

NEWCASTLE-UNDER-LYME BOROUGH COUNCIL

**EXECUTIVE MANAGEMENT TEAM'S
REPORT TO**

Cabinet
13 October 2021

Report Title: Northgate - Revenues and Benefits Cloud Migration

Submitted by: Head of Customer and Digital Services

Portfolios: One Council, People and Partnerships

Ward(s) affected: All Wards

Purpose of the Report

The report seeks Cabinet approval to enter into a new contract with Northgate (NEC) for the provision of cloud hosted Revenues and Benefits services.

Recommendation

That cabinet approve this cloud migration proposal to safe guard continued service for our Revenues and Benefits applications serving the residents of the Borough.

Reasons

Whilst historically the Northgate Revenues and Benefits applications have been hosted on premise via our data centre located at Kidsgrove Town hall, the cost of providing On-Premise servers and cyber security for these key applications is increasing. Our current On-Premise data centre is coming to the end of life in February 2022 therefore it makes business sense to start the cloud migration of key applications at the earliest opportunity.

1. **Background**

- 1.1 The Northgate Revenues and Benefits applications have traditionally been hosted on premise using Council procured servers and storage maintained by ICT officers with the Applications support and Infrastructure teams.
- 1.2 The investment in our two data centres as part of the Civic Offices to Castle House migration was completed in 2017 where all new data centre equipment was purchased with a 5 year support and maintenance contract, this is coming to an end in February 2022 however we can extend for one more year. Therefore, as part of the sizing exercise for our data centre/s beyond February 2023 along with the review of Cyber security and business critical applications provided by the Borough Council it is deemed the most secure option to adopt a cloud first migration attitude.

2. **Issues**

- 2.1 Our data centres will need a hardware refresh after February 2022 which will require some investment however the prevailing security issues will remain the sole responsibility of ICT Officers and the associated costs.

- 2.2 With cyber-attacks and ransomware becoming a regular occurrence, Cloud providers such as Northgate can provide the reliance and expertise to protect our systems, rather than the Council's own internal security measures. Constant attacks and new ways of breaching physical systems against council's have increased over the last three years with Hackney being one of the highest profile councils to be a victim of this style of attack.
- 2.3 Since 2019, several Councils have been subject to cyber-attacks. Hull City Council has suffered at least ten serious cyber-attacks as well as thousands of attempted "phishing" attacks by cyber criminals wanting to steal login credentials, while Colchester Borough Council is understood to have been targeted in repeated unsuccessful phishing attacks in December 2020.
- 2.4 One of the most significant recent cyber-attacks was against Hackney Council, with estimates suggesting that it has cost up to £10m to rectify. Following four months of recovery they have now set aside £2m from future budgets to address this problem amid a budget shortfall of £58m. Hackney's IT systems were still being impacted after 6 months, including land searches and the processing of changes to existing benefit and council tax claims and payments.
- 2.5 Whilst Cloud migration is still classed as a more expensive option over traditional methods of on premise servers. The true cost of a successful attack is in its millions rather than thousands.
- 2.6 Business Continuity (BC) and Disaster Recovery (DR) for key Borough functions is essential, in our current BC / DR situation there would be a time delay in restoring our Revenues and Benefits systems, whilst ICT would work tirelessly to restore key systems as quick as possible, there would be delay of anything from hours to days without this key system being available
- 2.7 One of the biggest benefits of using managed cloud services from Northgate is that they will perform the security management for us automatically. The cloud service provided by Northgate will mitigate the risks we've had to deal with in the past. For example, patching, threat hunting, system hardening, and configuration management are all much easier to achieve.
- 2.8 It is becoming a market standard for key / critical services and applications to be migrated to the Cloud and operate under a Software as a Service (SaaS) model. This direction has already been adopted with the Council's email facility that is now hosted in the cloud. The benefits of this hosting environment is that it enables both Council employees and councillors to access their emails whilst not compromising on the internal security of the legacy system, something that we would not be able to achieve using the traditional method with on premise servers.
- 2.9 If we continue to utilise these legacy systems the Council will find it difficult to provide the same level of support and business continuity. Demand is high and increasing costs of physical servers and the ongoing maintenance cost such as patching, maintenance updates, security updates, physical checks, air conditioning, power management, back up management to name a few are all the hidden extra costs of keeping legacy systems up and running.

3. **Proposal**

- 3.1 That Cabinet approve this Cloud Migration proposal for the hosting of our Revenues and Benefits applications.

4. **Reasons for Proposed Solution**

- 4.1 As identified in items within section 2, our data centre hardware is becoming end of life by February 2022, this cloud migration along with other future Cloud Migration projects) will reduce the amount of hardware needed moving forward beyond February 2022. There is a strong possibility that we can reduce from two data centres to one data centre to add to the saving.
- 4.2 Additional security for the applications and the ability for Revenues and Benefits staff to access Northgate directly via the internet, which enhances the Council's Business Continuity and Disaster Recovery plans.
- 4.3 All data and applications would be backed up by NEC Cloud, enhancing the Council's Business Continuity and Disaster Recovery plans. All backup's will be off-site and the responsibility of NEC to ensure security and regularity of backups.
- 4.4 Currently the system has a finite of resources of Council ICT staff. This poses a considerable risk which we knowingly absorb. If we took this opportunity of moving to NEC Cloud then it would eliminate these risks as the responsibility to undertake any system upgrades or repair failed hardware would be within NEC's remit. NEC would provide multiple resources that would be available 24/7 to resolve and provide continuation of service. It is also expected that moving to NEC Cloud could potentially release approximately 0.5 FTE from the management, patching and the cost of running the physical infrastructure. This resource is then able to concentrate and focus on developing and enhancing the application and liaising with the users to develop a better service for the customer.
- 4.5 As cloud-based solutions are becoming the new standard NEC's development programme will be centred on a cloud-based platform with all future licencing models be in the form of cloud licences. A similar business model would be the Microsoft 365 platform and it is likely that we will be forced down NEC's cloud route in the future as the On-Premise applications are phased out.

5. **Options Considered**

- 5.1 Continue with the On-Premise Solution and replace necessary server hardware, back up devices as needed in February 2022, continuing with ICT officers supporting both the infrastructure and application software and security patching.
- 5.2 There is a very limited marketplace for Revenues and Benefits application providers, it would not be viable to move away from Northgate due to staff training, timescales involved and data integration from one vendor to another.
- 5.3 Continue with Northgate and adopt the market standard of Cloud migration and hosting for critical application.

6. **Legal and Statutory Implications**

- 6.1 The use of the CCS Data and Application Solutions (DAS) RM3821 framework offers a compliant procurement option in line with current legislation (Public Contract Regulations 2015 (PCR2015) and the Council's governance procedures and as such will minimise the risk to the Council of a procurement challenge.

7. Equality Impact Assessment

7.1 Local authorities have a responsibility to meet the Public Sector Duty of the Equality Act 2010. The Act gives people the right not to be treated less favourably due to protected characteristics. It is important to consider the potential impact on such groups and individuals when designing or delivering services.

8. Financial and Resource Implications

8.1 The overall project cost over 5 years will cumulate to £685,785 of which £355,864 is already accounted for within existing budgets.

8.2 As per the figures below, there will be no cost within this current year's budget, all works and expenditure will commence from financial years 2022/23 and an initial one off 'On Boarding' cost of £40,949 will be required. (Identified as 'Works')

8.3 The current licencing costs per annum are made up of £46,173 for Northgate Core Licences and £25,000 for Annual Licences (identified as Other – Licences – Core & Annual). The total 5-year cost amounts to £355,864.

8.4 The Cloud migration and Cloud Hosting will be an additional £73,057 in the financial year 2022/23, of which £40,949 will require capital budget. There is currently no revenue budget allocated to enable the Cloud migration and Hosting, and will therefore require a pressure of £32,108 in 2022/23's budget. From 2023/24 there will be an additional pressure of £32,108, in order to cover the full year costs of £64,216.

Costs	2021/22 £	2022/23 £	2023/24 £	2024/25 £	2025/26 £	2026/27 £	Total £
Works (capital)		40,949					40,949
Fees (revenue)		32,108	64,216	64,216	64,216	64,216	288,972
Other (licences, current existing expenditure)	Core	46,173	46,173	46,173	46,173	46,173	230,864
	Annual	25,000	25,000	25,000	25,000	25,000	125,000
Total		144,230	135,389	135,389	135,389	135,389	685,785

8.5 These prices have been sourced via the CCS Data and Application Solutions (DAS) RM3821 framework which allows the Council the opportunity to make a direct award of contract without a call for competition, the framework having been previously competitively tendered.

8.6 By moving the application into the cloud, the Council will no longer incur expenditure in relation to hardware. This reduction would be in relation to the renewal purchase price, support and maintenance costs. This is expected to be in the region of £59,000, and would potentially be due in January 2022. A reduction in the number of servers the Council requires would also lead to reducing the requirements for data centres. With the potential to run only one data centre at Kidsgrove Town Hall, savings on other services such as utility, air conditioning, alarm and generator maintenance costs. This would provide both financial and environmental efficiencies.

8.7 In addition, as per 4.4 above, ICT resource would no longer be required to check and update the existing infrastructure.

9. Major Risks

11.1 If we do not adopt the Cloud Migration / hosting solution the major risk is from Cyber and ransomware attacks and the associated down time for the Revenues and Benefits applications should the council fall victim.

11.2 Downtime due to failed hardware at our on-premise data centres with no resilience or backup available.

10. UN Sustainable Development Goals and Climate Change Implications

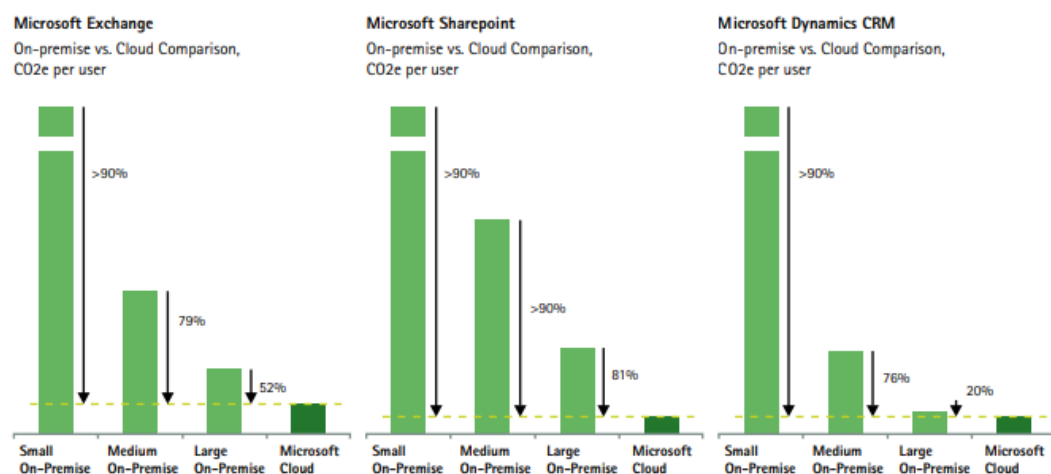


10.1 Further reasons to consider moving towards a cloud based infrastructure, is that as a sustainable and responsible council we need to look at our carbon footprint and mitigate where we can. In study from Microsoft the environmental impacts from ICT can be reduced by 60 - 80% in small to medium size company reducing our effects on the environment.

10.2 The results of analysis by Microsoft shows a significant decrease in CO2 emissions per user across the board for cloudbased versus on-premise delivery of the three applications studied (see Figure 1). The analysis suggests that, on average across the different applications, typical carbon emission reductions by deployment size are:

- More than 90 percent for small deployments of about 100 users;
- 60 to 90 percent for medium-sized deployments of about 1,000 users; and
- 30 to 60 percent for large deployments of about 10,000 users

Figure 1: Comparison of Carbon Emissions of Cloud-Based vs. On-Premise Delivery of Three Microsoft Applications



↓ = estimated decrease with Microsoft Cloud

10.3 Maintaining the council's current infrastructure is not just maintaining physical servers but the peripheral components such as Air Conditioning, Network Switches, UPS Power Management, Fire proofing and Diesel generators. All these components require a huge intake of power and our data centre's located at the Depot and Kidsgrove town hall all have to be maintained at a consistent ambient temperature of around 4 degrees to ensure the systems run at optimum performance.

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10.4 Higher temperatures will result in the components such as processor's overheating causing system wide failures. There are many reasons why cloud computing has become the new viable and sustainable future. Our commitment to our residents should not be solely based on staying put but more looking to the future on how we as a council can truly make a difference.

11. **Key Decision Information**

11.1 This is a key decision under part 2, 13.2 (a) and (b) of the Council Constitution

12. **Earlier Cabinet/Committee Resolutions**

12.1 Proposal discussed at the Commercial, Assets and Capital Investment Review Group on 2 August 2021 and again on 20 September 2021.

13. **List of Appendices**

13.1 None

14. **Background Papers**

14.1 None