![Nottinghamshire County Council logo] Nottinghamshire County Council

REPORT OF THE SERVICE DIRECTOR FOR FINANCE, INFRASTRUCTURE AND IMPROVEMENT

CLOUD PROGRAMME UPDATE

Purpose of the Report

1. To brief Members on the progress and direction of the Cloud programme.

Information

2. The presentation aims to further inform Members of the objectives of the Cloud Programme, progress to date and what the next steps will be.

3. The discovery phase and high level design phases are now complete providing scalable choice regarding which Cloud service model is best utilised. These can broadly be summarised into the following descriptions:

Model	Description
Software as a Service (SaaS)	This model enables an organisation to rent an application separate from its underlying infrastructure. This is often chargeable on a per user per month basis. The main Microsoft solution delivered through this model is Microsoft 365, a suite of applications including email, documentation, presentation and collaboration products.
Infrastructure as a Service public Cloud (IaaS)	This model enables and organisation to rent a form of *virtualised* servers (physical servers that are segmented to run multiple systems) and accessed through secure network connections. The County Council would retain responsibility for the provision and support of the systems, the supplier has the responsibility to maintain the physical equipment.
Co-location model	The County Council will retain a small amount of infrastructure and some systems in a supplier

	provided data centre(s), in the same way that we currently use the Node 4 data centre.

4. Further work is underway to provide education and support materials to embed the adoption of the services and technologies delivered through the programme. This has become more significant with the increased reliance on effective communication and collaboration tools that support the displaced workforce.

Progress

5. There were three primary objectives identified in the most recent report:
   i. Roll out Office 365 mail across the estate. Completed.
   ii. Migrate applications to Microsoft Azure. Designs have been tested allowing a choice of three migration pathways, enabling a more efficient migration based upon application type and technical requirements.
   iii. Move remaining applications out of County Hall data centre and relocate the core to Node 4 Derby. The balance of services now has Node 4 as our primary datacentre, with the County Hall building acting as the secondary data centre inclusive of failover provision for resilience purposes and host to site-specific services.

6. The Council received a letter from the Cabinet Office in February 2020 regarding the risks of of ransomware, risks that are brought into sharp relief by the current events experienced by Hackney Borough Council. A specific concern was raised regarding the provision of offline backups. This is underway and, once implemented, will need to be tested for effectiveness.

7. The unexpected displacement of staff in the Springtime accelerated the adoption of Microsoft Teams as a central communication platform. Within a few weeks the number of Teams users increased by 400% to approximately 3,800, rising to 7,960 active accounts in October 2020. This transition brought with it the respective need for training and support for the new technology.

8. The migration to home working also necessitated some fast reconfiguration work on the central network. The Cloud Programme inately supported this transition as it enables secure, direct communication from NCC devices straight to the Microsoft 365 platform.

9. The experiences from this summer raise three areas of concern that need to be addressed with the plans for future technology. These are:

   i. Supporting team cohesion whilst working in isolated locations.
   ii. Connecting users with support and training tools to maximise the benefits of the new functionality.
   iii. Moving to a hybrid environment as offices begin to repopulate, and delivering a common user experience whether working remotely or in presence.

Next Steps

10. Key milestones for the next phase include:

i.   Roll out Office update, allowing the use of protective markings, data labelling, and other features to help implement an effective document management strategy.
ii.   Deliver OneDrive to all users. OneDrive is a modern, cloud-based file store service which supports more flexible collaboration between individuals, helping to remove the home drive equipment from the data centre.
iii. Implement teams telephony Proof of Concept prior to the removal of Skype for Business in 2021. The ambition for most users is that their voice, messaging, and meetings will all be accessed through a single application.
iv.   Migrate applications to Microsoft Azure; the first batch of web based applications (webapps) is due to commence this month.
v.   Describe the ambitions for 2021 and beyond.

11. There are some technical difficulties with supporting geographically dispered devices. The delivery of software updates is usually contingent on a large, managed network link to all devices. Most home connections are a fraction of this capacity and can not be managed.

12. To mitigate the disruption to end users, capacity for software updates have been reduced to critical security patches only over the summer whilst an alternative delivery mechanism has been developed. This is currently being tested with a small group of pilots users with an update to Office 365.

13. Microsoft Teams has been a proven success this summer. MS Teams meetings hosted by the Council are kept within our security and protection controls, allowing safe collaboration within the Council and with partners. In October 2020 there were 7,960 active users on Teams, which indicates nearly 1 in 4 participants is a partner or guest member.

14. To supplement the structured collaboration Teams provides, further products are being prromoted over the next period to support dynamic and cross-team collaboration within the Council. There are many add-on applications the individual teams can select, support for these will largely be based on the manufacturers own content initially.

15. Replacing the use of home drives is part of the roadmap to decommission legacy hardware from the data centre. OneDrive is a modern filestore service that, amongst other features and benefits, will replace the need for a home drive by providing a personal, workplace document store. OneDrive allows users to share access to files with colleagues, promoting simpler cross-team working. OneDrive content is synchronised across all the user's devices, expanding the ease of mobile technologies.

16. The legacy Skype for Business telephone platform will become unsupported in Q1 2021/22. Preparation is underway to migrate the telephone services this still supports for the Councils major sites to Microsoft Teams. A proof of concept will be implemented over the next quarter to better inform the key design decisions.

17. The nature of Cloud services means new products and features are becoming available more frequently. One example of this is a new offer labelled Metal As A Service, potentially allowing the Council to migrate our virtualised servers to Azure more quickly

and economically. Work is underway to evaluate the possible fit of this technology within our estate.

Technology in the future workplace

18. The experience and lessons learned this summer will need to influence the design of future technology solutions related to corporate property use. The Council has experienced a seismic shift in culture and working practices which should be enhanced and leveraged further.

19. Whilst the capability to work from home has been proven, and every improvement to the work/life balance is welcomed, the social and health impact of prolonged isolation highlights how the use of corporate premises should be focussed on supporting the human connection elements that technology cannot deliver. Technology's role in this is to enable disparately located attendees to share the experience.

20. Not every work situation can be done in a home setting. Council sites should support a broad selection of drop-in attendance, providing choice from casual and informal seating to board room. This may include an assortment of meeting types, from solo working to energising team spaces, and to connect across partnerships and geography.

21. Technology is most readily adopted and it is seamless and unobtrusive. Consultation is underway in partnership with suppliers to explore how technology can support a flexible hybrid experience, allowing all staff (whether working remotely or otherwise) to share a similar experience.

22. Solutions will need to be scalable and flexible. Automation and booking services can help support staff outside of the traditional 9-5 pattern alongside the work-locally ethos.

23. There is current investment in smartscreen technologies within the council which can be enhanced further to better support remote participation. A infographic of potential products has been produced and will be shared with stakeholders and leadership teams.

24. The technology solutions will not be produced in a silo, and must be developed in conjunction with other initiatives, service areas, and the transformation plan.

Other Options Considered

25. None

Reason/s for Recommendation/s

26. To help the committee understand the context behind the cloud programme and report on progress to date.

27. To help the committee support the direction and use of cloud services in the modern workplace.

Statutory and Policy Implications

28. This report has been compiled after consideration of implications in respect of crime and disorder, data protection and information governance finance, human resources, human rights, the NHS Constitution (public health services), the public sector equality duty, safeguarding of children and adults at risk, service users, smarter working, sustainability and the environment and where such implications are material they are described below. Appropriate consultation has been undertaken and advice sought on these issues as required.

RECOMMENDATIONS

1)   That the Committee considers if there are actions arising from the report and presentation.

2)   That the Committee agree to receive regular updates from, the cloud programme.

Nigel Stevenson
Service Director Finance, Infrastructure and Improvement

For any enquiries about this report please contact:
Mark Davies, Interim Head of ICT

Constitutional Comments (SSR 12/11/2020)

29. The Improvement and Change Sub Committee is the appropriate body to consider the content of the report. If the Committee resolves that any actions are required it must be satisfied that such actions are within the Committee's terms of reference.

Financial Comments (CSB 13/11/20)

30. There are no financial implications arising from this report.

Background Papers and Published Documents

Except for previously published documents, which will be available elsewhere, the documents listed here will be available for inspection in accordance with Section 100D of the Local Government Act 1972.

 • None

Electoral Division(s) and Member(s) Affected

 • All