techUK data centre programme
COVID-19: Recovery

Planning the recovery: common practices and challenges

May 2020

Summary

At time of writing, there are no reports of significant data centre outages resulting from COVID-19, but operators do not see this as cause for complacency: on the contrary, this is a time when careful planning and relentless vigilance are essential.

For some time, data centre operators have been considering how they will return operations to a more normal footing as restrictions on movement are relaxed. In the early days of the pandemic those responsible for the resilience of our data infrastructure did not wait for directions from government but implemented a wide range of precautions long before formal social distancing and lockdown requirements were in place. Similarly, operators are not simply going to drop these precautions overnight, irrespective of the degree to which public restrictions on movement are relaxed. Feedback from the industry suggests that most will implement a phased return, rolling back access restrictions and stepping up maintenance by degrees. All, however confirmed that they will retain the vast majority of existing precautionary measures and in many cases implement new ones.

Recovery presents operators with a number of challenges. Many of the measures taken involve additional cost or contribute to a growing backlog. Maintenance deferrals and access restrictions cannot be sustained in the long term so operators have to tackle this backlog as part of their recovery process. Their second major task is to recover operations to meet the new normal - and ensure they can prosper in the changed business conditions that our post-COVID world may impose.

These notes provide an overview of the approaches that operators are taking during this new, finely balanced, phase: our collective recovery towards something resembling normality. They summarise actions and procedures and identify issues. Useful links are included at the end.

1) Reminder of existing precautions

2) Strategic measures for recovery
- Planning
- Communications
- Supporting mental health and wellbeing

3) Operational measures
- Procedures and guidance
- Critical environments
- Monitoring and reporting regimes
- Minimising footfall to sites and accommodating social distancing requirements
- Cleaning, sanitising and PPE
- Testing
- Lessons learned

4) Issues operators are struggling to resolve
- Accommodating new business
- Liability
- Bottlenecks (customers, maintenance, supply chain and projects)
- Transport

5) Useful links to guidance, further information and contacts

1 Existing precautions in place over and above BAU (business as usual)

Operators have already applied a range of precautions to limit the spread of infection (see our overview published on 27th April). These include new guidelines, procedures and upgraded security controls. Intra-company communications have been stepped up and reporting lines shortened. Precautions on site include shift segregation, restrictions on visitor access and on movement between sites, reduction in or elimination of shared workloads and both domestic and international travel constraints. Smart hands and other remote support have been stepped up, non-essential maintenance deferred, security controls adapted and screening introduced. In some cases visitor temperatures are being taken and non-medical grade PPE has been distributed, usually to reception and frontline staff only. Level and frequency of cleaning has been increased and sanitisation measures implemented. Post contamination cleaning arrangements have been set up for immediate deployment. Non-operational staff are working from home.

2 Strategic measures for recovery

Operators have been thinking hard about recovery and anecdotal reports suggest a range of approaches are being implemented in areas like business planning, communications and staff welfare. They include the following.

Business planning
- Accommodating the likelihood of permanent changes in customer demand, business and working practices with associated operational and market impacts
- Accommodating financial implications of operational changes
- Sales and marketing teams reviewing communications strategies and media, re-evaluating existing approaches and cultures
- Developing and communicating timelines for phased recovery and lifting access restrictions
- Planning for resultant changes in the way office space will be used: as "front of house" rather than daily workplace
- Adapting operations to longer term changes in working practice: home working, staggered travel, segregated shifts
- Anticipating longer term changes in attitudes to location and implications for commercial property market
- Identifying future supply options for PPE and preparing to build future PPE stock

Communications
- Timelines communicated to staff and customers (e.g. relating to access)
- Regularity of company communications to staff and customers stepped up

Mental health and wellbeing
- Stepping up staff welfare measures across the board
- Implementing additional mental health support procedures: for those required to continue working remotely, those returning to site and to address furlough tensions
- Managing expectations regarding low likelihood of an early return to BAU
- Prioritising staff for whom isolation has been more problematic for early return
- Implementing recuperation time for staff who have been under intense workloads before the catch-up phase imposes more pressure: implementing recuperation time
- Acknowledging contribution from staff who have kept facilities running

3 Operational measures

Most operational measures that are planned to safeguard business continuity during the recovery phase have already been implemented, so by and large it is a case of continuing or expanding on existing precautions. Some additional procedures are being implemented, however. We have tried

to differentiate new measures (N) from existing measures (E) or existing measures being expanded (E+) but this only provides a feel as there is a lot of variation in practice.

Procedures and guidance
- Introducing procedures to rescind access at short notice   N
- Introducing procedures to reduce shared use of items (e.g. crockery, cutlery, headsets, desk phones and workstations)   N
- Implementing clear procedures for appropriate use of PPE and sanitisation regimes   E

Critical Environments
- Phased resumption of deferred maintenance being planned   N
- Maintenance routines being reviewed. Where there is justification, some maintenance intervals extended
- Stepping up remote hands services for customers while access still restricted: Remote hands at record levels for many operations. In some areas SLAs relaxed in favour of best endeavours, although SLAs generally achieved.   E+
- Enhancing infrastructure management and monitoring tools so that customers can see their equipment in real time. New projects avoided if change would be disruptive, however.   E+
- Expanding existing remote monitoring operations where multiple facilities can be managed from one place.   E+

Monitoring and reporting regimes
- Rigorous monitoring and reporting of staff and visitor health   E
- Rapid and rigorous identification and reporting of potential exposure to infection   E
- Pre-screening routines for all visitors to identify potential exposure   E
- Quarantine and urgent testing of symptomatic staff or those in contact with those that are symptomatic (now that testing is available).   N
- Post contamination routines for potential infection   E
- Thermal imaging technology being tested.   N

Minimising footfall to sites and accommodating social distancing requirements
- Social distancing measures implemented on all sites.   E
- Where social distancing impractical, PPE issued and extra sanitisation measures enforced.   E
- Alternating teams, both operational and office, on rotational basis – week in, week WFH   E
- Visitor restrictions continue, by appointment, cap on numbers   E
- Segregated shifts – no movement between shifts, clean handovers   E
- Remote working practices extended beyond management and leadership teams: non-operational staff to continue working from home for foreseeable future   N
- Rearranging office layouts to accommodate social distancing requirements, spaced workstations, reduced occupancy   N
- Limiting access to toilet, kitchen, breakout and meeting rooms (e.g. one in-one out)   E+
- All meeting rooms closed   E
- 2M indicator markings on floors, number limits clearly indicated for each area   E

Cleaning, sanitisation and PPE
- Additional cleaning of facilities before staff return.   E+
- Flushing and testing of water systems and water storage tanks if unused for some time   N
- Provision of sanitizers, additional handwashing stations and clear guidance on correct use   E
- Non-medical grade masks (some operators have recommended type 1, EN24683). Most operators are issuing cloth masks to staff to mitigate spread of infection from individuals as opposed to protection. Some issuing PPE more widely according to site function and availability.   E

- Other PPE issued depending on availability and circumstance: gloves, visors etc   E
- Clear instructions on correct use provided to prevent inappropriate use or complacency.   E+
  This a priority. (see example from operator here and in useful links below)

Testing

As of 29th April, operators were eligible for testing to establish whether key workers self-isolating because they are symptomatic, or living with those who are symptomatic, are infected. The objective is to allow those not infected to return to work. We await feedback on this process: See: https://www.gov.uk/guidance/coronavirus-covid-19-getting-tested

As antibody testing becomes available (to determine whether individuals have had the virus in the past) operators plan to implement testing.   In the meantime one of our operators, CloudHQ, has recommended this testing provider Eurofins see information sheet here and in useful links below. We welcome feedback.

Lessons Learned

- Greater control of communal areas needed – reinforcing restrictions, reminders issued and furniture moved to prevent people gathering or sitting together e.g. to eat lunch
- Clear instructions about waste disposal – especially that of used PPE. Flip lid bins deployed to ensure that no discarded items were left open to air
- Clearer signage, messaging and enforcement for customers and contractors
- Stepping up cleaning and controlling numbers continue to be the most effective means of infection control, because instructions not always followed in practice
- Thermal and other screening activity located outside entrances, not inside
- PPE stocks and specialist cleaning equipment and services being identified / assembled for future use

4   Issues that operators are struggling to resolve

Recovery presents operators with a number of significant challenges, which include the conundrum of identifying the scenario that constitutes recovery in a new BAU: What are we working towards? What will good look like? Further work will follow at corporate and sector level to understand and explore these challenges in more detail. In the meantime, the following points identify some additional concerns that operators have raised.

Accommodating new business and perturbations in demand
- How to onboard new customers and fulfil orders for new capacity
- Accommodating customers who provide remote working platforms and need to upgrade their data centre infrastructure urgently to accommodate demand
- Handling short- or longer-term reductions in traditional enterprise demand, including requests for deferred payment terms

Managing bottlenecks
- Footfall: managing a sudden uplift in customer access requests to complete deferred work
- Maintenance: there will be heavy competition for maintenance teams and specialist engineers and technicians to address the backlog
- Supply chain: members are anticipating supply shortfalls for some equipment and critical spares
- Strong competition likely for installation and maintenance teams from the supply side
- Some activity likely to be rescheduled due to supply shortages or interruptions

- Operators were anxious about viability of smaller subcontractors in the event of prolonged slowdown
- Projects: especially construction, and the difficulty of re-assembling construction teams and accommodating risk of further interruptions

Consistency
- How to deliver phased relaxation of access restrictions consistently across multiple sites, especially in different regions with different social distancing requirements

Liability
- How to handle liability issues relating to PPE, exposure to infection, etc.
- How to access supplies of PPE and sanitiser to meet HSE requirements and fulfil duty of care

Transport
- How to scale up transport for workers: dealing with the logistical challenge of minimising their exposure to public transport without contributing to a dramatic increase in car use
- Construction site staff and office staff most at risk from public transport. Operators would welcome guidelines from public transport providers

Site specific
- Bathroom facilities on construction sites particularly problematic as needed by all and social distancing and hygiene have to be maintained
- Central London offices particularly in blocks: protocols needed for lifts and stairwells

5   Useful Links

- Returning to work: official guidance: https://www.gov.uk/government/news/new-guidance-launched-to-help-get-brits-safely-back-to-work
- TFL guidance: https://tfl.gov.uk/campaign/coronavirus-covid-
- Testing information: https://www.gov.uk/guidance/coronavirus-covid-19-getting-tested
- Testing provider: https://www.techuk.org/insights/news/item/17565-data-centres-and-covid-19-testing
- Sample corporate guidance on PPE: https://www.techuk.org/insights/news/item/17563-data-centres-and-covid-19-more-on-ppe
- Latest Uptime report: Pandemic planning and response: a guide for critical infrastructure
- Also see this handy guide on reopening your workplace from Cushman & Wakefield
- COVID-19 Precautions taken by data centre operators: https://www.techuk.org/insights/news/item/17405-data-centres-and-covid-19-precautions
- Our COVID-19 hub: https://www.techuk.org/covid-19-information-hub/data_centres
- DCMS Mailbox: COVID-data-resilience@culture.gov.uk

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