techUK's response to Ofcom's cloud services market study

techUK welcomes the Ofcom study of the cloud services market in the United Kingdom (UK). This review is an opportunity to consider and highlight the vital role of cloud computing in delivering the technologies and services that are key to enabling, supporting, and driving the UK's digital economy and society.

With a diverse membership that represents all aspects of cloud computing, we wanted to provide an overview of techUK's position on some of the key issues raised by Ofcom in the consultation, such as the scope of the market study and the importance of the international context. This submission also highlights the positive impact of cloud computing on competition in the UK's tech sector and wider economy.

As well as setting out this topline position, techUK has encouraged our members to respond individually to the consultation to provide the detail you need from all market participants. I would like to take this opportunity to thank you for engaging directly with members during our recent roundtable. Our members would welcome further opportunities as the study progresses to explore the issues raised by this work and we would encourage you to reach out to us to arrange future engagement opportunities that you feel would benefit this study.

In this letter we provide feedback to Ofcom on the:

- ✦ Impact of cloud on competition in the UK tech sector and the wider economy
- ✦ Scope and structure of the Ofcom study
- ✦ International context
- ✦ The importance of interoperability and data portability

Impact of cloud computing on competition in the UK tech sector and the wider economy

The introduction of on-demand as-a-service computing has had a transformational impact on the market for compute, data storage and networking technologies. This has given rise to a huge range of new technology companies offering innovative products and services, which has in turn driven increased customer choice both within the technology sector and across the broader economy.

As Ofcom rightly notes, computing as a service has also shifted the procurement paradigm for digital technology from capital expenditure to operational expenditure. This has greatly increased the flexibility and agility of digital products and services, reducing the risk of scaling up and down new lines of business, weakening barriers to experimentation and acting as a catalyst for innovation, making it easier for businesses to enter new markets and challenge organisations that may be held back by legacy infrastructure.

One key example of cloud computing enabling competition and driving innovation in this way is the financial services industry, where dominant incumbents have been challenged by new, "born in the cloud", challenger banks and fintech start-ups. We have seen a revolution in financial services that has increased consumer choice and been a catalyst for innovation by forcing incumbents to respond to these new digital-first market entrants, thereby increasing competition across that industry.

Increased competition in that market would not have been possible without the agile, secure, and highly elastic infrastructure of cloud computing that allowed new market entrants to scale without large up-front capital investment in on-premises solutions.

techUK believes that by making it easier for organisations to respond to market pressures, experiment with new and innovative products and services, undertake digital transformation projects, and adopt emerging technologies like Artificial Intelligence, cloud has had a hugely positive impact on overall competition within the tech sector and the wider economy.

<u>Scope and structure of the Ofcom study</u>

In response to the scope and structure of the market study, techUK understands the decision to look primarily at infrastructure and platform services. However, we feel that this analysis would benefit from a broader scope that considers all the routes through which customers purchase compute and storage.

As Ofcom noted in the call for inputs, cloud is still an evolving sector, and most businesses continue to choose on-premises IT solutions, or adopt a hybrid strategy, rather than operating exclusively in large scale public cloud. Adopting a more holistic view that acknowledges the range of deployment options available to organisations would facilitate a more rounded assessment of innovation and customer choice, and by extension the overall impact on competition in the economy.

To assist with that more rounded assessment we have several comments on the themes set out by Ofcom:

Ofcom Theme 1: Infrastructure Services

The market for as-a-service infrastructure also includes multi-cloud strategies, hybrid cloud, hosted private cloud, edge computing with cloud services deployed at the edge, and other infrastructure and platform options that are all part of a broader transition towards a more flexible, heterogenous, and distributed network of digital technologies.

Any subsequent work building on this study would benefit from a broader scope that includes these other deployment methods for compute, data storage and networking that are also available as-a-service through consumption-based procurement.

Ofcom Theme 2: Cloud Ecosystems

The call for inputs draws several times on the Competition and Markets Authority (CMA)'s analysis of "ecosystems" in the mobile market where hardware device, platform and applications are tied much more closely than is the case for cloud computing, so direct comparison does not present an accurate picture, and techUK would urge Ofcom to avoid this problematic and unhelpful framing of the relationship between IaaS, PaaS and SaaS.

In cloud computing, there is a vast and thriving array of companies operating on top of the infrastructure services layer, including many software-as-a-service (SaaS) vendors, giving customers a wide range of choice in how to procure and manage as-a-service applications. As Ofcom has acknowledged in 3.22 of the call for inputs, the SaaS segment is "significantly more fragmented" and does not have the same characteristics as seen in PaaS and IaaS. techUK would argue that this is where cloud computing is at its most diverse and competitive.

This is a complex and rapidly evolving industry, with many companies offering services both vertically up and down the cloud stack, and horizontally across multiple IaaS and PaaS providers. This complexity has given rise to a thriving market for managed services and other businesses supporting digital transformation and migration to cloud.

Other issues to consider as part of the study

1) techUK would welcome further clarity on how public procurement fits alongside the themes of this study and how Ofcom plans to assess the impact of Government procurement policy on competition in the tech sector, including for all types of cloud services (e.g., public, private and hybrid IaaS and PaaS). We believe that an open, transparent and level playing field for public procurement is good for competition and that this merits consideration within the study.

   For example, although CCS's G-Cloud includes a transparency framework, that is not yet universally true of the way the public sector procures technology, resulting in an inaccurate view of how much is being spent on products and services from vendors across the industry. techUK believes that transparency should sit at the heart of public procurement, as this supports an open and competitive tech sector, and we would also encourage Ofcom to consider carefully how procurement policy more generally affects competition.

2) Additionally, techUK notes that this study comes in the context of broader regulatory developments that include the revision of the Network & Information Systems (NIS) Regulations, and moves by the Bank of England, FCA and PRA towards further oversight of "critical third parties", bringing managed service providers and other third parties into the scope of their regulation for the first time. It is worth considering this context, the overall balance of regulation on businesses operating in this industry, and the potentially discouraging impact on new entrants, when considering the outcome of this study.

International context

techUK believes it is right that the Ofcom study explores the potential impact of international regulatory developments on cloud computing in the UK. This is particularly important when considering policy initiatives that relate to the global context of cloud services. For example, the EU's Digital Markets Act, draft EU Data Act, draft European Cybersecurity Certification Scheme for Cloud Services (EUCS), and the recent US Executive Order on EU-US data flows.

While a comprehensive understanding of the direction of travel being taken by other nations and regions, such as the EU, is key, particularly when related to the technology sector and data policy, it is also important that the UK develops an approach that is right for UK businesses and consumers. For example, an approach that is aligned with the aims and ambitions of the National Data Strategy, the UK's ambition to be a science and technology superpower and a leader in the global debate on enabling global data flows with trust.

In assessing the international context Ofcom should seek to draw a distinction between measures that support and promote an open and competitive market, which are within the scope of this study, and those designed primarily as a tool of industrial policy that may intentionally or unintentionally undermine competition. It is also worth noting that many of these policy interventions have only recently been implemented or proposed, and it is worth taking some time to assess the impact with a close focus on competition before proposing regulatory action in the UK

Positioning the UK as a place where those providing cloud services, and the innovators that rely on a vibrant, open, and competitive tech industry to develop and offer new digital products and services, want to be based and scale and grow, is vital to the UK's digital and economic future. As set out above, cloud computing is increasingly a key enabler of innovation and a vital foundation of the UK's digital economy. It is also increasingly the route to market for advanced data analytics and emerging technologies like AI and Quantum.

If the UK is to remain a global leader in digital technologies it is important that we maintain a thriving and diverse IT services industry, supported by a policy approach that enables choice and open competition, rooted in trusted and secure international data flows.

We look forward to seeing the outcome of this section of the study and any conclusions that can be drawn from the international context. However, we would strongly advise further consultation and engagement with industry on this issue following the call for inputs and would be happy to help facilitate further conversations with techUK members. Such deeper engagement is important, given the fast-moving pace and interconnected nature of current international policy developments in the digital and data space that may have a direct, or indirect, impact on the UK's cloud sector.

The importance of interoperability and data portability

techUK supports the work of our members in pursuing interoperability, application portability, and data portability. These efforts are crucial to facilitating competition by making it easier for customers to switch providers, harness the potential of multi-cloud strategies that utilise multiple providers simultaneously, or adopt other deployment options like hybrid cloud and edge computing. Interoperability and portability give businesses greater flexibility and choice, driving innovation and economic growth.

While there is still work to do in the IT industry to make it easier for businesses to operate across different platforms, or between public cloud and on-premises hardware, we have seen progress on issues like interoperability and application portability in recent years.

For example, the development of containerisation in software development has greatly improved the agility and flexibility of cloud services. Furthermore, many of our members are already pursuing multi-cloud strategies involving more than one infrastructure provider, demonstrating that cloud computing remains open for customers to make choices.

We recognise that this area is developing rapidly, with new and innovative solutions being developed every day. techUK believes it is important that CSPs, and other IT providers operating in the UK, are supported and encouraged to continue developing innovative solutions to the challenges faced around the world relating to interoperability, application portability, and data portability. This support could comprise innovation challenges, sandbox projects or specific funding, which could result in this being an area where the UK takes the lead in developing practical solutions to these challenges.

As Ofcom has acknowledged, the cloud computing industry and the market for as-a-service compute is still developing, evolving, and maturing, and it may be too soon to know how these issues will impact the overall market for digital technologies. techUK agrees with the need for an open and competitive cloud sector and that we should avoid the perception that customers are locked-in to a specific provider, which could supress further uptake of cloud services.

The ability of businesses and public sector organisations to adopt flexible and agile IT services, move apps and data between platforms in response to business needs, and retire legacy infrastructure, will be key to driving innovation, unlocking productivity, and boosting economic growth.

Thank you for the opportunity to contribute to Ofcom's study of the cloud services market. We hope that the information in this letter is useful and if you have any further questions on the issues raised above or would like to engage further with our members, please do not hesitate to get in touch.

We look forward to working with you on this important issue in the coming months.