

CMA update report on implementation of the Privacy Sandbox commitments

April 2023

Summary

1. This report updates on the implementation of the [legally binding Commitments](#) that Google made in February 2022 to address competition concerns relating to its proposals to remove third party cookies from Chrome and replace them with alternative [Privacy Sandbox](#) tools (see **Annex 1**). The report summarises the progress made in Q1 2023. We do not repeat points made in previous reports (published July and October 2022, and January 2023) unless they continue to raise issues that we intend to explore further.
2. Google intends to remove third party cookies from Chrome in the second half of 2024. Our aim through the Commitments is to ensure any competition concerns are addressed in the design of the Privacy Sandbox tools and that we gather evidence of the likely impacts of the changes by the middle of 2024. We plan to have robust mechanisms in place to monitor the ongoing Commitments on Google in relation to use of data and non-discrimination once third-party cookies are removed.
3. Based on the available evidence, we consider that from 1 January 2023 to 31 March 2023 (the relevant reporting period), Google has complied with the Commitments. Any developments in April 2023 will be covered in Google's next quarterly report.
4. Building on the priorities for Q1 2023, as set out in our last update report, in Q2 2023 we intend to focus on the following:
 - (a) Engaging with Google on the design and development of its Privacy Sandbox proposals with a particular focus on the Attribution Reporting API, Topics API and First Party Sets (FPS). We are also ensuring that Google applies the Development and Implementation Criteria in paragraph 8 of the Commitments in the design of its proposals.
 - (b) Continuing to engage with a range of market participants (with a particular focus this quarter on advertisers and SSPs) to identify any concerns with Google's Privacy Sandbox proposals, challenging Google where appropriate, and exploring ways of addressing concerns through alternative designs. We will be participating in W3C's Private Advertising Technology Community Group as part of this outreach. We are also keen to engage further with civil society groups to better understand the views that users might have on the development of Google's Privacy Sandbox proposals.

- (c) Progressing plans for testing the effectiveness of the Privacy Sandbox tools, including working with Google to continue its own tests, and encouraging market participants to carry out their own testing of the Privacy Sandbox tools.
 - (d) Analysing Google's internal systems, particularly around data access and flows. This is likely to be a multi-period activity to ensure that Google is in a position to comply with the data use obligations in Section G of the Commitments upon third-party cookie deprecation.
5. Although the timeline for removal of third-party cookies has been set by Google, we are keen to ensure there are no further delays in the process, provided that our competition concerns are addressed. The work we are planning to undertake, as outlined above, is intended to meet this objective.
 6. Market participants who have concerns about the design and implementation of the Privacy Sandbox should continue providing feedback to us using the contact details at the end of this report. We are particularly interested to hear from advertisers, ad techs and civil society groups (including both those based in the UK and outside of it) and would encourage representatives of these groups to get in touch. While it may not be possible for us to respond to each individual concern, raising these points means we are better able to monitor the development of the Privacy Sandbox and ensure that Google is meeting its legal obligations.

Dashboard

Dashboard: summary of CMA view on current position, January-March 2023

Relevant section of Commitments	Compliance	Level of focus by CMA ¹	Key actions during period	Summary of planned next steps
D - Transparency and consultation with third parties	Compliant	Higher focus	- Engagement with market participants on quantitative testing and development of individual APIs (eg Topics) - Continue to engage with a range of affected third parties to explore areas of concern	- Continuing to engage with market participants on quantitative testing and development of individual APIs (eg Attribution Reporting API) - Ensuring Google continues to respond to stakeholder concerns.
E - Involvement of the CMA in the Privacy Sandbox proposals	Compliant	Higher focus	- Continue to develop framework for testing and trialling - Continue to engage on design issues including approach to Topics, FPS & UACH. - Bring in views from external experts and third parties	- Encourage testing and trialling by Google and other market participants. - Engage on design issues including approach to Topics and First Party Sets
F - Standstill before the Removal of Third-Party Cookies	Compliant	Lower focus (currently N/A)	None	None
G - Google's use of data	Compliant	Medium focus	- Build deeper understanding of Google's internal data control systems - Working to ensure that necessary data use protections are fully implemented well in advance of third party cookie deprecation	- Analyse Google's proposed approach to data controls for paras 25-27 - Working to ensure that necessary data use protections are fully implemented well in advance of third party cookie deprecation
H - Non-discrimination	Compliant	Medium focus	- Refining the controls around interactions between internal working groups involved in the design of the Privacy Sandbox - Continue to apply technical knowledge to monitoring artifacts and logs	- Systematise recurring elements of reporting on Section H measures - Further testing Google's internal decision-making process, particularly at key decision points - Continue to apply technical knowledge to monitoring artifacts and logs
I - Reporting and compliance	Compliant	Lower focus	Completion of regular monitoring report(s)	- Google to continue demonstrating ongoing compliance - Prepare for next monitoring report(s)

Note: this is a summary, so it cannot provide comprehensive details on all topics

¹ While all aspects of the Commitments are important, this column is referring to the relative priorities of the CMA, and which have required a greater focus, during the course of the reporting period.

Progress during the most recent reporting period

Testing and trialling

7. The aim of testing and trialling is to gather evidence from Google and third-party market participants on the likely impact of the Privacy Sandbox tools before a final decision is taken on whether to remove third party cookies. As set out in our previous note on experiments, we are working with Google on tests that they can run within their ecosystem. However, we recognise that Google cannot observe impacts across the market as a whole, so we are also very interested in results of tests carried out by other market participants and keen to encourage third party testing. Over the past three months we have spoken to a number of ad techs and other groups who have carried out their own tests or are planning to do so. We would encourage stakeholders to continue to reach out to us if they would like to discuss their approaches to testing.
8. The results from testing and trialling will inform part of our assessment of the effectiveness of Google's proposed changes in terms of market outcomes, competition and privacy, as set out in the Development and Implementation Criteria in the Commitments. We will also take into account wider qualitative evidence and views alongside the testing and trialling results, particularly in relation to impacts that are more difficult to assess through quantitative trials.
9. To clarify how we are intending to incorporate third-party testing within our assessment:
 - (a) We are not envisaging that there will be a single, industry-wide test that companies need to sign up to participate in. Instead, we are working with Google to facilitate testing environments that can support effectiveness testing by other market participants. We have also provided guidance on the types of methodologies that we think are most likely to yield meaningful results, and the type of metrics that we are interested in. We provided initial guidance in our previous experiments note and will continue to develop this as we gain experience of how testing is working in practice.
 - (b) There is no prescribed combination of Privacy Sandbox tools that testers will be required to use. We are interested in understanding how market participants intend to adapt to the removal of third-party cookies and what the impacts would be, so testers should build the integrations that make sense for their business. For example, market participants who do not rely on interest-based advertising may not find it meaningful to test the Topics API.

- (c) Relatedly, testers are not advised artificially to constrain themselves by only using Privacy Sandbox APIs and excluding other signals or technologies they would expect to use in their live products following deprecation of third-party cookies. For example, market participants who expect to sell interest-based advertising using other signals alongside those generated by the Topics API (eg contextual data, publisher first party data) should not feel compelled to exclude such signals from their treatment group.²
- (d) Testing will take place over a period of time, and companies are not required to test in a certain timeframe beyond the amount of time necessary to gather sufficient data for their tests and make the results available to the CMA in a timely fashion. We would particularly welcome any early test results that could help identify issues or help improve and shape subsequent industry testing.
10. We have continued to discuss effectiveness testing with Google and market participants during Q1 2023. Our discussions with Google have focussed on building a deeper understanding of what ‘ecosystem effects’ the types of experiments we described in our initial [note](#) on quantitative testing of Google’s Privacy Sandbox tools can be used to measure. As we outlined in that note, there are aspects of the market for digital advertising and the Privacy Sandbox tools that make it challenging to replicate auctions for advertising inventory in a post-third party cookie world. In dedicating time to understanding these challenges, we hope to use the results of experiments as effectively as possible in our assessment.
11. Topics, FLEDGE (which Google recently renamed as Protected Audience API), and the Attribution Reporting APIs are scheduled to move to General Availability as of Q3 2023. It is during this phase that Google intends to carry out quantitative testing of the Privacy Sandbox tools. Market participants engaging in their own testing in advance of and during this phase, and sharing results with us, will help in formulating our assessment of the Privacy Sandbox tools during the Standstill period.
12. In our last update report, we described how market participants were broadly supportive of our approach to testing, but had signalled that engagement with

² In the case of interest-based advertising, market participants might find it useful to design two treatment groups in their experiments: one including other signals only (eg contextual data and publisher first party data), and another including these other signals alongside the Topics API. This approach would support the identification of the incremental benefit of the Topics API.

testing the Privacy Sandbox tools was low due to the cost and complexity involved.³

13. Market participants told us that further clarity on the timeline and technical parameters for testing might encourage engagement in advance of our assessment. Over the next quarter, we will work with Google on mitigations for any challenges to running experiments and refine a set of recommended methodologies we can share with market participants for effectiveness testing. Within the next month we expect Google to publish more detailed guidance on testing the Privacy Sandbox proposals, and to clarify how Chrome will facilitate and support third party testing.
14. We also heard that market participants would like reassurance that Google's proposals are close to their final state before dedicating significant resources to testing, including by Google publishing results of internal testing. We have continued to receive similar feedback over this period.
15. In our January report, we indicated that Google Ads was planning to run preliminary internal experiments testing the effectiveness of the Topics and Measurement APIs.⁴ Since that report, Google has conducted an experiment testing how the Topics API might affect interest-based advertising for display ads on Google platforms. Google has published the results of this experiment in a Whitepaper and accompanying blog post.⁵
16. We worked closely with Google while the experiment was in the field to understand their approach and reviewed their findings before publication. This experiment was conducted in highly Google-specific circumstances, and is only a partial test of one of the Privacy Sandbox tools – we would expect subsequent combined tests of the APIs to give a more robust reflection of likely impacts. However, we consider Google publishing the results and methodology to be an important step in providing greater transparency for other market participants about possible testing approaches and measurement of impacts.
17. Google is also in the early stages of running similar testing on the effectiveness of Measurement APIs. We will continue to work with Google to understand these experiments, and expect Google to publish results later this year when the testing is further advanced.
18. To help us formulate our quantitative testing and our overall assessment of the Privacy Sandbox tools at the Standstill period, we have recently appointed

³ CMA's Q4 2022 report, paragraph 14.

⁴ CMA's Q4 2022 report, paragraph 18.

⁵ Google's Whitepaper and blog post.

Garrett Johnson, an Assistant Professor of Marketing at Boston University, as a technical adviser working on the implementation of the Commitments. Professor Johnson was appointed through an open competitive process for his expertise in online experiments, privacy and online display advertising, as well as Google's Privacy Sandbox. We will draw on his expertise in these areas as we review and develop our testing and assessment framework.⁶

Design issues

19. As noted in our previous reports, Google's current timeline indicates that most proposals (except IP Protection⁷ and Privacy Budget) will be available for general adoption as of Q3 2023.⁸
20. We have continued to hold detailed discussions with Google during the period on several of the key Privacy Sandbox APIs, including raising with Google points that stakeholders put to us during the period, and probing on how the proposals can be designed to address the Development and Implementation Criteria in the Commitments. We summarise below the key points raised.

Topics API

21. We had previously discussed with Google early findings showing limitations in the URL-based assignment of topics to websites. In this quarter, Google has announced an improved classifier considering page titles.⁹ This should mean that websites will be assigned topics that are more representative of their contents, and therefore represents an improvement for the overall utility of the Topics API.
22. Several stakeholders raised concerns about the utility of the initial 350-topic taxonomy. In this quarter, Google is planning to announce an update to the taxonomy. Google has said it remains committed to a long-term goal of shifting governance of the taxonomy to an external party that would continuously incorporate feedback and ideas from across the industry.¹⁰ We understand that Google has been discussing its proposed new taxonomy with several market participants across the ad tech supply chain. While a few large publishers have said that greater utility of topics would increase competitive pressure on their first-party data based solutions, our preliminary view is that

⁶ You can read more about Garrett Johnson's academic work here: [Garrett A. Johnson | Assistant Professor of Marketing Questrom School of Business Boston University \(garjoh.com\)](https://garjoh.com).

⁷ IP Protection is an updated Privacy Sandbox proposal that supersedes Gnatcatcher.

⁸ privacysandbox.com/open-web/#the-privacy-sandbox-timeline (accessed 18 January 2023).

⁹ The page title is an HTML element, containing a short description of a page, and is commonly used to describe the page to users and search engines.

¹⁰ As per the Topics API explainer: [patcg-individual-drafts/topics: The Topics API \(github.com\)](https://patcg-individual-drafts/topics)

greater utility is better for competition overall – in particular for the ability of smaller publishers to continue monetising their inventory after the deprecation of third-party cookies.

23. Overall, our preliminary view is that an improvement in the utility of the individual topics would be a positive step. However, we are sensitive to the risk of a ‘full capture’ of the taxonomy by Google, and we are also keen to understand what any new taxonomy would mean for market participants in terms of updating their ad systems. We welcome feedback from the wider ecosystem.

FLEDGE (now Protected Audience API)

24. We continue to monitor developments and ecosystem feedback on FLEDGE (now Protected Audience API). Google published a blog providing greater clarity on the timeline for implementation of different features, and which would be optional in the short term. Our view is that such clarity is welcome and allows better planning of engineering resources for market participants.
25. Google also issued further information about the bidding and auction services that will support computation of part of the auction on a trusted server, as opposed to entirely on device. Our understanding is that this is beneficial and overcomes latency and user experience issues associated with on-device processing – and also enables ad techs to run more complex scripts. This is early stage and we will continue to monitor the implications of using such ‘trusted servers’, including security aspects.
26. We previously ascertained that FLEDGE enables the publisher to decide which SSP would be the top-level seller in a multi-seller auction (also referred to as component auction). Google has now also told us that FLEDGE allows each publisher to choose the structure of the auction, including the choice of top-level and component sellers (if any).

Attribution Reporting API

27. On Attribution Reporting API, we noted ad techs have, based on functional testing, asked for greater utility and in particular quicker reporting. We note that Google recently announced a move towards evaluating shorter delays (under 10 minutes) in sending aggregate reports (aggregate mode of the API). We understand also that the addition of null reports will help ensure privacy is not reduced with this change. For event-level reports, the introduction of custom report windows will also allow reports to be received one day after a click or view, instead of the previous minimum two days.

28. The CMA and the ICO noted the importance of having clarity regarding how design decisions are made about key API parameters (for Attribution and other APIs), in particular about levels of noise and delays, and how they affect the privacy vs utility trade-offs.
29. We continue to be interested in understanding how smaller publishers and advertisers will be impacted in particular by noise and delays. We welcome the guidance that Google issued in this quarter, to help market participants understand the impact of various API parameters – and in particular how to best use the aggregate mode of the API, e.g. based on volume of conversions and the product advertised.

User Agent Reduction (UAR)

30. Stakeholders have continued to express concerns about the implementation of UAR and User Agent Client Hints (UA-CH) since the publication of our last report.
31. The User Agent (UA) string is a text field supplied by clients (usually browsers) in communications exchanges with web-servers. Chrome has been reducing the amount of information in the UA string (through 'UA-Reduction') and instead requiring third parties to request the information through UA-CH. UA-CH reduces the default data supplied in the string whilst enabling servers to explicitly request specific more fine-grained data for certain use-cases.
32. UAR rollout for an increasing proportion of Chrome traffic continues largely on schedule.
33. At the CMA's request Google has carried out testing of latency incurred when critical hints are requested via UA-CH. Their findings indicate a modest latency impact, which is summarised in their latest report. We invite ecosystem stakeholders to feedback to us if they believe this particular latency will measurably impact them.
34. UA-CH functionality continues to be expanded. We note that Google has also been responsive to some developer feedback, including addressing bugs and edge cases.
35. We do not see any reason to require Google to pause the ongoing rollout at present, however we will continue to monitor latency and take-up metrics.
36. In the longer term, we will consider the impacts of UAR and UA-CH as part of our overall assessment of the Privacy Sandbox changes at the Standstill period.

First Party Sets (FPS)

37. During Q1 2023 we asked Google to clarify communications on the specification for associated sets, which were unclear across the various communications channels including the Chrome Developer blog and GitHub repositories. We understand that the final specification of the various categories of subsets is still an ongoing process in response to stakeholder feedback.
38. Google is due to change the status of the current FPS submission process from 'test' to 'live' from the end of April 2023. Previous submissions will be deleted. We continue to raise and will monitor the potential administrative burden this process may impose upon Google and are yet to be convinced that proposed automated checks on the submission process will be sufficient to ensure smooth operation of the registration (and any subsequent amendments to their first-party sets) for third parties.
39. The concern here is that although Google is introducing numerous registration and attestation mechanisms (for example, developer registration for use of Privacy Sandbox APIs), the success of FPS registration is very important to the overall functioning of Privacy Sandbox. Only one stakeholder attempted domain registration during the 'test' period on the FPS GitHub repository and they encountered problems. We do not share Google's confidence that the system will be resilient when a 'cliff-edge' is reached prior to third-party cookie deprecation and that the majority of stakeholders are motivated to submit their domains using the procedure currently available. We have raised these concerns with Google, and we will continue to monitor.

Privacy Sandbox enrolment and attestation

40. Google announced an enrolment process for organisations wanting to use key targeting and measurement Privacy Sandbox APIs. The aim is to obtain greater transparency for the ecosystem as to how each organisation intends to use these APIs.
41. Our preliminary view is that this enrolment process is acceptable as long as Google does not gain an unfair advantage from collecting additional data about the use of Privacy Sandbox API. We note that Google will make publicly available the information it collects through this enrolment process.

Other proposals

42. We have also continued to discuss with Google its plans for user controls for when Privacy Sandbox reaches general availability in 2023. Google has

presented to the CMA its current proposed user interfaces for controls relating to Topics, FLEDGE (now Protected Audience API) and ad measurement. Together with the ICO, we are continuing the dialogue with Google about this and what underlies current design decisions on the consent flow for opting in or out of Privacy Sandbox; and how this would compare with the consent flow for Google's own personalised advertising.

43. We continue to welcome market participants' feedback on any of the Privacy Sandbox proposals.

Actions and conclusions of the Monitoring Trustee

44. The Monitoring Trustee has not informed the CMA of any instances of Google being non-compliant with its obligations under the relevant paragraphs of the Commitments.
45. During the reporting period, the Monitoring Trustee has overseen Google's activities relating to paragraphs 25-27, 30-31, and 33 of the Commitments, including:
 - (a) Further refining the controls around interactions between internal working groups involved in the design of the Privacy Sandbox.
 - (b) Continuing to review compliance artifacts around internal decision-making processes (eg logs and records) to test whether Google's internal processes are being followed in practice.
 - (c) Building a deeper understanding of Google's internal data control systems in order to robustly test Google's proposals to address its commitments on Chrome browsing history, Google Analytics data, and ad inventory on websites not owned and operated by Google. These commitments only apply after Chrome ends support for third party cookies, but we are working to ensure that these controls are fully implemented well in advance of third-party cookie deprecation.
 - (d) Developing plans to investigate data flows within Google to ensure that the data controls are effective in practice (eg addressing potential risks arising from data use from any secondary storage locations).
 - (e) Speaking to, and reviewing submissions from, stakeholders who have raised concerns. We note that we would generally not expect the Monitoring Trustee to respond directly to individual stakeholder feedback,

but it would incorporate any relevant points into its overall review, as well as informing the CMA and/or Google as appropriate.¹¹

46. We would emphasise that while the Monitoring Trustee's quarterly report represents a snapshot in time, Google is subject to continuous monitoring for the duration of the CMA Commitments. Therefore, monitoring activities may be reported on as in progress or otherwise in the process of discussion, negotiation, investigation, or consideration, with a future road map of monitoring work at any given time.
47. As explained below, the Monitoring Trustee has been working closely with the Technical Expert, as well as with the CMA. Submissions (or extracts of submissions) from stakeholders which are relevant to multiple elements of the compliance regime are frequently shared between the CMA, Monitoring Trustee, and Technical Expert to ensure that they are fully addressed.

Technical Expert

48. As mentioned in the last update report, the Technical Expert aims to support the Monitoring Trustee by providing the following skills which are vital for effective monitoring of the Commitments:
 - (a) Analysing Google's data access and flows;
 - (b) Analysing technical access controls and security; and
 - (c) Providing general ad tech expertise and advice.
49. We have also continued our direct dialogue with the Technical Expert. Discussions have focused primarily on market trends and issues concerning the design and implementation of Google's Privacy Sandbox proposals.

Engagement with market participants

50. We are continuing to engage with market participants in the wider online advertising ecosystem to ensure that we become aware of, and understand, concerns about the Privacy Sandbox tools and their impact.
51. It is important to note that our own stakeholder engagement is not intended as a substitute for market participants' direct interactions with Google, and we

¹¹ Under paragraph 12 of the Commitments, 'Google will take into consideration reasonable views and suggestions expressed to it by publishers, advertisers and ad tech providers, including (but not limited to) those expressed in the W3C or any other fora, in relation to the Privacy Sandbox proposals, including testing, in order to better apply the Development and Implementation Criteria in the design, development and implementation of the Privacy Sandbox proposals'.

would encourage participants to raise substantive concerns through existing channels including W3C. Google is required under the Commitments to respond to reasonable views and suggestions, as summarised in Google's quarterly report which is published alongside this document. It is important that Google responds substantively to feedback, and we will highlight to Google where we do not consider that it has provided an adequate response and ensure that it does so.

52. Since the publication of the CMA's last report, in Q1 2023, our engagement has had a particular focus on publishers, organisations developing alternative cookie-less technologies and civil society groups. Concerns raised throughout the stakeholder engagement process have been raised with Google, and directly informed our role overseeing the design and implementation of its proposals.
53. Some publishers raised the following concerns:
 - (a) that the limit of three associated domains within Google's updated First Party Sets proposals would restrict their ability to compete with large platforms by pooling data across commonly-owned publications;
 - (b) that the Topics API taxonomy was not granular enough to support interest-based advertising, while others felt that increasing its effectiveness further would undermine publishers' own first party data efforts;
 - (c) that W3C was an unfamiliar venue for publishers, and that alternative fora should be utilised for non-technical policy discussions.
54. Companies developing alternative cookie-less technologies expressed concern that uncertainty in Google's timeline for third-party cookie deprecation had negatively impacted investment. This is a concern we have heard repeated by certain publisher associations. We recognise this concern, and as mentioned above, we do not want to see the timeline extended further, provided our competition concerns can be addressed. There is also concern that Google might restrict the ability of alternative technologies to operate through changes to its Chrome browser, and that this further contributed to uncertainty.
55. Additionally, a civil society group told us that by delaying deprecation of third-party cookies in Chrome, the commitments process was preserving the status quo and leading to a delay in the privacy benefit resulting from the removal of third-party cookies.

56. We shared the above concerns and comments with Google during the period. Google has provided responses to each point, in addition to feedback received directly, in its Q1 2023 report.
57. Through the course of our engagement, we also heard concerns related to Google's proposed Android Privacy Sandbox. As previously noted, Google's Android developments are not included within the scope of Google's Commitments agreed with the CMA, although we have passed on feedback to Google where appropriate.
58. Since our last report, members of our case team have joined W3C's Private Advertising Technology Community Group. We do not intend to play an active role in the group but we will be observing the ongoing debate.
59. We are continuing to discuss these issues with Google and other stakeholders, and will continue to monitor developments in W3C over the next reporting period. Given the global nature of Google's developments, we welcome feedback from organisations both within and outside the UK.

Engagement with the ICO and international authorities

60. We have continued to work together with the ICO in implementing the Commitments. The ICO's role has included:
- (a) Participating in discussions with us and Google on the development of the Privacy Sandbox tools, analysing data protection impacts with a specific emphasis on user controls;
 - (b) Continuing to work with us on plans for the wider assessment of the Privacy Sandbox tools, including assessing privacy impacts; and
 - (c) Engaging with market participants on proposed alternative technologies to targeting.
61. We have also continued to engage with our international counterparts and data protection authorities on the of implementation of the Commitments in an effort to identify any issues of common concern and ensure consistency of approach.

Current views and next steps

62. Based on the available evidence, we consider that Google has been compliant with the Commitments.

63. Over the next three months, we are planning to focus on the following activities:
- (a) Engaging with Google on the design and development of its Privacy Sandbox proposals with a particular focus on the Attribution Reporting API, Topics API and First Party Sets (FPS). We are also ensuring that Google applies the Development and Implementation Criteria in paragraph 8 of the Commitments in the design of its proposals.
 - (b) Continuing to engage with a range of market participants (with a particular focus this quarter on advertisers and SSPs) to identify any concerns with Google's Privacy Sandbox proposals, challenging Google where appropriate, and exploring ways of addressing concerns through alternative designs. We will be participating in W3C's Private Advertising Technology Community Group as part of this outreach. We are also keen to engage further with civil society groups to better understand the views that users might have on the development of Google's Privacy Sandbox proposals.
 - (c) Progressing plans for testing the effectiveness of the Privacy Sandbox tools, including working with Google to continue its own tests, and encouraging market participants to carry out their own testing of the Privacy Sandbox tools.
 - (d) Analysing Google's internal systems, particularly around data access and flows. This is likely to be a multi-period activity to ensure that Google is in a position to comply with the data use obligations in Section G of the Commitments upon third-party cookie deprecation.
64. We are planning to publish our next update report and Google's quarterly update in July 2023.

Contact details

65. We would welcome views from members of the online advertising ecosystem on this report, as well as on any other relevant publications (eg Google's own quarterly reports). The relevant contact details are:
- (a) **CMA:** privacysandbox@cma.gov.uk; matthew.allsop@cma.gov.uk; angela.nissyrios@cma.gov.uk; and chris.jenkins@cma.gov.uk.
 - (b) **Monitoring Trustee (including communications for the Technical Expert):** trustee.services@ing.com; matthew.hancox@ing.com; and david.verroken@ing.com.

(c) **Google:** [Feedback - Chrome Developers](#).

Annex 1 – current proposals in the Privacy Sandbox

At the time of publication, the list of proposals in the Privacy Sandbox include:

- 1. Use Case: Fight spam and fraud on the web**
 - (a) Private State Tokens (previously Trust Tokens)
- 2. Use Case: Show relevant content and ads**
 - (d) Topics
 - (e) FLEDGE (now Protected Audience)
- 3. Use Case: Measure digital ads**
 - (a) Attribution Reporting
- 4. Use Case: Strengthen cross-site privacy boundaries**
 - (a) First Party Sets
 - (b) Shared Storage
 - (c) CHIPS
 - (d) Fenced Frames
 - (e) Federated Credential Management
- 5. Use Case: Prevent covert tracking**
 - (a) User Agent Reduction (including User-Agent Client Hints)
 - (b) DNS-over-HTTPS
 - (c) Storage Partitioning
 - (d) Network State Partitioning
 - (e) IP Protection (previously Gnatcatcher)
 - (f) Privacy Budget
 - (g) Bounce Tracking Mitigations