

**NEWCASTLE-UNDER-LYME BOROUGH COUNCIL**

**CORPORATE LEADERSHIP TEAM'S  
REPORT TO**

**CABINET**

**06 February 2024**

**Report Title:** IT Data Centre Replacement

**Submitted by:** Service Director – IT and Digital

**Portfolios:** One Council, People & Partnerships

**Ward(s) affected:** All

<b><u>Purpose of the Report</u></b>	<b><u>Key Decision</u></b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
To seek Cabinet approval to retire the Council's on-premises Data Centres and migrate to Microsoft Azure.			
<b><u>Recommendation</u></b>			
That Cabinet:			
<ol style="list-style-type: none"> <li>1. Approve the migration of the Councils applications, servers, and infrastructure to Microsoft Azure.</li> <li>2. Authorise the Service Director for IT and Digital in consultation with the Portfolio Holder for One Council, People and Partnerships to enter into a contract by direct award with a suitably qualified Microsoft Azure partner to provide consultancy, training and support.</li> </ol>			
<b><u>Reasons</u></b>			
<ol style="list-style-type: none"> <li>1. The current data centre equipment is reaching end-of-life and requires significant reinvestment.</li> <li>2. The use of Cloud Computing is a key element of the Council's Technology Strategy (2023-2028)</li> <li>3. The use of Cloud Computing provides for significant sustainability benefits, supporting the Council's target of becoming net zero by 2030.</li> </ol>			

1. **Background**

1.1 The Council's IT and Digital service supports over 400 active users, including staff, Councillors, partner organisations and suppliers. The service manages and maintains over 800 digital devices (laptops, thin clients, mobiles/tablets, meeting room equipment etc.) and over 250 servers; providing around-the-clock access to services which are core to the day-to-day business of the Authority.

1.2 The Council manages and operates two dedicated data centres, which contain several host servers. These host servers utilise 'virtualisation' where 1 host can run multiple

servers to help reduce our IT resource requirements, reduce costs, and improve performance. The Council runs over 250 servers which host key line-of-business applications to support the delivery of services to residents.

- 1.3 The council operates two data centres to spread the load and maximise performance, whilst also provide resilience in the event of an issue i.e. power outage, loss of internet connectivity.
- 1.4 Every five-years, the Council is required to purchase new server equipment. This ensures that the Council has active warranty and support agreements in place with the server manufacturer. The current equipment is now reaching this five-year point where the server manufacturer will no longer provide support for the equipment and as such, this equipment will need to be replaced.
- 1.5 The One Council programme has over the last three years, created a new operating model for the way in which we deliver services, improving the way that we interact with our customers to provide the most efficient and effective service.
- 1.6 Technology continues to move at pace and the Council must take steps to ensure that it is able to scale, adapt and benefit from such technological advancements, especially where they work to further support the Council's defence to Cyber security threats and the One Council transformation programme.
- 1.7 The Council have been exploring their options to ensure that the most appropriate replacement is implemented. One such option is to utilise Cloud Computing.
- 1.8 Cloud Computing is the delivery of computing services over the internet. Instead of buying, owning, and maintaining physical data centres and servers, cloud computing allows access to servers, storage, databases, on an as-needed basis. This can provide several benefits, including cost savings, reduction in administrative work and availability of the latest technologies and tools.
- 1.9 As part of the One Council programme, a number of key applications were already migrated to cloud computing models, managed and maintained by the relevant application developer. This prior migration has created an opportunity to review whether a full cloud computing model is a suitable replacement option for the Council's data centre environment.

## 2. **Issues**

- 2.1 The 2023-2028 Technology Strategy identifies Cloud Computing as a key deliverable due to the associated benefits, such as sustainability, agility, elasticity, and cost savings. Alongside the use of supplier-led Software as a Solution (SaaS) options.
- 2.2 The cost of the continued operation of physical data centres is an ongoing concern, as the Council is required to regularly procure new hardware, employ suitably trained engineers, purchase support contracts alongside many other associated costs such as electricity, air conditioning, fire suppression and security.
- 2.3 In the last few years, the Council has already migrated a number of applications and systems into supplier hosted cloud solutions, known as Software-as-a-Service (SaaS). SaaS provides a cloud delivery model where the software supplier is responsible for ensuring the system is available, up-to-date and secure and the Council is then only

responsible for the data and operational use of the software. This delivery model allows council officers to focus on the delivery of services to residents. However, some of the Council's applications are not suitable to operate as a SaaS model, therefore alternative hosting options are required.

### 3. Proposal

That Cabinet:

1. Approve the migration of the Councils applications, servers, and infrastructure to Microsoft Azure.
2. Authorise the Service Director for IT and Digital in conjunction with the Portfolio Holder for One Council, People and Partnerships to appoint partners to provide consultancy, workshops and training services/sessions as required.

### 4. Reasons for Proposed Solution

- 4.1 Cloud computing is playing an increasingly important role in the modern technology landscape, with more and more businesses and organisations embracing technology in virtually every aspect of their business. The cloud provides further opportunities to streamline processes and operate more efficiently than ever before, increasing productivity in the process.
- 4.2 The Microsoft Azure suite of services and tools are one of the leading cloud providers across both the public and private sectors. Microsoft invest over one billion dollars annually into the security of Microsoft Azure alone. This level of investment far outweighs the Council's available resource.
- 4.3 The Council has already made significant investment in Microsoft technology, including Microsoft 365 and Windows. Microsoft Azure provides native integration between these technologies which will work to further streamline and transform the Council's technology estate and processes. Alongside this, the Microsoft Azure platform will also allow the Council to utilise its existing Microsoft server and SQL licence agreements, providing significant cost savings as compared to other cloud hosting providers.
- 4.4 The implementation of cloud services also works towards the Council's climate change and sustainability plans, aiming to achieve net zero by 2030. The removal of on-premises server infrastructure will:
  - 4.4.1 Reduce the Council's energy consumption as the number of servers and air conditioning units being powered will reduce.
  - 4.4.2 Reduce the water consumption to the air conditioning units.
  - 4.4.3 Remove the requirement for fire suppression equipment to cover the data centre equipment.
  - 4.4.4 Reduce carbon emissions where officers and suppliers are required to attend our data centre sites to perform essential maintenance, often travelling by Car.
  - 4.4.5 Reduce the environmental impact of replacing server hardware (manufacture, on-going physical maintenance, and recycling) every five years.
- 4.5 Cloud Computing provides significant sustainability benefits. Since 2012, Microsoft Azure has been 100 percent carbon neutral. Microsoft have since announced that they are

committed to their cloud data centres being powered by 100 percent renewal energy sources by 2025.

4.6 Cloud Computing provides significant benefits in achieving the Council's Defence in Depth approach to IT Security, further supporting the existing cyber security tools that the council already has in place.

4.7 The Council has undertaken a proof-of-concept project hosting services and systems within the Microsoft Azure cloud. This concept project was successful in allowing the council to realise that the Microsoft Azure cloud is a feasible option for the future hosting of IT servers and infrastructure.

## 5. **Other Options Considered**

5.1 **Supplier Hosted Applications** – The suppliers for several of our applications now provide supplier hosted options, called Software-as-a-Service (SaaS). SaaS hosting is where the supplier of the application hosts, upgrades and manages the relevant application ensuring it is available. However, not all of our applications or suppliers have this option available. This would therefore prevent this option being the complete solution, although it should be noted that Supplier SaaS should be the preferred option (where available and is best value for money).

5.2 **Alternative Cloud Hosting Solutions** – The Council has already made significant investment into Microsoft products and services, in particular the Council's Microsoft Enterprise Agreement. This agreement licences the council to utilise a number of Microsoft Products, such as Windows Server and SQL. As part of this agreement, the Council can make use of the Azure Hybrid Benefit saving costs on software and servicing licences. The use of alternative cloud hosting suppliers would therefore not be cost effective for the Council.

5.3 **Physical Server** – The procurement of physical server hardware will only offset the eventual requirement for the Council to seek cloud hosting solutions. This would mean that the Council would be required to pay for migration services for existing suppliers to move their applications to the new hardware in 2024 and then again to cloud services in the future. This would not provide best value for money, nor would it meet the requirements of the Council or allow for the council to realise the available sustainability and technological benefits.

## 6. **Legal and Statutory Implications**

6.1 Data Protection legislation requires the Council to take every reasonable technical precaution to protect the personal information that it processes. Keeping software up to date, on well-managed, secure infrastructure is a well-recognised and accepted method of reducing the risk of a cyber-related incident and a key activity identified by the National Centre for Cyber Security.

6.2 Microsoft Azure has been awarded a large number of data compliance and security certifications, including ISO 27001, Financial Conduct Authority, PCI DSS and Cyber Essentials Plus. [[Azure Compliance](#)]

6.3 Note that Appendix A is exempt from publication (at the current time) on the basis set out in Paragraph 3 of Schedule 12A Local Government Act 1972, that it contains information relating to the financial or business affairs of any particular person, including

the authority in question. It is considered that disclosure of this information at this time would be capable of having a significant detrimental impact on the efficacy of the authority's business affairs and its financial well-being.

## 7. **Equality Impact Assessment**

7.1 No adverse impact has been identified as a result of delivering this proposal.

## 8. **Financial and Resource Implications**

8.1 The financial implications are detailed within confidential Appendix A. It is however expected that the migration to Microsoft Azure will provide a revenue saving of at least £10,000 per year.

## 9. **Major Risks**

9.2 The council runs a risk to the delivery of operational services where it fails to invest in ICT and modern technologies.

9.2.1 This is an identified risk within the Corporate Risk Management system under the ICT Services profile.

9.2.2 The council have already taken steps to mitigate this risk with control measures, such as the implementation of an IT Strategy, Consolidation of hardware and software and the One Council transformation programme.

9.2.3 The investment of a modern, future-scalable cloud platform and cloud technologies (such as Microsoft Azure) is a defined action to reduce and mitigate this risk.

9.3 The council has identified risks whereby there are a number of identified risks within the ICT risk profile relating to the failure of air conditioning, loss of utilities, loss of facilities and hardware failure within the two datacentres.

9.3.1 These risks are identified within the Corporate Risk management system under the ICT Services profile.

9.3.2 The Council have already taken steps to mitigate this risk with control measures, such as Uninterrupted Power Supplies (UPS), replication across Data Centres, automated alerts from hardware and diverse routing (using different suppliers for utilities and internet connectivity).

9.3.3 The investment of a modern, future-scalable cloud platform (such as Microsoft Azure) would reduce and mitigate this risk as we would no longer be required to keep physical server hardware at our IT data centres.

## 10. **UN Sustainable Development Goals (UNSDG)**

10.1 The proposal will contribute to UNSDG 3, 7, 8, 9, 11, 12 and 13

<https://sdgs.un.org/goals>



10.2 Microsoft Azure has committed to focus on four key areas of environmental impact to local communities – carbon, water, waste, and ecosystems. As part of this, they have set 4 key deliverables; 100% renewable energy by 2025, water positive by 2030 (replenish more water than they consume), Zero-waste certification by 2030 and net-zero deforestation from new construction. [[Azure Sustainability – Microsoft Azure](#)]

11. **Key Decision Information**

11.1 This is not considered to be a key decision.

12. **Earlier Cabinet/Committee Resolutions**

12.1 None.

13. **List of Appendices**

13.1 Appendix A

14. **Background Papers**

14.1 None.