Dear Chair,

Introduction

I am delighted to be able to respond on behalf of Oracle to the Business, Energy and Industrial Strategy Committee's inquiry into 'Post pandemic economic growth.' Oracle welcomes the Committee's interest in exploring how the lessons of the COVID-19 pandemic can be harnessed to drive future economic growth covering issues including investment, industrial strategy, jobs, skills, exports and sustainable growth. Given the wide-ranging nature of the inquiry, this submission underlines the particular opportunity to take advantage of change and innovation in the cloud computing market to support the further modernisation, digital transformation and sustainability and climate goals of both of public services and businesses, and the potential this has to unlock growth and cement the UK's status as a hub of digital innovation and enterprise.

By way of short background, Oracle is a cloud computing, software, and hardware company which in the UK employs thousands of people in our Reading HQ and across our regional offices. A strategic supplier to the Government, with more than 800 Public Sector customers of whom nearly 200 have moved to our cloud solutions. Current public sector customers include a wide range of departments including the NHS, Home Office, Foreign, Commonwealth and Development Office, Department for Work and Pensions, Ministry of Defence and Ministry of Justice. In addition to the close relationship Oracle enjoys with the UK Government and devolved administrations, it also powers much of the wider economy as 80% of the FTSE 100 rely on Oracle capabilities. Oracle continues to invest in the UK with a doubling of our AI team and, more recently, with the launch in December 2020 of our next generation cloud datacentres for both public sector organisations and commercial customers.

Lessons from the pandemic

While the immediate economic outlook for pandemic-stricken western economies is challenging, the effective roll-out of COVID-19 vaccinations in the UK means the public sector and business alike must ensure they are ahead of the curve in identifying key learnings in terms of how the pandemic has revolutionised ways of working and catalysed longer-running trends towards service modernisation and accessibility. And as we slowly progress towards normality, Government should also be thinking about reviewing the structures in place to identify, plan and manage risks, with the weaknesses in many of these

– particularly around procurement – exposed due to the crisis. Government should seek to institutionalise processes for better understanding and preparing, whether that is drawing on data from across government to scan for potentially high impact events, preparing decision makers through scenarios and models or ensuring that relevant teams can be quickly mobilised in a future crisis.

The year-long economic set-back that the UK economy has faced means there is an acute need for UK policymakers to accelerate digitisation so that businesses and government are not left behind as growth returns in 2021. Addressing legacy as a matter of priority and helping enforce wider technology adoption and digital upskilling is a key post-COVID economic stimulus measure that will have a ripple effect across several key sectors of the economy ranging from tech, education, life sciences, to telecommunications, transportation, manufacturing and beyond.

Added to this, there is a need to be responsive to the heightened expectations of digital

consumers of both government and business services as well as employees, suppliers and stakeholders. The rapid shift to remote working and much wider digital accessibility of all kinds of frontline public and business services means that the public's expectations about what is possible to deliver digitally have been expanded, likely irrevocably. For example, Deloitte published its ' Digital Consumer Trends' study in August 2020 which found that 62 percent of people planned to continue accessing banking services digitally once life had returned to normal, with a quarter of people stating their intention to continue with virtual medical services and appointments following the end of lockdown. Government and business alike need to ensure they are responsive to this and avoid the risk of being seen to squander the opportunity to fundamentally reshape the ways in which consumers and citizens interact with business, employers and public services.

To support these changing expectations, Government should commit to ensuring digital skills are prioritised for the workforce and in educational settings. There is a risk in particular that those who are already at risk of social or financial exclusion will be slowest to benefit from the digital revolution the pandemic has brought and may even find themselves left behind the pace of change. Therefore, embedding digital skills and digital literacy in the education system should be a major priority, as should building on current incentives to provide reskilling opportunities for the existing workforce, to ensure that the benefits of digital transformation can be shared and fully realised.

The cloud opportunity

Oracle believes that cloud computing sits at the heart of this necessary transformation. Oracle sees a cloud computing market both in the UK and globally that is increasingly dynamic, innovative, and changing. The cloud computing market has changed radically since it was first defined over a decade ago. In the early years, the market was divided into three categories: Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS), and Software-as-a-Service (SaaS). Over time, SaaS has become increasingly differentiated, evolving into a number of niche applications to meet needs ranging from email services to advanced financial applications. Ultimately, SaaS is the most strategic, scalable and transformative option available. Cloud technologies also increasingly underpin the rollout of 5G, which will be a key enabler of businesses to grow and innovate in the 2020s.

Public sector (and service) digital transformation

In the UK, the Government's goal should be to harness this change and innovation in the cloud computing market, which will continue to accelerate beyond the pandemic. Fully integrated cloud suites will become increasingly common, as will services and approaches to bridge those offerings. These suites will have unique, differentiated strengths that are integrated into hybrid• and multi-cloud environments. SaaS will play an increasingly important role, as more customers seek to move 'mission critical' enterprise applications to cloud environments. The vital task for government will be preparing to successfully use these innovations to improve services.

The Government's current cloud strategy rightly provides a roadmap to consider all the benefits of the emerging cloud market. Oracle has deep expertise with cloud solutions and assisting large enterprises in the UK and around the world in their modernisation journey, with 80 percent of the FTSE 100 reliant on Oracle capabilities and more than 30,000 organisations globally using Oracle cloud applications to run their front and back office functions. We hope the insights that Oracle derives from this experience prove useful to the Committee in better understanding the ways in which public sector transformation and IT modernization can support wider economic growth ambitions. Truly strategic public sector IT modernisation therefore should seek to account for and facilitate the following:

- **Goal-driven project delivery**: it is a mistake to view IT modernisation and cloud adoption as an end in itself – modernisation needs to begin from a foundation that sets out the goals the Government seeks to achieve, i.e. this could be security, performance, accessibility, efficiency, or incorporation of AI and machine learning processes to achieve these. To enable smart and effective procurement, cloud procurement should be treated as it would for any other capability – i.e. the Government can only buy the right system if it starts with the right requirements and has clearly defined strategic end goals in mind.

- **Preserving choice in digital procurement:** at a time when both main political parties in the UK have been questioning the value of private procurement across the full range of public services, competition in the cloud market is an important example of the Government and public sector successfully leveraging the full range of architectures and services this enables to provide better services. Cloud is an example of exactly how Government should leverage the private sector, with competition enabling the tremendous innovation, diversification and change that we see today. Healthy competition in the cloud market also means the Government can seek to afford to preserve its choice and flexibility by avoiding long-term, single vendor commitments whenever possible in its procurement processes. To facilitate this, procurement processes and metrics should be reviewed regularly and in light of new and emerging risks to ensure they are sufficiently agile and ready to adjust, especially in the face of 'black swan' events, as the last 12 months have shown.

- **Ensuring procurement practices keep pace:** The crisis has illustrated the need for government to be able to stand-up novel and innovative technologies, at pace and scale. Increasingly these are enabled by cloud technologies – for example, Oracle Cloud Infrastructure supported the rapid and swift expansion of Zoom videoconferencing services at the beginning of the pandemic. However, the standardized commercial and procurement models for cloud computing fundamentally differ from the traditional model for on-premises IT, with cloud

services continually evolving as vendors update and improve their offerings. As a result, government must adapt its compliance, procurement, and IT management systems to work continuously in order to fully benefit from this IT acceleration. This is particularly important for the UK Government to consider as it reviews cross-government procurement functions in the wake of the pandemic, notably as part of the 'Transforming public procurement' green paper. As part of this, Government should review the rules, guidelines and procurement routes used by civil servants, working with industry to agree and publish new guidance.

Harnessing the benefits of the 'virtual enterprise'

For business, COVID-19 – in a similar vein to 'Y2K' – will become an inflection point for enterprise IT investment. As businesses begin to look beyond the pandemic and invest for growth, they will rapidly re-evaluate their customer, supplier and employee relationships, while – as we see most obviously in the revolution in remote working practices – "work" itself will be increasingly redefined. Transactions will increase as the relationship between enterprises and their employees, suppliers and customers become increasingly virtual; corporate leaders will focus on how technology uniquely drives enhanced productivity and efficiency gains, which in turn will accelerate IT investment on an unprecedented scale. The growth of the 'virtual enterprise', built in the cloud, will in practice be supercharged by innovations such as cashier-less-payment systems; just-in-time (and self-healing) supply chains; and 5G-enabled smart factories.

In turn, the public sector and its organisations can look to harness learnings from the private sector, and policymakers and procurement managers should be encouraged to adopt 'virtual enterprise' thinking when it comes to the outsourcing of system availability, performance and security. While there is already a great deal of focus on the digital transformation of citizen-facing services, we believe there has been less focus on corporate objectives within public sector organisations, for example in the areas of finance, human resources and other 'back office' functions. Government, like any lean enterprise, understandably seeks to minimise costs that are perceived as 'administrative', but we would encourage Government to treat these as investment priorities in order to create empowering workspaces for civil servants, where they have access to the data and tools necessary to make better decisions and manage performance.

Here, looking to harness scalability is key – and that means policymakers need to reassess attitudes to outsourcing and attachment to pursuing bespoke solutions, where this is less likely to produce the kind of integration necessary to support the strategic procurement goals of public sector organisations. Public sector organisations should be encouraged to leverage the investments of others and to adopt the best practices of commercial applications, rather than persisting with in-house bespoke solutions that fundamentally cannot scale and make little more sense when developed in the cloud than they do on physical premises.

Oracle believes that the 'virtual enterprise' of the future, whether found in the public or private sectors, will be built on a suite of sophisticated, industry-specific, analytics-driven and AI-powered enterprise applications. Technologies such as machine learning, Internet of Things (IoT), analytics and blockchain are in reality features of enterprise applications rather than bespoke applications themselves, i.e. they come with and are built into modern applications. Today, the most advanced enterprises and organisations – and those set to

benefit most readily from post-pandemic growth – understand that systems must scale, systems must be secure, and systems must be integrated in order to succeed.

In practice, this means that applications must be mobile, social and driven by artificial intelligence, analytics and machine learning. This trend will only accelerate as the rise of 5G and the IoT enable a new wave of SaaS applications, with as many as 40 billion new connected endpoints over the next five years globally. This represents the new frontier in cloud computing, with Oracle at the forefront of providing these complete, integrated, feature-rich, highly scalable and fundamentally secure enterprise solutions that will underpin future growth and help to meet strategic goals of public sector procurement and digital transformation.

Harnessing cloud solutions and emerging technologies to deliver the green recovery

Central to the question of supporting and sustaining post-pandemic economic growth is ensuring that credible steps are taken to deliver a green recovery. This should be foremost in the minds of UK policymakers and business leaders alike as we approach the COP26 summit in Glasgow and the UK seeks to cement its position of global leadership in driving emissions reduction towards net zero. The tech sector in particular has the potential to be at the forefront of climate innovation and the Government should be confident in supporting this capability.

Oracle recognises the scale of this urgent challenge, and in 2015 we set our own aggressive goals for reducing emissions, waste, and energy and water use at our facilities worldwide by 2020. We are proud of the success achieved to date in pursuit of becoming a more sustainable business. Building on these goals, Oracle recently announced a set of new and significantly more challenging targets to reach by 2025, including ambitions to:

- Power the Oracle Cloud with 100% renewable energy by 2025;
- Ensure 100% of key suppliers have environmental programs in place and that at least 80% of those have emissions reduction targets by 2025;
- Reduce emissions from employee air travel by 25% over a 2019 baseline;
- Achieve a 26% reduction in absolute emissions over a 2015 baseline and a 55% reduction of emissions per unit of energy consumed.

These goals follow the Science Based Targets initiative's (SBTi) guidelines, which set emission levels in accordance with the Paris Agreement on climate change. Oracle is on track to reduce emissions according to the Paris Agreement's 1.5° scenario. Already, our UK data centres are powered with 100% certified renewable energy, as are our other European data centres (Amsterdam, Frankfurt, and Zurich). Globally, our data centres procure 59% of their energy from renewable sources. And we are working to apply the lessons learned in the UK to our data centres in other parts of the world.

Beyond our own corporate efforts, we believe it is important to demonstrate how cloud solutions and emerging technologies also enable our customers themselves to take credible steps towards achieving climate and sustainability goals. Oracle's solutions cover an unmatched breadth and depth of capabilities for all industries to design more environmentally friendly products, source materials responsibly, transport goods in more sustainable ways, manage risks, and analyse and report on environmental impacts. And emerging technologies like the IoT, AI, Big Data, and Blockchain are providing unprecedented opportunities to fundamentally shift how organisations are impacting the

environment as they conduct their business. It is important that Government continues to prioritise R&D and investment in these technologies as part of both 'levelling up' economic ambitions and the modern industrial strategy.

With Oracle Cloud's sharing of computing resources among a large number of customers, organisations, including those in the public sector, gain enormous economies of scale, especially when it comes to carbon and energy consumption. Oracle Cloud enables customers to take advantage of Oracle's highly efficient cloud infrastructure with its centralized server processing and optimised energy usage. Oracle's data centres leverage state-of-the-art intelligent energy management and cooling technologies that are based on Oracle's industry-leading expertise and best practices. We would be happy to share with the Committee some specific examples of the ways in which our technologies are supporting customers in the UK to meet climate goals, if that would be helpful as the inquiry progresses.

Conclusion

Across both public and private sectors, Oracle believes that innovation in the cloud computing market demonstrates the potential for post-pandemic economic growth in the UK to be driven and sustained by scalable, secure and integrated cloud solutions that will deliver gains in efficiency, accessibility, performance and, of course, sustainability for administrators and users of public sector and business services alike.

At a policy level, this submission aims to underline the opportunities for decision-makers to:

- Ensure Government and the public sector adopts a goal-driven and strategic approach to cloud and wider tech adoption, smartly enabling and leveraging private competition in the cloud market to meet increased public demand for accessible public services and to take advantage of the pandemic's catalysing effect on digital transformation.

- Ensure Government procurement practices are sufficiently agile to take account of and ensure services benefit from ongoing advances in cloud solutions and technology, as the Government seeks to learn lessons about effective procurement practices in the wake of the pandemic. Crucially Government should review rules, guidelines and procurement routes used by civil servants, working with industry to agree and publish new guidance to ensure public bodies are well-placed to respond rapidly to future 'black swan' events and risk.

- Encourage those taking public sector strategic procurement decisions to adopt a 'virtual enterprise' mentality: leveraging scalability in the cloud market, using applications that are driven by artificial intelligence, analytics and machine learning that are best situated to benefit from the coming advances in 5G and the Internet of Things. This must apply not only to citizen-facing services, but to corporate functions too, to ensure those involved with the day-to-day running of Government and public sector organisations are given the tools to drive performance improvements and meet objectives. This should be an investment priority for procurement managers.

- Highlight the ability of cloud solutions and associated emerging technologies to support organisations in adopting increasingly ambitious climate goals as we look to build a green recovery. In the year of COP26, Government should consult widely with the tech and IT sector to ensure that climate goals are embedded and

replicated throughout the digital economy. Government should seek to put tech businesses and innovators at the forefront of the UK's global leadership on climate change, while continuing to make technologies likely to support climate goals an investment priority.

At a wider level, Oracle believes that fundamental to the challenge of securing and sustaining post-pandemic growth is the task of ensuring the UK becomes the most competitive and supportive environment for digital and tech innovation, particularly as the UK charts a new course outside of the European Union and seeks to maximise areas of competitive advantage. Government investment should be targeted at fostering innovation in digital infrastructure, embedding digital skills and re-skilling, supporting competition in cutting-edge technologies such as cloud and 5G, and ensuring public procurement practices are sufficiently agile to lead the way in these areas and to take account of best practice in the private sector. In so doing, the UK economy will be better equipped to rebound from the crisis and deliver growth into the 2020s and beyond.

I hope these insights will prove useful as the Committee takes forward its inquiry into 'Post-pandemic economic growth'. Should you wish to discuss this submission further, I or a member of my team would be only too happy to speak with you or the Committee secretariat in private to provide further insight and detail.

Yours sincerely,

Richard Petley - UK Country Leader, Oracle

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