Witness Name: Louis Mosley on behalf of Palantir Technologies UK, Ltd.

Statement No.: 1

Exhibits: LM01-07

Dated: 15 January 2025

UK COVID-19 INQUIRY

WITNESS STATEMENT OF LOUIS MOSLEY, ON BEHALF OF PALANTIR TECHNOLOGIES UK, LTD.

In response to Module 5 of the UK COVID-19 Public Inquiry, I, Louis Mosley will say as follows: -

I. BACKGROUND

1. I, Louis Mosley, Executive Vice President of Palantir Technologies UK, Ltd., submit this statement on behalf of Palantir Technologies UK, Ltd. ("Palantir") in response to the Request for Evidence from the UK COVID-19 Public Inquiry. I had the privilege of working for a technology company that supplied HM Government ("HMG") with software critical to its response to the COVID-19 pandemic. Palantir's software products were used by NHS England ("NHSE") and the Department for Health and Social Care ("DHSC") to provide

data integration, data analysis, and operational decision-making support during the pandemic.

2. Palantir builds software that enables large, complex organisations to integrate their data, decisions, and operations at scale. In March 2020, NHSE contracted Palantir to supply its Foundry software platform ("Foundry") to support HMG's pandemic response.

3. NHSE used Foundry, as well as other software solutions provided by other vendors, to deliver the "COVID-19 Data Store",[1] which provided key decision-makers in NHSE, and across the wider government (e.g. DHSC, Cabinet Office/ No 10 Downing Street), with holistic, accurate, and up-to-date data relating to the COVID-19 pandemic. The COVID-19 Data Store also supplied data underpinning the Government's public-facing "Coronavirus (COVID-19) dashboard"[2]. Palantir's work on this project is detailed at Section III below.

4. NHSE also used Foundry to build other dashboards and software applications leveraging the COVID-19 Data Store, which are relevant to this Inquiry:

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[1] https://www.england.nhs.uk/contact-us/privacy-notice/how-we-use-your-information/covid-19-response/nhs-covid-19-data-store/ (last accessed 3 December 2024) [LM/01 - INQ000089761].

[2] https://ukhsa.blog.gov.uk/2023/12/21/ukhsa-data-dashboard-takes-over-from-the-coronavirus-covid-19-dashboard/ (last accessed 3 December 2024) [LM/02 - INQ000532765].

a. Software solution to monitor stocks of ventilators and critical care equipment and to inform and direct the allocation and distribution of these items to Trusts across England. Foundry enabled NHSE to track and analyse the supply of and demand for ventilators and critical care equipment during the pandemic, helping to ensure these items were allocated fairly and efficiently. This work is detailed in Section IV.

b. Software solution to monitor stocks of Personal Protective Equipment ("PPE") and to inform and direct the allocation and distribution of these items to sites across England. Foundry enabled NHSE to track PPE supply and demand in near-real time, from distribution logistics to hospital inventory levels, helping to ensure these items were allocated fairly and efficiently. This work is detailed in Section V.

c. Software solution to support the COVID-19 vaccination programme, encompassing the ordering, allocation, distribution, and monitoring of the uptake of the vaccine and consumption of associated supplies. Foundry enabled NHSE to analyse data on vaccine supply and demand in near-real time, helping to ensure the fair and efficient allocation and distribution of these items across England. This was critical to achieving widespread immunisation and controlling the

pandemic, as covered in the Kings Fund Report of 30 January 2022 ("Kings Fund Report")[3]. This work is described in Section VI.

d. Finally, Palantir assisted the Department of Health and Social Care by developing a dashboard that provided a comprehensive picture of how COVID-19 was affecting care homes. This enabled targeted interventions to protect vulnerable populations within these facilities. This work is described in Section VII.

5. As has been reported in the media, we also had discussions with Ministers and senior officials about using Foundry to support the ordering, allocation, distribution, and uptake of PCR tests and Lateral Flow tests. However, NHS Test & Trace declined to take Palantir up on this offer to help.

II. PALANTIR'S EXPERIENCE

6. Palantir's ability to deliver positive outcomes during the pandemic was the result of strong leadership at NHSE. We also benefited from the continuity of these key personnel throughout the period. Knowledge and know-how were compounding.

7. We credit Julian Kelly – who held the position of Chief Financial Officer at NHSE at the time, and who chaired the Steering Committee overseeing

[3] https://www.kingsfund.org.uk/insight-and-analysis/reports/covid-19-vaccination-programme (last accessed 3 December 2024) [LM/03 - INQ000283354].

Foundry's deployment across NHSE – for his outstanding leadership, Amanda Pritchard – who held the position of Chief Operating Officer at NHSE at the time – and Dame Emily Lawson – who held the position of Chief Commercial Officer at NHSE at the time – for their outstanding operational leadership, and Ming Tang – who held the position of National Director, Data and Analytics at NHSE at the time – for her outstanding technical leadership. Their outcome-focused approach, their willingness to experiment, and their ability to learn quickly were instrumental in making our software impactful.

8. From an institutional perspective, it was beneficial to have NHSE as a customer – an organization with an operational rather than technical mandate. This meant applications developed in Foundry were built to end-user specifications and benefitted from rapid feedback loops, which ensured they were quickly tested in practice and enjoyed rapid improvement cycles. In our experience, organisations where the technology function is closely subordinated to operational leadership have better outcomes from their technology investments. As per Conway's Law, complex products typically end up shaped like the organisational structure they are designed in or designed for – hence, technology functions are likely to build technology for technologists, not operational users.

9. Within the scope of the Request for Evidence set out in Section 2(c), our experience of "existing data, communications, and technology systems" during the pandemic was limited to "analysing the supply, demand and distribution of equipment". We note, however, that our software was used by NHSE not only for analysis, but also for operational decision-making support relating to the supply, demand, and distribution of equipment. The ability of NHSE both to analyse data *and* act on these data-driven insights within Foundry was critical to enabling NHSE to respond effectively to the pandemic.

10. At the onset of the pandemic, we observed the following weaknesses:

a. **Fragmented data**: there was no accurate, holistic, granular, or real-time data on the supply of or demand for critical care equipment or supplies. The relevant data was either captured in varied formats across thousands of disparate systems or collected manually (with all the associated accuracy and latency issues). The visibility required to trace data quality issues to their source was lost.

b. **Low technology penetration:** years of underinvestment in technology meant many critical processes were still analog or manual, e.g., data collections.

c. **Lack of interoperability**: there was rarely a technical way for these disparate systems to communicate with one another, either directly or via an integration layer.

d. **Dispersed accountability**: these disparate systems belonged to a multitude of different organisations, both national and local, with different priorities. Responsibility for technology was split between NHS Digital, NHSX, and NHSE.

e. **Fragmented or un-auditable information governance:** discrete, disparate data processing and data sharing, especially over email and phone calls, risked breaking access controls and audit trails.

f. **Lack of market awareness**: familiarity with the range of technological solutions available on the market was limited. There was often a reliance on custom, consultancy-built technology instead of off-the-shelf solutions.

g. **Value for money**: while like-for-like comparisons are difficult, the Kings Fund Report noted that NHSE spent a total of £25m licensing Foundry with impactful results, as detailed below. In contrast, the

NAO identified £155m of "digital and data" expenditure by NHSTT in 2020-21 alone[4].

11. Data protection, security, and privacy were acute challenges throughout the pandemic. Tracking who has access to what information and why, across thousands of datasets and thousands of users, quickly became an exceptionally complex problem for information governance personnel. As the number of access requests grew, so too did the number of potential failures.

III. COVID-19 DATA STORE

12. Palantir's support for the COVID-19 Data Store began on or around 12 March 2020. Palantir's team was led by Gemma Hallatt, Forward Deployed Engineer.

13. Ming Tang, who held the position of National Director, Data and Analytics at NHSE at the time, commissioned Palantir to develop a "data asset" that would supply NHSE leadership and other senior HMG stakeholders with holistic, accurate, and up-to-date data and analysis on a wide variety of critical metrics relating to the pandemic.

14. NHSE used Foundry, among other software solutions, to ingest and integrate hundreds of data sources from across the healthcare system into the

[4] https://www.kingsfund.org.uk/insight-and-analysis/reports/covid-19-vaccination-programme (last accessed 3 December 2024) [LM/03 - INQ000283354].

COVID-19 Data Store. For example, the COVID-19 Data Store tracked the availability of different types of hospital beds (e.g., beds with oxygen masks, beds with bilevel ventilators, beds with full mechanical ventilators), the number of COVID cases, NHSE staff availability, and PPE stock levels.

15. Foundry provided NHSE with tooling to rapidly clean and harmonise this complex, disparate data and ensure the resulting data pipelines remained accurate and up to date at all times.

16. Foundry enabled NHSE information governance personnel to establish and monitor a comprehensive data governance regime, including data tracking, granular access controls, data minimisation, data quality improvements, and comprehensive auditing. These controls were applied at source and propagated automatically as data was transformed and deployed across the various dashboards and operational tooling listed below.

17. The COVID-19 Data Store became HMG's 'single source of truth' for key metrics relating to the COVID-19 pandemic via the Civil Contingency Secretariat in Cabinet Office. Dashboards built using Foundry to display this information, like NHSE's "Strategic Decision Makers Dashboard" ("SDMD"), were used by NHSE leadership and other senior HMG stakeholders throughout the pandemic to provide situational awareness and support critical decision-making.

18. The COVID-19 Data Store also supplied data and analysis underpinning the "Coronavirus (COVID-19) dashboard"[5], which HMG used to keep the public informed about the development of the pandemic.

IV. ALLOCATION AND DISTRIBUTION OF VENTILATORS

19. Palantir's support for NHSE's ventilator allocation and distribution began on or around 4 April 2020. Our team mainly collaborated with Dame Emily Lawson (at the time, Chief Commercial Officer) and Professor Sir Keith Willett (then, National Director for Emergency Planning and Incident Response) on this project. Tom McArdle and Joanna Peller, both Forward Deployed Engineers, led the Palantir team.

20. From early April, the Palantir team joined a daily meeting where NHSE leadership would decide how many ventilators to allocate and distribute that day from the national stockpile to individual Trusts in need of additional equipment.

21. We observed in this meeting that reliable data on both the current and likely future supply of ventilators was lacking. Similarly, data on demand for ventilators was patchy and its provenance was often unreliable. As a result,

[5] https://ukhsa.blog.gov.uk/2023/12/21/ukhsa-data-dashboard-takes-over-from-the-coronavirus-covid-19-dashboard/ (last accessed 3 December 2024) [LM/02 - INQ000532765].

critical decisions were being made with limited or inaccurate data and with no way to assess relative needs across different sites.

22. With the support of Dame Emily Lawson, NHSE personnel identified sources of data on the current and projected supply of ventilators. This data was integrated into Foundry to enable NHSE to see the total supply picture and how this might change as potential allocations were made during the daily meeting.

23. In parallel, NHSE used Foundry to integrate data to inform the demand for ventilators, including Trusts' current capacity, Trusts' request for new equipment, alongside site-level COVID case counts, and forecasts from the SDMD. Sir Keith Willett, the senior clinician responsible for making the allocation decision, made the demand of Trusts that they submit data on their ventilator usage and other relevant metrics on a daily basis.

24. As a result, NHSE used Foundry throughout the pandemic to determine the allocation and distribution of approximately 10,000 mechanical and bilevel ventilators, plus all associated critical care equipment such as patient monitors. NHSE used Foundry to help ensure ventilator allocation was based on reliable data and analysis, enabling the equitable and efficient distribution of this critical and life-saving equipment across England.

V. ALLOCATION AND DISTRIBUTION OF PPE

25. Palantir's support for PPE allocation and distribution began on or around 19 April 2020. The Palantir team primarily collaborated with Dame Emily Lawson and her team. The Palantir team was led by Tom McArdle and Joanna Peller, both Forward Deployed Engineers.

26. From late April, the Palantir team joined a daily meeting with approximately 50 participants from various organisations, including the British Army, Royal Navy, private sector consultancies, DHSC leadership, NHSE leadership, and key NHSE staff. At these meetings, the assembled group decided how much PPE to allocate and distribute that day to individual Trusts.

27. The pre-pandemic system for PPE procurement had been largely decentralised. Individual Trusts purchased PPE themselves or actioned this via Supply Chain Coordination Ltd (SCCL). With the onset of the pandemic, this decentralised system was overwhelmed by the surge in demand. PPE became scarce and NHS organisations were competing against each other to procure more PPE, driving up prices further and exacerbating shortages.

28. In April 2020, the PPE procurement process was centralised[6] and NHSE took responsibility for the allocation and distribution of this centrally procured PPE to hospitals across England.

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[6] Palantir did not support the PPE procurement process.

29. This posed the following challenges:

a. There was no ability for NHSE to gauge the supply of or demand for PPE at individual Trusts. PPE stock levels at Trusts were not being recorded in accurate, consistent, or systematic ways. Information on PPE stock levels was being shared via phone calls and emails, which was inefficient and potentially inaccurate.

b. British Army and Royal Navy personnel were enlisted to distribute PPE to Trusts, but without data to guide them, their distribution was done broadly evenly, so every Trust was getting the same amount of PPE, regardless of their current stock levels and/or specific needs. As a result, local PPE supply shortages were emerging, even as the aggregate PPE supply was sufficient.

30. To address the challenge in determining accurate supply of PPE, NHSE used Foundry to build a holistic, granular, accurate, and near-real-time picture of PPE supply across England. In the relevant period, Foundry enabled Trusts to manually input their own data on PPE stocks or connect directly to their local inventory management systems. Dame Emily Lawson stipulated that the provision of data on PPE stocks was a prerequisite for Trusts to be eligible to receive further PPE supplies. In parallel, Foundry integrated data on PPE stock

levels directly from warehouse management systems at PPE distribution centres.

31. To address the challenge in determining accurate demand for PPE, NHSE used key metrics from the COVID-19 Data Store, such as infection rates, number of ICU patients, historic PPE demand, and expected PPE deliveries. Foundry enabled Trusts to update this data daily and adjust their needs, allowing for more efficient demand calculations over time.

32. NHSE also used Foundry to run forecasting models to predict PPE needs at individual hospitals. Using model chaining, where the output of one model became the input to the next, Foundry enabled NHSE to manage and govern these complex sequences of models, ranging from national epidemiological models developed at academic institutions to site-level PPE burn-rates developed by NHSE analysts.

33. As a result, Foundry became one of the key operational tools through which NHSE allocated PPE supplies across England during the pandemic. Approximately nine billion items of PPE were allocated and distributed to sites during the pandemic.

VI. THE COVID-19 VACCINATION PROGRAMME

34. Palantir's support for the vaccine rollout began on or around 9 November 2020. The Palantir team primarily collaborated with Dame Emily Lawson. The

Palantir team was led by Tom McArdle and Joanna Peller, both Forward Deployed Engineers.

35. Palantir's support for the COVID-19 vaccination programme was its most comprehensive and wide-ranging contribution to HMG's pandemic response. When designing and delivering the COVID-19 vaccination programme, NHSE benefitted from its experience of using Foundry to allocate and distribute ventilators and PPE. Familiarity with and trust in Foundry as an operational platform enabled a greater technical ambition from the start of the programme.

36. NHSE used Foundry to connect directly to dozens of national and local systems, ranging from inventory systems and warehouse management systems to point of care systems. This was done in days.

37. NHSE used Foundry to:

a. Ensure the rapid mobilisation of vaccination sites by:

i. Integrating disparate data relating to site readiness, including supplies of vaccines and syringes, the presence of adequate storage facilities, and staffing levels; and

ii. Building operational software tools to enable the ordering of vaccines, syringes, and other critical supplies for the different types of vaccination sites and in coordination with the varied ordering processes.

b. Prioritise and execute vaccine deliveries by:

    i. Integrating directly with warehouse management systems and building operational software tools to manage the complex logistics of ordering and distributing vaccines and other critical supplies.

    ii. NHSE used Foundry to model which areas had the most unvaccinated population and prioritized vaccine deliveries accordingly.

    iii. These operational software tools also streamlined the process for quick and accurate shipping requests, which helped ensure vaccine supplies were sent wherever they were most needed as soon as they arrived in the UK.

c. Increase vaccination uptake by:

    i. Providing a constantly updating, near real-time, 'single source of truth' for vaccinations, from individuals to aggregated local, regional, and national levels.

    ii. Foundry also provided NHSE with the tooling to analyse uptake according to vulnerability groups and other relevant demographics.

iii. This enabled NHSE to deploy interventions to increase uptake and observe their effectiveness on target population segments in near-real time.

d. Delivering secure, automated reporting to every stakeholder, from GPs seeking to understand performance in their Primary Care Network to Ministers observing aggregated performance for the entire country.

38. As a result, Foundry became one of the operational platforms through which NHSE ordered, tracked, allocated, distributed, and monitored the uptake of every COVID-19 vaccination in England. It enabled over 44 million people in England to receive their vaccination during the period.

39. We believe Foundry played a critical role in making NHSE's COVID-19 vaccination programme one of the swiftest and most efficient examples of mass vaccination in history worldwide, as explained in the Kings Fund Report[7]. To this day, NHSE continues to use Foundry to deliver vaccinations and immunisations – for COVID-19 and now other diseases such as monkey pox, the flu, RSV, and MMR – across England.

[7] https://www.kingsfund.org.uk/insight-and-analysis/reports/covid-19-vaccination-programme (last accessed 3 December 2024) [LM/03 - INQ000283354].

VII. ADULT SOCIAL CARE

40. Palantir supported DHSC from June 2020. The Palantir team was led by Gemma Hallatt, Forward Deployed Engineer.

41. DHSC used Foundry to develop a dashboard like NHSE's SDMD to provide a comprehensive picture of how the pandemic was affecting care homes and domiciliary care providers. Foundry integrated with pre-existing tools used by social care organisations to provide daily metrics at individual care home level across a range of indicators, including the number of COVID-19 cases and the number of people tested for COVID-19.

42. This data could then be aggregated to a local authority level, a regional level, or a national level. Among the data collected were PPE supplies, with the dashboard flagging providers that were low on PPE on a broad high/medium/low basis.

43. This dashboard underpinned a daily meeting chaired by Helen Whately MP, then Minister of State for Social Care.

44. The dashboard was also used by several local authorities, with access controls in place to ensure they could only access data relevant to them.

45. Unlike our work with NHSE, this analytics work for DHSC did not evolve into the provision of operational support, although we did propose ways in which this could have done. Nonetheless, the dashboard provided valuable

insights and supported key decision-makers in managing the impact of COVID-19 on care homes and domiciliary care providers.

VIII. LESSONS LEARNED

46. The data infrastructure in place at the start of the pandemic suffered from critical structural weaknesses: fragmented data, underpinned by manual data collection processes, stored in varied formats across disparate and un-interoperable systems, with inflexible access control frameworks and broken information governance audit trails. Accountability for this data infrastructure was dispersed across a multitude of organisations within England's healthcare system and overarching responsibility for technology was split between three organisations: NHS Digital, NHSX, and NHSE.

47. These weaknesses hampered HMG's pandemic response. HMG's ability to monitor the unfolding crisis, understand the healthcare system's capacity to cope, and equip its decisionmakers – at every level of the HMG hierarchy – with the information they needed to make better-informed decisions in response to the pandemic was undermined by inaccurate, incomplete, inaccessible, and/or high-latency data.

48. Foundry was used by NHSE to overcome these weaknesses in specific areas of its pandemic response – i.e., the allocation of ventilators, PPE, and

vaccines – but the beneficial impact of Foundry on HMG's wider pandemic response was necessarily limited by the narrow scope of its application.

49. Had this kind of technology and approach to data integration been more widely used across other parts of HMG's pandemic response relevant to this module of the Inquiry (and beyond), we believe fewer things might have gone wrong. For example, Foundry could have been used to help manage the procurement of Ventilators and PPE[8] or support the supply, demand, distribution, and uptake of PCR and Lateral Flow tests. In the latter case, for example, Foundry could have been used to help prevent an issue in the processing of COVID-19 test results data at Public Health England (PHE), which led to an estimated 1,500 avoidable deaths from COVID-19 over a seven-day period in September-October 2020[9]. As requested by the Inquiry, we have

[8] Palantir software is used widely by large corporate and government agencies to manage procurement, including for supplier management, sourcing, negotiation, and fraud detection. See Exhibit LM/04 – INQ000533721 for case studies.

[9] On 3 October 2020, HMG announced that 15,841 COVID-19 cases had gone unreported during the period 25 September and 2 October 2020 because of PHE's use of an out-of-date file format in the relevant data pipelines. See this BBC article from 5 October 2020 or further details: https://www.bbc.co.uk/news/technology-54423988 (last accessed 3 December 2024) [LM/05 - INQ000532764].

Analysis in a subsequent paper from Warwick University suggested that these 15,841 missed referrals for contact tracing were associated with more than 125,000 additional COVID-19 infections, and 1,500 COVID-19 deaths. See the Warwick University paper for further details: https://warwick.ac.uk/fac/soc/economics/research/centres/cage/publications/workingpapers/2020/does_contact_tracing_work_quasi_experimental_evidence_from_an_excel_error_in_england/ (last accessed 3 December 2024) [LM/06 - INQ000532766].

provided our opinion on how an emergency procurement system could be structured in Section IX below.

IX. EMERGENCY PROCUREMENT SYSTEM

50. HMG should invest in a "Common Operating System" ("System") solution that would sit on top of, and be able to integrate with, the multitude of source systems across the local and central government, healthcare and other bodies of national strategic importance. This System would be used by these organisations both in peacetime and during emergencies such as COVID-19.

51. In peacetime, this System can be used to improve collaboration between these organisations and to optimise procurement, among other things. We set out some of the case studies for how Foundry is used at our customers to do so in the Exhibit LM/04 – INQ000533721. Government would similarly use this system for collaboration, but also to monitor crisis preparedness by looking at, for example, supply chain risks such as geographical concentration and dependencies on key suppliers and source materials. This would inform government policy decisions such as foreign policy, investment, allowing mergers and acquisitions, and nationalisation of key infrastructure.

52. In an emergency, the Common Operating System would be rapidly reconfigured to respond to the crisis at hand. If required, the System will be used to centralise procurement of critical supplies.

53. We set out below the key features that an emergency procurement solution should have:

a. Common Operating Picture
    i. Comprehensive inventory of available supplies and equipment
    ii. Real-time tracking of stock levels across multiple locations
    iii. Information on approved suppliers and their capacities
b. Reporting and Analytics
    i. Real-time dashboards for decision-makers
    ii. Customisable reports for different stakeholders
    iii. Historical data analysis for continuous improvement
c. Supply Chain Oversight
    i. Real-time tracking of orders and shipments
    ii. Integration with logistics providers for efficient distribution
    iii. Ability to identify and resolve bottlenecks quickly
d. Communication Tooling
    i. Integrated messaging and alert systems
    ii. Collaboration tools for stakeholders across different departments and bodies
    iii. Public-facing portal for transparency and information dissemination

e. Demand Forecasting/Scenario Planning

    i. Explainable analytics to anticipate needs based on various scenarios - It is key to understand why models are predicting certain outcomes. Without this, trust is almost impossible to establish, or worse, decisions are taken on un-auditable recommendations.

    ii. Integration with public health data to inform forecasting models

f. Allocation and Distribution Management

    i. Fair and needs-based allocation algorithms

    ii. Prioritisation mechanisms for critical areas or facilities

    iii. Last-mile delivery tracking and confirmation

g. Supplier Management

    i. Pre-vetted supplier network with rapid onboarding capabilities

    ii. Performance tracking and rating system for suppliers

    iii. Ability to quickly scale up production with existing suppliers

h. Automated Procurement Processes

    i. Streamlined, digital requisition and approval workflows

    ii. Automated purchase order generation and management

iii. Integration with financial systems for rapid fund allocation and payment

i. Interoperability
    i. Integration with existing systems and databases
    ii. Standardised data formats for seamless information exchange
    iii. API-driven architecture for easy integration with external systems

j. Quality Control
    i. Built-in quality assurance checks and compliance monitoring
    ii. Ability to track and manage product recalls or defects
    iii. Integration with regulatory bodies for rapid approval of new products

k. Security and Access Control
    i. Role-based access control for different user types
    ii. Robust cybersecurity measures to protect sensitive data
    iii. Audit trails for all system activities

l. Scalability and Flexibility
    i. Cloud-based infrastructure for rapid scaling during emergencies
    ii. Modular design to adapt to different types of emergencies

iii. Ability to quickly add new product categories or suppliers

m. Training and Support

i. Built-in user guides and training modules

ii. 24/7 support for system users during emergencies

n. Compliance and Regulatory Features

i. Built-in checks for adherence to emergency procurement regulations

ii. Automated generation of required documentation for audits

iii. Integration with relevant government databases for verification

54. The most important feature would be *agility*. What happened during the pandemic is unlikely to happen again in precisely the same way. HMG must be able to respond to the black swan events. COVID-19 was an airborne disease pandemic, but the next national emergency could take a different form: a contact disease, a widespread energy outage, a global supply chain disruption, a nuclear disaster or a war for example. The Common Operating System should be able to be rapidly configured to respond to any such emergency.

55. These situations will be highly uncertain, overwhelming, emotional, full of extraneous noise and misinformation. The System and its users should implement tight feedback loops to react to changing circumstances, such as the Observe, Orient, Decide, Act (OODA) loop. HMG needs a system that lets

you quickly assess the status of equipment, consumables, demand, etc. in near real-time, then gives you the ability to quickly build out a few scenarios and likely solutions. HMG should be able to execute these solutions rapidly, monitor the outcomes, and adjust the solution.

56. A lot of the work (e.g. data pipelines, alerts, ordering, purchase order generation, supplier review) can be automated. However, Palantir believes in augmenting rather than replacing the capabilities of human teams and certain key actions and decisions will always need to be made by trained operational-level personnel who are close to the situation on the ground.

X. CONCLUSIONS

57. In summary, we draw three conclusions from our experience:

a. **HMG should invest in a "Common Operating System" for their data –** a layer of flexible, shared, digital infrastructure that could rapidly bring together accurate, holistic, up-to-date data from any relevant source and setting while ensuring appropriate security and privacy controls always apply. From a data perspective, we would recommend its scope be as broad as possible, including other government departments like the Department of Work and Pensions (DWP) or Local Authorities (LAs) that, for example, hold data on care providers. HMG should deploy this Common Operating System

capability immediately and not wait until the next pandemic or civil challenge on the scale of COVID-19 is already underway. An investment of this kind is long overdue.[10]

b. **HMG should ensure technical functions are subordinate to operational leadership** – technology is an enabler, not an objective. Technology only works when it is built to real users' requirements and constantly tested in practice. Hence, technology functions should not be separate bodies from the institutions whose operational mission they serve. The closer they are subordinated to operational outcomes, the better.

c. **The importance of leadership** – the leadership of individuals like Julian Kelly, Amanda Pritchard, Dame Emily Lawson, and Ming Tang was instrumental in remedying the weaknesses in pre-pandemic digital infrastructure for the supply, demand, and distribution of critical equipment and supplies. Their continual application of lessons learned, especially from the experience gained during the distribution of ventilator and PPE, helped to shape their approach to

[10] For further information on the chronic, decades-long under-investment in technology across England's healthcare system, see "Chapter 7: Funding, investment and technology" of the Independent Investigation of the National Health Service in England by Lord Darzi, published September 2024: https://www.gov.uk/government/publications/independent-investigation-of-the-nhs-in-england (last accessed 3 December 2024) [LM/07 - INQ000474367].

the COVID-19 vaccination programme and ensure it was set up for success from the start.

X. STATEMENT OF TRUTH

I, Louis Mosley, believe that the facts stated in this witness statement are true. I understand that proceedings for contempt of court may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief in its truth.

Signed: Personal Data

Name: Louis Mosley

Position: Executive Vice President, Palantir Technologies, UK, Ltd.

Date: 15/01/2025