

## CMA CLOUD SERVICES MARKET INVESTIGATION

### Google Cloud's response to the CMA's Issues Statement dated 17 October 2023

1. Google Cloud welcomes the opportunity to comment on the CMA's [issues statement](#) (the **Issues Statement**).
2. The Issues Statement sets out a number of theories of harm and potential adverse effects on competition (**AECs**):
  - a. Technical barriers make switching and multi-cloud harder and limit competition between cloud services providers;
  - b. Egress fees harm competition by creating barriers to switching and multi-cloud, leading to cloud services providers entrenching their position;
  - c. Committed spend discounts (**CSDs**) raise barriers to entry and expansion for smaller cloud services providers by incentivising customers to concentrate their business with one provider; and
  - d. Software licensing practices by certain cloud services providers restrict customer choice and prevent effective competition.
3. Google Cloud does not believe that any of the first three theories of harm are sustainable or that they give rise to the adverse outcomes posited. To the contrary, we believe that the market is, with one notable exception, operating competitively and delivering good outcomes for UK customers in terms of quality, price, and innovation. Technical barriers—which are to a certain extent a natural consequence of pro-competitive product differentiation between vendors—can generally be overcome, and egress fees and CSDs are natural features of pricing competition. We are confident that the evidence the CMA gathers will show that these three theories of harm are unfounded.
4. Google Cloud agrees that the fourth theory of harm should be investigated in depth as part of the market investigation. In our experience, software licensing practices adopted by legacy vendors are directly harming UK customers, particularly small and medium-sized enterprises (**SMEs**). The CMA has specifically named Microsoft in its Issues Statement; with Microsoft's licensing restrictions in particular, UK customers are left with no economically reasonable alternative but to use Azure as their cloud services provider, even if they prefer the prices, quality, security, innovations, and features of rivals. These licensing practices are the only insurmountable barrier preventing competition on the merits for new customers migrating to the cloud and for existing workloads. They lead to less choice, less innovation, and increased costs for UK customers of all sizes.
5. Accordingly, as the CMA continues its investigation, we would encourage it to focus on the fourth theory of harm, where the evidence demonstrates the existence of a clear AEC and where straightforward and clear-cut remedies are available. We look forward to engaging with the CMA on these issues.



## Cloud computing is delivering transformational benefits across the UK, and those benefits are reinforced by generally strong competition

6. Cloud computing technologies are accelerating innovation across the economic value chain and delivering transformational benefits for consumers, businesses, and non-profit and public sector bodies in the UK. For example, [Monzo has worked with Google Cloud to build a high-powered technology stack](#) that requires minimal maintenance, delivers highly resilient analytics capabilities while minimising the need for downtime and ensuring business continuity, and underpins one of the UK's leading challenger banks.<sup>1</sup> The UK public sector also continues to benefit from [Google Cloud's strong and recently reinforced commitment](#) to provide the tools and resources that UK organisations need to deliver improved public services across the nation.<sup>2</sup>
7. One concrete example of Google Cloud delivering benefits to the UK public sector is when the [Office for National Statistics \(ONS\)](#) partnered with Google Cloud for the 2021 Census. This was the first time the Census was delivered in a truly digital way, moving away from traditional paper-heavy processes. The use of Google Cloud architecture allowed the ONS to scale its operations across more than 25 million households in the space of six weeks with the help of more than 40,000 staff members who needed to collaborate remotely and in real time to meet a high demand. Notwithstanding the high demand experienced on Census Day itself—at its peak, just under half a million submissions were being received every hour—the process ran without any disruption as a result of the resilience of the underlying cloud infrastructure.<sup>3</sup>
8. Migration to the cloud is also important for boosting SME productivity by reducing the costs of IT infrastructure (in particular, hardware and network acquisition and maintenance costs) and by enabling remote access to applications and data across the globe. Google Cloud supports SMEs across the UK to deliver innovative solutions to consumers—for example by [powering the advanced algorithms that underpin Kaluza's mission](#) to accelerate the global transition to a zero-carbon future,<sup>4</sup> and [enabling Bud to scale its operations](#) and help more UK consumers make sense of their financial data.<sup>5</sup>
9. Google Cloud believes that, aside from the problems arising from Microsoft's licensing practices in particular, competition is otherwise functioning effectively in the UK market. Key features of the market are continuous innovation, a downward pricing trend, and the availability of numerous deals and pricing offers, all of which are confirmed by Ofcom's findings in its Cloud Services Market Study Final Report.

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<sup>1</sup> Google Cloud, [Monzo Case Study](#).

<sup>2</sup> Google Cloud, [Google Cloud Public Sector UK: Helping government adapt to a digital future](#), 11 October 2023.

<sup>3</sup> Office for National Statistics, [Delivering the Census 2021 digital service](#), 4 October 2021.

<sup>4</sup> Google Cloud, [Kaluza: driving the energy transition with electric vehicle charging](#), 5 May 2023.

<sup>5</sup> Google Cloud, [How Bud Financial turns transactional data into rich customer insight](#), 29 April 2023.

- a. Ofcom found “the scope for attracting new customers into a growing market is creating strong incentives to innovate.”<sup>6</sup> Google Cloud agrees. In the past three months alone, Google Cloud has introduced the [next evolution of Kubernetes](#)<sup>7</sup> to help customers scale new workloads with [containers](#),<sup>8</sup> announced [BigQuery Studio](#)<sup>9</sup> to provide customers with a unified interface to perform data tasks across different cloud environments, launched [Cross-Cloud Network](#)<sup>10</sup>—an open networking platform that enables connectivity between cloud and on-premises environments—and added [Google Cloud Firewall Plus](#) to its suite of security solutions to give users best-in-class threat protection.<sup>11</sup>
- b. Google Cloud also agrees with Ofcom’s analysis of pricing data submitted by different providers during the market study, which “suggests that list prices paid by [pay-as-you-go] customers for their core cloud infrastructure services have either remained stable or decreased in recent years.”<sup>12</sup> Google Cloud believes this downward pricing trend is further evidence of a healthy degree of competition that is delivering significant customer benefits.
- c. Ofcom correctly observes that “[c]loud providers compete to attract new customers by providing a range of pricing benefits in the form of discounts (including committed spend discounts), cloud credits and free trials/tiers, which contribute towards lowering the initial migration costs that customers may face.”<sup>13</sup> Discounting—which is one of several factors on which providers compete—is a positive feature of the market for cloud infrastructure services that enables (i) smaller providers, such as Google Cloud, to challenge the incumbent providers (Amazon Web services (**AWS**) and Microsoft) for business, and (ii) consumers to benefit from lower prices and increased bargaining power.

**To preserve competition and foster future innovation, it is critical for customers to have unconstrained ability to switch providers and adopt multi-cloud strategies**

10. While Google Cloud’s share in the UK market for cloud infrastructure services has grown in recent years, the market remains dominated by AWS and Microsoft, who each have a share

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<sup>6</sup> Ofcom, Cloud Services Market Study, [Final Report](#), para. 4.142.

<sup>7</sup> Google Cloud, [Introducing the next evolution of container platforms](#), 29 August 2023.

<sup>8</sup> A container is a package of software that contains all of the necessary elements to run workloads, thereby allowing customers to run workloads in any environment (*i.e.*, on any operating system, in the public cloud, private cloud, or on-premises data centres).

<sup>9</sup> Google Cloud, [Announcing BigQuery Studio – a collaborative analytics workspace to accelerate data-to-AI workflows](#), 31 August 2023.

<sup>10</sup> Google Cloud, [Introducing Cross-Cloud Network: a new way to network](#), 29 August 2023.

<sup>11</sup> Google Cloud, [Introducing Google Cloud Firewall Plus with intrusion prevention](#), 3 October 2023.

<sup>12</sup> Ofcom, Cloud Services Market Study, [Final Report](#), para. 4.140.

<sup>13</sup> *Ibid.*, para. 4.64.



of up to 40%.<sup>14</sup> Given the incumbent dominance, as Ofcom found, Google Cloud primarily competes alongside other smaller competitors, including IBM, Oracle, OVHcloud, and Scaleway. Often, that competition is to become “*the secondary provider for existing cloud customers (i.e., with AWS or Microsoft remaining as the primary provider).*”<sup>15</sup>

11. Google Cloud’s experience competing to attract new workloads in the absence of any incumbency advantage aligns with Ofcom’s market research findings, which highlight the impact of Microsoft’s licensing and show that “*existing relationships in adjacent software markets*”<sup>16</sup>—especially when combined with restrictive licensing practices—are an important influence on customers’ initial cloud choices. Google Cloud works hard to design services that enable customers to adopt multi-cloud strategies and take full advantage of what cloud computing has to offer—efforts which are currently being undermined by restrictive licensing practices. Google Cloud strongly agrees with Ofcom’s findings that customers should have an unconstrained ability to switch and/or use multiple cloud providers to run their workloads. Such flexibility is critical to realising the full potential and promise of cloud computing.

### **The benefits of cloud can only be achieved if customers are able to operate flexibly across different environments**

12. At Google Cloud, our design principles start with a deep belief that a secure, open cloud approach will best serve our customers. Our goal is to offer customers the maximum amount of flexibility to run their businesses how they want. To do this, we encourage a multi-cloud, hybrid architecture designed to quickly adapt as organisations evolve.
13. Our cloud business model is founded on openness and we have been a [leader in promoting fair and open licensing for our customers](#) since the start of the cloud revolution. We were the first to launch a multi-cloud infrastructure service (allowing customers to run workloads across multiple clouds), the first to launch a multi-cloud data warehouse (allowing customers to manage data across multiple clouds), and we continue to innovate in this space.<sup>17</sup>
14. Google Cloud has long-recognised that customers can only unlock the full potential of cloud computing if they are allowed to deploy their workloads and data flexibly across different environments. Without that ability, customers are unable to (i) choose best-in-class tools that are optimised to suit specific needs, (ii) realise the cost efficiencies associated with scaling demand up and down, and (iii) enhance operational resilience by securely distributing applications and data across environments.

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<sup>14</sup> *Ibid.*, Tables 4.9 and 4.11.

<sup>15</sup> *Ibid.*, para. 6.84.

<sup>16</sup> *Ibid.*, paras. 6.88 and 9.16.

<sup>17</sup> Google Cloud, [Ensuring fair and open competition in the cloud](#), 20 October 2022.

15. That is why Google Cloud is and remains a consistent advocate and ally for the open source community, [data portability, and interoperability](#),<sup>18</sup> as is evident from its ongoing contributions to open source projects like [TensorFlow](#) and [Kubernetes](#), as well as its plentiful free [learning paths](#) and [certifications](#). Google Cloud has always been—and as a challenger firm it is in its commercial interests to be—a pioneer of tools that are designed to remove the operational friction typically associated with using multiple public clouds. [BigQuery Omni](#), for example, is Google Cloud’s multi-cloud analytics tool that allows customers to seamlessly analyse data stored across different cloud environments, and [Anthos \(GKE Enterprise\)](#)—which uses open standards—enables customers to orchestrate workloads consistently across on-premises hardware, public, and private clouds.
16. While Google Cloud is committed to multi-cloud and has heavily invested in technological innovations to make multi-cloud a reality, the true benefits of multi-cloud can only be realised if customers are able to choose optimal solutions that suit their needs and are not otherwise locked into a single cloud stack. For multi-cloud strategies to work, all industry players need to commit equally to abstaining from practices that lock-in customers, and regulators have a critical role to play to ensure a level playing field.
17. Google Cloud therefore fully supports the CMA’s decision to investigate whether Microsoft’s software licensing practices disincentivise customers from using rival cloud providers, and thereby act as a barrier to customers switching and/or adopting multi-cloud strategies.<sup>19</sup>

### Theory of harm 1: Technical barriers

***While some technical interoperability restrictions exist, on the whole technical barriers are not a meaningful barrier to multi-cloud or switching***

18. The Issues Statement refers to Ofcom’s finding that technical barriers can hinder customers’ ability to work with multiple clouds, switch between them, and—to a lesser extent—implement multi-vendor architectures. We do not agree that technical limitations to interoperability are hindering competition among cloud services providers. While there are inherent technical differences that result from strong competition and innovation efforts, Google Cloud and other competitors are for the most part able to develop tools that overcome them or mitigate their impact.<sup>20</sup> We therefore do not agree that any market-wide remedies would be necessary or appropriate.
19. Developing an integrated multi-cloud architecture is inherently complex and requires considerable technical effort. Google Cloud—as an advocate for and beneficiary of customers’ ability to switch and/or use multiple providers—commits significant resources to building innovative tools that help customers overcome inherent technical complexities

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<sup>18</sup> Google Cloud, [Data Portability and Interoperability](#), January 2023.

<sup>19</sup> On the basis of its [solicitation for public comments](#), it appears that the Federal Trade Commission in the US is also investigating the extent and possible impact of interoperability between cloud services.

<sup>20</sup> One notable exception is interoperability between 'must-have' Microsoft tools such as Microsoft’s Active Directory and non-Azure cloud infrastructure. This is discussed further in para. 47 below.



and work flexibly with numerous products across various cloud and non-cloud environments.

20. As part of our efforts on the [Data Cloud Alliance](#) initiative, Google Cloud is working with industry leaders to promote open standards and interoperability, with a view to alleviating burdens on customers in overcoming inherent technical barriers. Google Cloud also continues to support open source database engines like [MongoDB](#), [MySQL](#), [PostgreSQL](#), and [Redis](#), as well as running its own databases like [Cloud Bigtable](#), [Firestore](#), and [Cloud Spanner](#) which equally support the portability and data export needs of our customers. And in addition to building products on open source technologies, Google Cloud offers a wide range of managed proprietary services which provide integrated open source components that save customers time and expense when running their applications across different environments and allow for data portability and provider switching solutions (e.g., [Google Kubernetes Engine](#), [Cloud Composer](#), [Dataflow](#), and [Anthos](#)).
21. Ofcom notes that smaller providers, including Google Cloud, are responding to customer demand for open source technologies, and technical differentiation between cloud services is a feature that can be the result of strong competition between providers as they seek to build new and innovative products.<sup>21</sup> While we agree with Ofcom that some technical barriers are inherent in the technology,<sup>22</sup> Google Cloud believes that any impact of such technical barriers on customers' ability to switch and/or use multiple providers can for the most part be neutralised through competitor product innovation, including new tools such as Google Cloud's [Anthos/GKE Enterprise](#) and [BigQuery Omni](#), each of which facilitate interoperability across cloud and on-premises environments or by other technical workarounds.
22. As a result of Google Cloud's and others' open cloud efforts, the effect of any artificial technical restrictions—which might include the use of proprietary codes and withholding of technical information (e.g., APIs)—is generally only a meaningful barrier to multi-cloud and switching when they are combined with the more impactful software licensing restrictions discussed below. To the extent interoperability issues arise, Ofcom's evidence shows such issues to be associated with market leaders, not challengers. Google Cloud agrees there should be no concerns about interoperability on the part of challengers, whose strategic interest is to maximise interoperability with all players, and in particular incumbents AWS and Microsoft, to win more business.
23. While generally there are workarounds for cloud providers of all sizes to find a way to overcome technical barriers, it is simply not possible to innovate around the commercial licensing restrictions developed by legacy vendors, including Microsoft. Google Cloud therefore believes that if the CMA requires Microsoft to allow customers to port existing software licences to any cloud providers' infrastructure of their choice without incurring additional charges, it will further unlock the promise of cloud without needing to design complex interoperability remedies that could otherwise lead to unintended consequences and hamper innovation efforts.

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<sup>21</sup> Ofcom, Cloud Services Market Study, [Final Report](#), para. 5.51.

<sup>22</sup> CMA, Cloud Services Market Investigation, [Issues Statement](#), para. 25.



### ***Data transfer charges are not a barrier to switching or multi-cloud***

24. The second theory of harm hypothesises that ‘egress fees’ (which the CMA broadly defines as charges for all data transfers to another provider’s infrastructure and/or to end users) create barriers to switching and multi-cloud, leading to cloud services providers entrenching their position. This theory of harm suffers from a number of misconceptions about the nature of different data transfer fees and the reasons why it is appropriate to charge such fees. We strongly disagree that data transfer fees (colloquially referred to as ‘egress fees’ in the industry as they are metered at the point of ‘egress’ from one storage system) act as a barrier to multi-cloud and switching and prevent or restrict competition between cloud services providers.
25. Given Google Cloud’s commitment to multi-cloud and desire to win new customers, it would be antithetical to Google Cloud’s interests to charge such fees if they genuinely were a barrier to multi-cloud and switching. These factors also mean that Google Cloud is strongly incentivised to set data transfer fees at reasonable levels.
26. The movement of data from one provider’s cloud infrastructure to another provider’s infrastructure, an on-premises environment, the end user on the internet, or another region or zone of the same provider, are all part of the routine usage of cloud services. It is legitimate for cloud providers to recover their costs for routine usage of their network infrastructure. Moreover, some of those data transfers (e.g., intercontinental transfers) are more expensive than others, and it is reasonable for pricing to reflect that reality. As well as covering costs, data transfer fees also support Google Cloud’s ongoing efforts to invest in the further expansion of its global network infrastructure and to develop innovative networking solutions for the benefit of our customers.
27. Our quantitative evidence shows that data transfer fees covering all types of data transfers account for only a very small proportion of an average customer’s total spend with Google Cloud. If the fees associated with the transfer of data to another cloud provider’s infrastructure as part of a multi-cloud strategy<sup>23</sup> or a one-off, wholesale migration (“true exit”) were isolated, this proportion is even smaller still. This means that data transfer fees are unlikely to be a major consideration for most customers when making cloud choices. This is also validated by Ofcom’s customer survey, which found that only 6% of market test respondents said that data transfer fees are the main switching challenge.<sup>24</sup>
28. We recognise that certain cloud providers have opted to add the costs of facilitating data transfers indiscriminately to the price of their cloud products and services rather than charging on a volume/usage basis. This too is a legitimate commercial strategy, though it

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<sup>23</sup> It is worth noting that Google Cloud—as a strong proponent of cloud providers enabling customers to adopt multi-cloud strategies and which, unlike Amazon and Microsoft, does not have an incumbency advantage—has no incentive to set Cross-Cloud fees (or indeed any other type of data transfer fees) at levels that are prohibitively expensive for customers.

<sup>24</sup> See Ofcom, [Context Consulting Market Research Report](#) (March 2023), p. 121.

comes at the cost of transparent pricing and cost control for customers. However, to suggest that the provision of ordinary course cloud infrastructure services including data transfers (whether provided on a standalone basis or embedded in other products) should be priced or capped at the same level, fails to recognise that cloud providers compete vigorously across a range of parameters, including quality and innovation. This is also not fair to the customers who have different data transfer volumes and needs. Content providers for whom low latency is key to their business model will have different demands and needs compared to small or medium-sized enterprise customers transferring documents from one server to another, who may be satisfied with 'standard' latency or a more limited product/service mix at a lower price point.

29. Accordingly, Google Cloud does not believe that egress fees are in practice a material barrier to switching or multi-clouding or that any AEC could arise from the same.

***Abolishing all types of data transfer fees would lead to unintended consequences***

30. Google does not believe that data transfer fees as a whole lead to any AEC. Moreover, abolishing data transfer fees altogether could—as Ofcom recognised in its Final Report<sup>25</sup>—have negative and unintended consequences:

- a. **Reduced transparency of costs.** One of the core benefits of cloud computing is the ability to easily scale demand up and down according to real-time needs. This results in an inherent natural consequence: usage unpredictability. Google Cloud helps customers combat usage unpredictability by making its [data transfer fees publicly available](#) and designing and maintaining a detailed [pricing calculator](#) and various [cost management tools](#) to help customers predict and plan for future costs. If egress fees were abolished, they might be replaced by higher charges elsewhere with the costs of facilitating data transfers added to the price of other cloud products and services. These costs would then be borne by all customers irrespective of the volume of data they transfer, resulting not only in higher unit prices for customers with lower usage—for instance, SMEs—but also in reduced cost transparency.
- b. **Unfair outcomes for customers.** Different types of customers have different types of needs and use cases. For some customers, low latency is key to their business model, and it is therefore critical to minimise the time it takes to transfer data from one location to another. Some providers may seek to provide premium and 'content delivery network' services to cater to these customers, whereas other providers may aim to differentiate themselves by focusing on serving customers for whom 'standard' latency may be sufficient. As noted, to suggest that all data transfers should be priced at the same level fails to recognise that cloud providers compete vigorously across a range of different parameters, and any regulatory intervention on such a basis would result in certain customers bearing costs incurred by others.

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<sup>25</sup> Ofcom, Cloud Services Market Study, [Final Report](#), para. 10.20.



c. **Reduced innovation in the development of network infrastructure.** Google Cloud's data transfer fees are set at a reasonable level in light of the [significant ongoing costs that are required to continuously improve](#),<sup>26</sup> maintain, and expand its [network infrastructure](#) as it attempts to differentiate itself from the two incumbent providers. Google Cloud believes that if the CMA caps or abolishes data transfer fees, it could reduce incentives for all providers to invest in network infrastructure and thereby dampen future innovation to the detriment of customers everywhere.

31. Google Cloud therefore strongly believes that any regulatory intervention targeting data transfer fees should be approached with a high degree of caution.

### Theory of harm 3: Committed spend discounts

#### ***Committed spend discounts are mutually beneficial for customers and cloud providers***

32. The third theory of harm that CSDs may raise barriers to entry and expansion for smaller cloud services providers is fundamentally misconceived. Google Cloud agrees with Ofcom's finding that *"price discounting can be a means of competition between cloud providers and so has the potential to benefit customers and lead to lower prices."*<sup>27</sup> Indeed, the prevalence of discounting practices is typically one indicator of a market that is functioning well.<sup>28</sup>

33. Google Cloud believes that CSDs—which are offered by nearly all providers—are mutually beneficial for both customers and cloud providers (and smaller providers in particular). For customers, CSDs drive down unit prices and increase the predictability of likely spend. At the same time, CSDs can provide some indication of expected customer demand and thereby assist Google Cloud in planning its future investments—which, in turn, create additional cost efficiencies that can be passed onto customers—and enable smaller providers like Google Cloud to challenge and win business from incumbents.

34. Google Cloud also agrees with Ofcom that it is *"important to preserve the ability of cloud providers to gain the commitments of customers to the extent that these are necessary to protect investment and innovation, and also the ability of customers to exercise their bargaining power to gain lower prices and other concessions from cloud providers"* and

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<sup>26</sup> Google Cloud, [Doing our part: How Google's network helps internet content reach users](#), 21 April 2022.

<sup>27</sup> Ofcom, Cloud Services Market Study, [Final Report](#), para. 5.256.

<sup>28</sup> See e.g., OECD, [Roundtable on Fidelity Rebates](#) (2016): "Rebates that are targeted to those consumers who are more likely to switch to competitors imply a more intense competition for these consumers. They clearly benefit from this situation. Moreover, prohibiting selective rebates as a reaction against competitive pressure may constitute excessive interventionism in the competitive strategies of firms on the part of competition authorities" (page 3). Ofcom also has explained that the process of discounting is not the concern and that "the practice of discounting or of customers commitments in general ... may be desirable features of a well-functioning market" (Ofcom, Cloud Services Market Study, [Final Report](#), para. 5.175). Ofcom was instead concerned that customer spend discounts can create a barrier to multi-cloud prompted by their structure and specific characteristics.

that “interventions focused on committed spend discounts could result in unintended consequences.”<sup>29</sup> Given the absence of any legacy footprint that could help it in the cloud computing market, Google Cloud’s investments are conditioned by its ability to win new business, and Google Cloud’s flexibility to offer CSDs in pursuit of this is an important part of its competitive strategy.

35. Google Cloud therefore considers that any regulatory intervention into its discounting practices would be inappropriate and disproportionate and undermine competition. It would have the unintended consequence of defeating the very purpose of intervening, which is to promote a more competitive market.

#### Theory of harm 4: Software licensing practices

***Licensing conduct by legacy software providers, in particular Microsoft, reduces customer choice and deters customers from switching cloud providers or using multiple providers***

36. Software licensing practices by legacy software providers, in particular Microsoft, are a persistent feature of the UK cloud market that prevent competition on the merits and impede customers’ ability to switch and/or use multiple providers. In Google Cloud’s experience, the artificial licensing barriers erected by legacy software vendors, in particular Microsoft, are the most significant barrier to effective competition in the UK cloud market.
37. As noted above, the CMA has specifically named Microsoft in its Issues Statement. Over the past 30 years, Microsoft has created an ecosystem of business software solutions that includes several traditionally ‘must-have’ products for enterprise customers—namely, Windows Server, Windows Desktop (*i.e.*, Windows 10/11),<sup>30</sup> and its Office suite of products.<sup>31</sup> Given the ubiquity of Microsoft’s enterprise software in legacy IT stacks, it is highly unusual for a traditional enterprise<sup>32</sup> customer to have no Microsoft footprint at all, and as Microsoft customers migrate from on-premises computing to the cloud, they continue to rely on Microsoft’s software products. This reliance on Microsoft technology affects UK cloud customers of all sizes as well as the UK government sector, whose [Cloud First policy](#) states that all public sector organisations should use public cloud services when procuring new or updating existing IT resources, with the UK Government’s broader [ambition](#) to be 100% on public cloud and free of legacy solutions in the near future.

***Traditional enterprise customers depend on Microsoft’s ecosystem of business software***

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<sup>29</sup> Ofcom, Cloud Services Market Study, [Final Report](#), para. 10.62.

<sup>30</sup> See e.g., the CMA’s [decision](#) in *Microsoft/Activision* (2022), para. 260.

<sup>31</sup> See e.g., the European Commission’s [decision](#) in *Microsoft/LinkedIn* (2016), paras. 290-294.

<sup>32</sup> Google Cloud uses the term “traditional enterprise” here to refer to a company with a significant on-premises IT footprint and historical pre-existing relationship with its legacy software competitors. Traditional enterprises include most large corporates founded prior to the widespread adoption of cloud computing in the late 2010s. Traditional enterprise customers collectively account for the large majority of the addressable cloud infrastructure market by value.

38. Microsoft's licensing restrictions for these 'must-have' products have strongly incentivised its customers to use Microsoft's own cloud products (especially Azure, its cloud infrastructure platform). The strength of these restrictions are such that, in many circumstances, customers have no economically reasonable alternative to using Microsoft cloud products, further embedding these customers within its broader ecosystem and restricting the ability of alternative cloud providers to compete for these customers.
39. When migrating to the cloud, customers will first assess if, how, and for what price they can move their most foundational on-premises workloads to the cloud. This is why legacy software providers, such as Microsoft, have such influence over customers at the critical moment when they decide to migrate their first workloads to the cloud, a fact that Microsoft recognises and has been leveraging since the early days of Azure.
40. A cloud provider that is unable to run Microsoft's 'must-have' on-premises software (or is unable to do so on commercially reasonable terms) is at a significant disadvantage to Microsoft when it comes to migrating and supporting customers' legacy on-premises workloads in the cloud.

***Microsoft prohibits and artificially restricts customers from using its 'must-have' software on economically viable terms unless they also run their workloads on Azure***

41. Prior to the onset of cloud computing, Microsoft was indifferent as to the hardware infrastructure that customers used to run its software products. For example, when customers bought an on-premises licence for Windows Server, they could freely run the software on IBM, Hewlett Packard, or Dell servers, among others. The software was hardware agnostic. This dynamic reflected the fact that Microsoft did not otherwise have a hardware offering at the time. Today, however, as traditional hardware has shifted to the cloud—and in a world where [Microsoft's Intelligent Cloud unit, which houses Azure, accounts for nearly half of all Microsoft revenues](#)—Microsoft's incentives have changed.<sup>33</sup>
42. Microsoft makes it financially, commercially, and operationally unfeasible for customers “to use Microsoft's licensed software products on the cloud infrastructure of a cloud provider other than Microsoft Azure.”<sup>34</sup> In Microsoft's [own internal documents, Microsoft confirms that the objective is to increase the attractiveness of Azure stating](#) that—in light of the fact that “Azure is the cornerstone of [its] cloud strategy and a core driver of Microsoft's future”—one of its priorities is to “[d]rive the migration of customers' on-prem workloads to the cloud, leaning on [amongst other things] our differentiated Hybrid Benefit offer.”<sup>35</sup>
43. The impact of Microsoft's conduct on competition and customers is twofold:

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<sup>33</sup> Reuters, [Microsoft sales beat estimates as customers prepare for AI rollout](#), 25 October 2023.

<sup>34</sup> Ofcom, Cloud Services Market Study, [Final Report](#), para. 1.45.

<sup>35</sup> Microsoft, [State of the Business](#), June 2022, slide 24. Microsoft's [Azure Hybrid Benefit](#) effectively provides a [rebate](#) to customers that run Windows Server or SQL Server on Azure. The licensing offer allows customers to forfeit and exchange their pre-existing on-premises licences for Windows Server and SQL Server for licences that can be used on Azure at no or only minimal additional cost.

- a. [Microsoft has rapidly increased its share of the market for cloud infrastructure services](#) at a sector-leading rate<sup>36</sup> since it implemented its most restrictive licensing practices in 2019.<sup>37</sup> This growth is not the result of a superior commercial offering. Indeed, customers are frequently forgoing preferred providers with higher levels of innovation and security.
  - b. Microsoft's enterprise software customers are forced to choose between taking the "*path of least resistance*"<sup>38</sup> (i.e., choosing to run their previously purchased, enterprise software on Azure) or incurring significant (often prohibitive) additional costs to run Microsoft's must-have software on their preferred third party cloud infrastructure. Professor Frédéric Jenny, an independent competition law expert and chair of the OECD Competition Committee, has conducted analysis that finds that the total overcharge for customers in the European Union that deploy SQL Server on third party cloud infrastructure rather than on Azure is approximately €1 billion (and possibly up to €1.9 billion).<sup>39</sup> These costs are not based on any technical justification; they are the result of commercial licensing restrictions imposed on previously purchased software. For most customers, incurring such additional costs is simply not an option.
44. Microsoft's practices include making arbitrary changes to its software licensing policies,<sup>40</sup> imposing unreasonable and discriminatory terms on its closest cloud rivals to prevent them from reselling Microsoft's software products on fair terms,<sup>41</sup> and limiting critical security updates and product upgrades to customers choosing to run Microsoft software on certain rival clouds. These practices have no objective justification, technical or otherwise.
45. Microsoft's conduct does not improve its own cloud offering relative to its rivals' offerings. Instead, Microsoft's conduct raises rivals' costs and diminishes its rivals' ability to offer a compelling cloud offering.<sup>42</sup>

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<sup>36</sup> Synergy Research Group, [Cloud Provider Market Share Trend](#), February 2023; Professor Frédéric Jenny, [Unfair Software Licensing Practices: A quantification of the cost for cloud customers](#) (21 June 2023), para. 43 and Figure 7.

<sup>37</sup> See [Microsoft's licensing update](#) dated 1 August 2019, in which it announced that customers would no longer be able to deploy on-premises licences purchased from Microsoft on cloud infrastructure provided by Alibaba, Amazon, and Google.

<sup>38</sup> [Context Consulting Market Research Report](#), March 2023, slide 15.

<sup>39</sup> Professor Frédéric Jenny, [Unfair Software Licensing Practices: A quantification of the cost for cloud customers](#) (21 June 2023), para. 111.

<sup>40</sup> See [Microsoft's licensing update](#) dated 1 August 2019.

<sup>41</sup> Professor Frédéric Jenny, [Unfair Software Licensing Practices: A quantification of the cost for cloud customers](#) (21 June 2023), paras. 43 and 96-97.

<sup>42</sup> This is analogous to the examples of 'cheap' exclusion that the Competition Commission investigated as part of its [local bus market investigation](#); conduct which the Competition Commission found restricts head-to-head competition and serves as a constraint to potential

46. Google Cloud strongly believes that customers' freedom to choose among providers when migrating to cloud for the first time, switching, and/or using multiple cloud infrastructure providers, would be significantly improved if customers could deploy existing, previously purchased software licences in any cloud environment without incurring the significant artificial surcharge imposed by Microsoft. Google Cloud therefore agrees it is appropriate that as part of its market investigation the CMA investigates licensing practices in adjacent, on-premises software markets<sup>43</sup> on which Microsoft has significant unilateral market power.<sup>44</sup> Google Cloud would urge the CMA to seek feedback from UK customers on how Microsoft's licensing practices have restricted customer choice and prevented effective competition.

***Remedies are available to address the impediment on competition created by anticompetitive licencing practices of legacy software providers***

47. There are a number of possible remedies available to the CMA for addressing anti-competitive licensing practices in a swift, straightforward and proportionate manner. Such solutions would be in line with industry practice and past CMA intervention—for example:
- a. **At a minimum, the CMA should require Microsoft to terminate its discriminatory 'bring your own licence' policies vis-a-vis so-called Listed Providers.**<sup>45</sup> Customers should be free to port existing software licences to any cloud provider, without incurring any additional charges or fees.<sup>46</sup> Without the removal of such restrictions, UK customers' choice will continue to be unnecessarily stymied.
  - b. **The CMA should require Microsoft to reverse the unfair conditions of access it imposes on Listed Providers under its Service Provider License Agreements (SPLAs).** For example, currently, Microsoft imposes unfair terms in return for supplying Windows Server and SQL Server under Google Cloud's SPLA (e.g., by charging unreasonable wholesale prices that push up the resale prices that Google Cloud must charge its customers).

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competition and new entry. See Competition Commission, Local Bus Market Investigation, [Final Report](#), paras. 8.275-8.277.

<sup>43</sup> Google Cloud notes that—according to the Competition Commission's [Guidelines for market investigations](#)—the “conduct of firms which supply the market when acting in other markets can be a feature of the market” (para. 160).

<sup>44</sup> The [Explanatory Notes to s.131 of the Enterprise Act 2002 \(EA02\)](#) (the **Explanatory Notes**) explain that the “structure” of a market is a “feature” of that market for the purposes of s.131 EA02. The Explanatory Notes add that the degree to which a supplier has integrated its activities in another market (and how that integration may influence its competitive behaviour) should form part of any analysis of “market structure” (para. 300).

<sup>45</sup> Listed Provider is a term used by Microsoft to refer to (and through its licensing practices, discriminate against) Alibaba, Amazon and Google. Technically, Microsoft also refers to itself as a Listed Provider, but applies a completely different set of rules to itself and its own cloud offering.

<sup>46</sup> CMA, Cloud Services Market Investigation, [Issues Statement](#), para. 54(d).

- c. **The CMA should require Microsoft to reverse its decision to prohibit hosted service providers from using their own SPLA licences on Listed Provider infrastructure beginning in 2025.** Today, hosted service providers can run their solutions on the cloud infrastructure of their choice and supply customers with SPLA licences for Microsoft software to be used with their hosted solutions. In August 2022, [Microsoft announced](#) that,<sup>47</sup> beginning in October 2025, hosted service providers will [no longer be able to run their solutions on Azure competitors and still be eligible to supply their customers with SPLA licences for 'must-have' Microsoft products](#).<sup>48</sup> Instead, those providers would need to run their solutions on Azure to maintain their eligibility to supply SPLA licences. [Microsoft's 2022 announcement failed to address industry-wide concerns](#) about its licensing conduct, and in doing so, further restricted customer choice.<sup>49</sup>
- d. **The CMA should require Microsoft to establish a mechanism that facilitates the interoperability of 'must-have' Microsoft tools such as Microsoft's Active Directory with non-Azure cloud infrastructure.** As a result of the strong technical links between Active Directory–Microsoft's proprietary on-premises identity and access management (IAM) tool–and Microsoft's productivity software, Active Directory has become a product that customers need their cloud-based IAM tools to integrate with as they transition to the cloud. Active Directory operates seamlessly with Microsoft's own cloud-based IAM tool, Entra ID (formerly Azure Active Directory). Microsoft requires customers to purchase Entra ID, which runs on Azure, to manage Microsoft 365 licences, even if the customer is already using a third party IAM tool that could also technically support Microsoft 365.
- e. **The CMA should require Microsoft to terminate its practice of withholding critical security updates for customers using Microsoft products on Listed Provider cloud infrastructure.** Microsoft [refuses to supply critical security patches](#) for its must-have software when customers move to a rival cloud provider and restricts rival cloud providers from reselling those security patches—a tactic that has an outsized impact on customers that hold sensitive data (e.g., public sector organisations).<sup>50</sup> By doing so, Microsoft effectively conditions full access to its dominant software on customers also using Azure or other non-Listed Provider cloud infrastructure.
- f. **The CMA should require Microsoft to cease offering its cloud-based products as part of a bundle which includes one or more dominant legacy software products.** By offering [licences which include the right to use both Microsoft's dominant legacy software products and distinct and unrelated cloud products](#),

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<sup>47</sup> Microsoft, New licensing benefits make bringing workloads and licences to partners' cloud easier, August 2022.

<sup>48</sup> SAMexpert, [Microsoft SPLA / CSP-Hosting / BYOL changes and updates](#), 2 April 2023.

<sup>49</sup> Cloud Infrastructure Services Providers in Europe (CISPE), [Assessment of Microsoft's proposals in its blogs on 29 August 2022](#), 31 August 2022.

<sup>50</sup> TechTarget, [Windows Server 2008 end of life: Is Azure the right path?](#), 20 November 2019.





existing Microsoft software customers who have not yet transitioned to the cloud already find themselves with several 'free' or at least below cost Microsoft products—an offering that rival providers simply cannot compete with. This further cements the extent to which customers are locked-in to Microsoft.

**The CMA's market investigation should target artificial licensing restrictions, which are a negative feature of the market imposed by a small number of cloud providers**

48. Google Cloud welcomes engagement with the CMA on the issues it is investigating in the course of its market investigation. We encourage the CMA to engage closely with customers on their experience of procuring cloud services in the UK and the challenges of vendor dependency and lock-in.
49. For customers to fully reap the benefits of cloud computing, they must have the option to choose cloud services providers based on the merits of their offerings. Microsoft's conduct, in particular, is preventing them from doing so, constraining businesses into using Azure, even if other providers offer greater innovation, more favourable pricing, or superior quality and features. By impeding competition, Microsoft dampens the pressure it faces to win and retain customers relying on its 'must-have' software products. This is to the detriment of UK consumers, businesses, government and the digital economy as whole.
50. The cloud is at an inflection point in the contest between legacy software constructs—restrictive licensing, closed ecosystems, and tying—and the cloud's original promise and potential—open, elastic, and free from artificial lock-ins. Urgent action is needed, both to improve customer outcomes today and mitigate risks in the future.
51. We look forward to assisting the CMA in exploring the issues it has identified and, if the CMA ultimately identifies features of the market giving rise to an AEC, to working with the CMA on potential remedies.

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