given a user-generated rating for each bundle (e.g. "Which? is rated 4.6 out of 5 by other users").</li> </ul>		



### How do you want to use the internet?

Pick one of the four areas below. We'll adapt your browser settings and extensions to help you manage how websites collect data about you and personalise website content.



Design	2A: Graduated control options	2B: Four-box grid to express preferences
Key features and rationale	<ul> <li>The first option should help people to engage with quick, small and simple privacy and personalisation choices. The other two options might appeal to those who are more tech savvy and willing to invest more time and effort to customise their experience.</li> <li>The options could present and bring together several different functions of a browser in one place, e.g. relating to cookie settings and browser extensions for various purposes.</li> <li>Trial runs are encouraged, to help people learn what they do and don't like in practice and engage on an ongoing basis.</li> </ul>	<ul> <li>Asks people for their views on two aspects of their online experience and then adjusts settings accordingly, without people having to engage with a more conventional settings screen that has lots of toggles.</li> <li>Draws on ideas from the finance context, where people express a preference for risk and an investment portfolio is automatically created without the person having to get into the detail of different financial assets.</li> <li>Visual presentation might make it easier for some people to process the information and understand the choices.</li> <li>Responsive information below the choice lists changes that will be made.</li> </ul>
Further thoughts	<ul> <li>The content of the three packages could be developed to best suit three different user segments.</li> <li>During the trial period, firms could test ways to flag and explain changes caused by people's choices as and when they happen (e.g. "Experimental tool: fact check notices have been added this news article"), and regularly check-in with users on their choices.</li> </ul>	• User testing can determine the definition and framing of the two dimensions, and check accessibility of the interface for different groups



#### **Customise The Feed**

Decide what you see in your Feed.

#### Less filtered

Filter out spam and clickbait	
Removes low quality content we don't think will interest you	
Filter out more extreme viewpoints	
Strater litering of content flagged by others as unsuitable (but which is still within our acceptable content policies)	
Filter out posts from untrustworthy news sources	
sources	
filtered	
	Removes <u>low quality content</u> we don't think will interest you Filter out more extreme viewpoints Stricter filtering of content flagged by others as unsuitable (but which is still within our acceptable content policies) Filter out posts from untrustworthy news sources Hides content that isn't from the independent <u>list of trusted sources filtered Confirm</u>

### Try The Feed in private mode

Switch to a more private version of The Feed.

- The ads you see will be based on your basic profile information only (age, gender, location, education), not <u>tracking data</u>
- We will not use tracking data to order the content in your feed. You will see the most recent posts first
- Your posts and photos will be shared with your friends and you'll be warned before <u>sharing posts more widely</u>



### Customise all settings

X

#### Preview changes to your Feed

Use Toggle the settings below to see how the posts and ads in your Feed change. Choose the settings you prefer.

#### Personalised Feed ordering

We use use tracking data to prioritise content in your feed. Turn this off to stop tracking and see most recent posts first.

#### Personalised ads

We use <u>tracking data</u> to personalise ads. Turn this off to stop tracking and see ads that use only your basic profile information (age, gender, location, education).

#### **Trusted sources**

Activate to see links and posts in your Feed from trusted sources only. We use this list of trusted sources.

Design	3A: Feed filtering slider	3B: 'Private mode' for social media	3C: Responsive personalisation toggles
Key features and rationale	<ul> <li>Sliders are found to be effective in aiding consumer decision-making in other contexts, such as <u>finance</u>.</li> <li>Short explanations clarify the status quo or the consequences of each choice, with links to learn more.</li> <li>Choices are cumulative, to minimise clicks and encourage people to enact the least impactful degrees of filtering (e.g. reduce spam).</li> </ul>	<ul> <li>As in Design 1B, the concept of 'private mode' might tap into people's existing digital vocabulary.</li> <li>Bundling a number of changes within a single switch removes friction for users to enact multiple privacy-enhancing changes.</li> <li>People tend to under-adjust when making decisions from a given starting point, so a simple toggles that re-configure several settings before people customise them should help people fully reflect their preferences.</li> </ul>	<ul> <li>Gives the user immediate feedback, with the content in the feed below changing as the toggles are used.</li> <li>Prioritises a small number of settings that people may be interested in, avoiding the need to navigate several different settings menus.</li> <li>Short explanations clarify the status quo or the consequences of each choice.</li> </ul>
Further thoughts	<ul> <li>Test different educational messages displayed immediately below options.</li> <li>Could add toggles to select how content in the feedis ordered.</li> </ul>	<ul> <li>As in Design 1B, someone needs to define the choices that are bundled within the 'private mode' option.</li> <li>Separate toggles could be added to each setting so that people who don't want to change one of the settings could still benefit from changing the rest with one click.</li> </ul>	• A designer or policymaker would need to decide which choices to highlight. These could be the choices considered most important or of greatest concern to people.

X

# 4. Testing what works

While our prototypes are grounded in the available research, without testing it is not possible to know how effective they will be. Robust evidence will also help policymakers and practitioners to drive changes to existing practices.

We intend to test our prototypes through focused qualitative research followed by online experiments to generate robust evidence on the impact of different designs on people's behaviour.

The qualitative research can help us to understand how and why different design elements of the prototypes we have created may or may not be accessible, helpful, and/or intuitive to a wide range of user groups and test the assumptions and principles that underpin the designs. User testing will involve a mix of interviews and observations of people interacting with the designs to identify any remaining barriers to active choice. This feedback will help us to sense-check and refine elements of our designs before carrying out large-scale testing to produce quantitative evidence of impact.

Online experiments with over 5,000 participants will be used to test the effectiveness of each of our prototypes against a business-as-usual 'control' experience. Specifically, they can assess to what extent each design achieves the three components of active choices as defined in Figure 1:

- Ability to make choices in line with preferences
- Understanding of consequences
- Feeling in control

To measure whether choices are in line with preferences, participants will be asked to make choices that meet the preferences of a simplified persona. These personas will be developed based on existing consumer research<sup>37</sup> combined with people's preferences revealed in the qualitative research.

In this way we can compare the level of discrepancy between the choices participants make and the ideal choices of the personas in each of the scenarios, and hence identify the designs where preferences and choices best align. Using personas ensures that people have a clear, achievable goal when engaging with the task. It avoids the significant challenges of eliciting detailed and truthful preferences from people, who may not have strong preferences themselves, and doing this in a way that does not then influence behaviour in the experiment. To support the persona approach and check that it works as intended, we will explore people's self-reported preferences vis-à-vis the personas.

<sup>&</sup>lt;sup>37</sup> Such as the personas developed by TTC Labs: Diverse Set of Personas.

Making active choices is not just about getting the 'right' option but also appreciating the consequences of different options and feeling in control. We therefore intend to assess these outcome measures alongside people's ability to make choices in line with preferences.

Secondary outcome	Example questions	Notes
Knowledge about the consequences of the choices people have just made A single score based on 4-6 multiple choice questions to test understanding	<ul> <li>Based on the choices you just made, which of the following links might you see in the feed?</li> <li>Based on the choices you just made, what information will Google Maps collect if you go out for dinner this evening?</li> </ul>	• We recommend testing applied comprehension (i.e. "in practice, will X happen?"). This goes beyond direct comprehension (i.e. "have you opted out of X?"). <sup>38</sup>
Feeling of control or empowerment over choices One question with a 5-point Likert scale answer format	<ul> <li>Having reviewed the settings, to what extent do you feel you had control over [the content in the Feed] on the platform?</li> <li>To what extent did the site allow you to exercise free and unobstructed choice?<sup>39</sup></li> </ul>	Offers an interesting comparison relative to actual control (the primary outcome measure) as well as evidence on the control paradox: does having more or less choice affect feelings of control?

Table 3: Provisional secondary outcome measures

These secondary measures will also offer insight into whether the designs are likely to help people in real situations who have weak preferences or haven't previously considered the trade-offs, for example by checking if people have a better understanding of the consequences of choices.

We will also explore outcomes such as the time it takes to exercise choice and people's views on the usability and trustworthiness of the services. The project ultimately seeks to determine which types of design prove the most effective in cutting across these considerations. The set of outcome measures should also help to make a case to industry to take up a new approach to design and to policymakers to consider how to encourage new approaches to be implemented.

<sup>&</sup>lt;sup>38</sup> For an example application, see experiments on improving the Bank of England's communication of inflation information: Behavioural Insights Team (2019). Enhancing central bank communications using simple and relatable information.

<sup>&</sup>lt;sup>39</sup> Similar questions were used to assess design changes in an experiment aimed at improving people's choices on an NHS procurement platform: Behavioural insights Team (2020). Improving NHS procurement with a behavioural procurement platform.

## 5. Conclusion

This work confirms the need to create opportunities for active choices so that people can shape technologies in line with their own values and preferences. In imagining and testing alternative approaches we can challenge tech companies to do better by the people who use their products and services.

In both primary and secondary research we've found extensive evidence that people are denied meaningful choices over their digital products and services. During the course of this work the Competition and Markets Authority<sup>40</sup> and the House of Lords Committee on Democracy and Digital Technologies<sup>41</sup> have both published reports that emphasise this gap and recognise the urgency of addressing it. The industry initiatives in the same period from Apple, Google and Facebook to amend their approaches to user choice for data and privacy also indicate that tech companies are beginning to respond to the pressure for change.

In our prototyping we have shown how even without the significant resources of many of the big technology companies it's possible to imagine substantially different ways for people to gain control over their digital services. Our approach demonstrates that tech companies could, if they chose to, start doing this now.

In future testing we will gain deeper insight into how that change can be achieved and to derive practical and scalable findings. Online experiments will deliver gold-standard evidence of the impact of design changes on people's ability to reflect their views, understand the consequences of their choices and feel in control of their online experience. The resulting findings will be based on the behavioural foundations identified in this report and make a compelling case to companies and policymakers of the potential impact of redesigns on people's online experience and metrics such as trust in tech companies.

In the next phase of our work we will create actionable recommendations to trial in the field and implement.

<sup>&</sup>lt;sup>40</sup> Competition and Markets Authority (2020). <u>Online platforms and digital advertising market study</u> <u>final report</u>

<sup>&</sup>lt;sup>41</sup> House of Lords Select Committee on Democracy and Digital Technologies (2020). Report of Session 2019-21. <u>Digital Technology and the Resurrection of Trust</u>.

# Annex A: Approach to prototyping

We began the process with a number of ideation activities to encourage a broad range of ideas, generating a high volume of different design sketches we might test. In subsequent reviews we ranked these ideas according to a number of specific criteria, helping to identify the best possible prototypes to trial.

#### Workshops

BIT and Doteveryone convened workshops in April and May 2020 involving participants from BIT, Doteveryone and the CDEI as well as representatives from technologists and design specialists, civil society, and policymakers. The workshop gave participants an overview of the key observations arising from the exploratory work and we focused idea generation around the three chosen contexts of a smartphone device update, web browser settings and a social media feed. Participants were encouraged to consider specific user needs for each and to draw up sketches to illustrate their ideas. For each prototype, participants also listed considerations around the policy implications, longer-term objectives, and risks.

BIT also ran internal ideation sessions using the EAST framework<sup>42</sup> to generate new and complementary ideas to those generated during the stakeholder workshops.

### Ranking ideas according to impact and feasibility

We refined the longlist of possible designs by rating each in two dimensions: impact and feasibility, as outlined below.

- 1. Impact: what magnitude of behaviour change do we think this solution is likely to achieve, based on existing evidence? We also considered:
  - a. Does it address the challenges identified in our exploratory work? Does it meet users' expectations in terms of privacy, personalisation and control?
  - b. Which users are likely to benefit most? Are we helping a broad range of users, particularly those who are currently most disempowered?
  - c. Will this concept generate insights applicable to a variety of online settings?
- 2. Feasibility: does this offer a realistic and scalable solution to the challenge? This includes feasibility:
  - a. For companies to implement: would it be prohibitively costly? Does the technology exist to do it in practice?
  - b. For policymakers to recommend and/or enforce: is there an actionable concept for companies to implement and regulators to enforce? Are there policy implementation challenges? Would it put realistic expectations on companies/regulators? Would it create undesirable incentives for companies or cause second-order effects on the market? What are societal implications?
  - c. To test in an experiment: will it feel realistic for users in a lab setting? Will interactions in a lab setting have relevance to real world environments?

<sup>&</sup>lt;sup>42</sup> Behavioural Insights Team. (2014). EAST: Four simple ways to apply behavioural insights.