EXECUTIVE BOARD DECISION

REPORT OF:	Executive Member for Digital and Customer Services
LEAD OFFICERS:	Strategic Director of Resources (SIRO)
DATE:	Thursday, 11 November 2021

PORTFOLIO(S) AFFECTED:	Digital and Customer Services
WARD/S AFFECTED:	(All Wards);
KEY DECISION:	Y

SUBJECT:

Transition to the Cloud

1. EXECUTIVE SUMMARY

The purpose of this report is to support an application for the funding required to deploy a Microsoft Azure Cloud Platform and Cloud backup solution which is needed to underpin the Council's new approach to Information Technology and Digital Strategy delivery. This investment will enable the Council to begin the process of replacing its ageing, inflexible, legacy systems and facilities with a next generation digital platform that will support the transformation of its public services, alleviating the current risks that the council faces.

2. RECOMMENDATIONS

That the Executive Board:
- Approves for inclusion in the Council's Capital Programme for 2021/22, a capital budget of £248k to fund the transition costs of moving to the cloud to be funded through prudential borrowing.
- Approves the use of the digital transformation programme contingent revenue reserves of £447k to fund one off non-recurrent revenue expenditure to cover dual running costs and post transition assistance.

3. BACKGROUND

Most of the Council's systems and services currently rely on IT infrastructure located from Council owned on-site data centres. Over the last 13 years the Council has invested heavily in IT infrastructure going through periodic capital investment to refresh equipment as required. The Council is in a position where it needs to invest more capital for on-site equipment over coming years but before this occurred alternative options were looked at. Over recent years the industry has seen a movement away from private cloud to public cloud such as Microsoft Azure. The main difference of interest between a public cloud and a private cloud is that in a private cloud the purchaser buys the capacity that it believes it needs, in advance via a fixed fee. In contrast, within a public cloud the infrastructure can be scaled immediately on demand. Scaling on demand means that the purchaser only uses and pays for what it needs when it needs it, and its capacity profile can flex up and down ensuring the purchaser only pays for capacity it actually uses, rather than what it estimates it might need as well as other benefits.

The large scale refresh programmes for Core Infrastructure which take years of preparation and implementation have a sizable capital commitment, which will be significantly reduced. Often by the time we have implemented such systems they are already a good way through their life span. Investing in on-premise infrastructure is now no longer a feasible option and skills to maintain such an infrastructure are now classed as outdated, making the market for recruitment much smaller with more competition thus higher salaries or specialist contractor support.

In order to access the viability of this, the Council worked with specialist consultancy from the ANS Group who are experienced in working with Local Government and the NHS, to deliver the planning and design phase for cloud migration in terms of our current IT estate including costings for the project. The proposal is to move circa 80% of our services to the cloud, this demonstrated that there is a clear financial business case to proceed with this project given it delivers sizable capital investment savings when complete. This even before the significant strategic advantages that flow from the ability to leverage other Microsoft technologies especially in the area of data analysis, business intelligence, knowledge management and artificial intelligence.

This investment should unlock cost savings across the Council through transformation projects that will leverage these modern technology approaches, leading to the sustainable running of our services into the future. This investment will also increase mitigation and reduce the impact of future cyber-attacks, which could result in a multi-million pound recovery programme, as recently evidenced in Hackney and in Redcar.

This Cloud transition looks towards bringing the Council back in line with other organisations and businesses following best security and technology practices and looks forwards in how we can benefit from these advancements in the future. Our ambition is to provide the systems and infrastructure to enable significant transformation for our biggest services. This means harnessing data technologies (Machine Learning and Artificial Intelligence), embracing the Internet of Things in services to people and the management of assets and leveraging the Internet and Web technologies to deliver the best in front facing online services. Our current on premise solution cannot cost effectively provide the infrastructure to support this ambition.

The user experience will be significantly improved as part of the investment, both as bi-products of the above outcomes (for example simplified operations will reduce overall outages and performance issues) and through direct strategic investment. New methods of working will allow the Council to employ technologies for remote working across any device, this will allow the council to deploy remote services for accessing a "Desktop" that is hosted in our cloud environment enabling us to invest in cheaper devices dependent upon role.

Moving to a Cloud first model will allow our staff and citizens to connect directly with services over the internet without reliance on BwD maintained datacentres or BwD broadband connections. Reliability and connection speed will thus be improved as we would be utilising the vast speed of Microsoft's network. This also goes a long way into helping troubleshoot end user issues whilst we adopt hybrid home/office working model.

The completion of transition will deliver the following high level outcomes:
- A solid foundation for the council's new approach to a modern Digital Strategy.
- Appropriate Back Up and Disaster Recovery capability will be delivered.
- The platform will enable the Council to build new business models whilst enabling better ways to engage with its citizens.
- The ability to leverage the Platform in the future to provide better insight and use of data through the use of a new common data platform.
- Greater flexibility to allow us to react and create services quickly.
- Improved reliability with services provided across two major UK regions.
- Improved Security.

- Easier integration with the NHS, police and schools.

4. KEY ISSUES & RISKS

The Councils current infrastructure is at the stage where further capital investment is required to keep it maintained, secure and reliable.

The majority of Council services are provided from data centres within the borough, Moving to the Cloud will allow us to be better prepared for disaster scenarios with services being run from London and Cardiff.

The current solution is not flexible, Cloud computing allows IT to react and create services faster than ever before. If we lose a service it should be able to be built from its previous iteration of code within minutes.

Although the Council has robust security measures on the existing estate, moving to the Cloud will strengthen and centralise our security into one single platform.

The department is financially reliant on other Councils and the NHS renting space to fund overhead costs of running the main BwD datacentre, the transition to Cloud will allow us to review the longer term future of the facility should 3rd parties decide to move out.

The data centre is one of the Councils highest CO2 polluting buildings. Cloud facilities are far more energy efficient in terms of energy required to run services, this will help mitigate the risk we are currently facing in terms of the increase in our local electricity costs.

By moving to the Cloud there is the risk of vendor lock in with Microsoft, this will be mitigated by also exploring options such as Amazon Web services to ensure we are able to exit if required. This is however unlikely as costs are negotiated by government.

5. POLICY IMPLICATIONS

The UK government has increasingly focused on cloud services since it launched its Cloud First policy in 2013. The policy was reassessed in 2019 and remains a flagship technology policy. The new contract will build on the Government's One Government Cloud Strategy and the principles of the Digital Data and Technology (DDaT) strategy, which focuses on modernising technology, strengthening cyber defence, improving digital skills and embedding a culture of innovation. It also supports more recent issues such as supporting the UK's recovery from the COVID-19 pandemic and sustainability.

6. FINANCIAL IMPLICATIONS

The proposed transition to the Cloud will result in a movement from historical periodic capital investment in equipment to an annual revenue payment. In order to fully demonstrate the value of moving to the Cloud the below shows the costs of remaining as we are against moving to the Cloud over a 10 year period.

Do nothing costs

Revenue Costs	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	Years 7-10 Per annum
Data centre running costs	68,000	68,000	68,000	68,000	68,000	68,000	68,000

Software licencing	107,200	132,200	132,200	132,200	132,200	132,200	132,200
Hardware maintenance	20,000	40,000	40,000	20,000	25,000	25,000	38,750
Total	195,200	240,200	240,200	220,200	225,200	225,200	238,950

Capital Costs	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	Years 7-10 total
Software Licencing	119,000	134,000	119,000	119,000	119,000	119,000	476,000
IT Hardware	173,000	78,000		518,000			769,000
Total	292,000	212,000	119,000	637,000	119,000	119,000	1,245,000

Transition to the Cloud

Revenue Costs	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	Years 7-10 Per annum
Data centre running costs	68,000	68,000	58,000	48,000	40,000	38,000	31,000
Software licencing	94,000	94,000	58,750	148,500	119,250	98,000	98,000
Hardware Maintenance	20,000	40,000	30,000	20,000	10,000	10,000	4,000
Transition support		25,000	25,000	25,000	25,000		
Cloud hosting costs	3,000	91,815	111,075	130,336	145,744	159,226	159,226
Total	185,000	318,815	282,825	371,836	339,994	305,226	292,226

Capital Costs	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	Years 7-10 total
Software Licencing	119,000	119,000	119,000				
IT Hardware		39,000					
Cloud transition costs	10,000	112,165	41,875	41,875	41,875		
Total	129,000	270,165	160,875	41,875	41,875	0	0

Our current estimated costs (Do Nothing option and assuming current clients continue to use the data centre) for the required IT investment and to run the datacentre over a 10 year period stand at:
Total Revenue - £2,302,000
Total Capital - £2,743,000
Total Costs - £5,045,000

The total estimated costs to migrate to the cloud over a 10 year period stand at:
Total Revenue - £2,972,600
Total Capital - £643,790
Total Costs - £3,616,490

There is therefore a clear financial case for the transition to occur with a saving to the Council of £1,428,510 over the 10 year period.

Revenue Funding

The department currently has a revenue budget of £220k to fund the existing IT infrastructure. Over the first few years of the migration there will be shortfall to fund the project due to transition support, dual running costs of the Cloud system / existing estate and a movement away from perpetual software licences being able to be treated as capital expenditure. There will therefore be a requirement for £447k of revenue costs to be funded through the digital transformation programme contingent revenue reserves.

From April 2026 the increased revenue costs of £72k per annum will be funded through staff efficiencies due to less resources being required internally to manage the IT estate due to the transition.

As indicated in the report, this investment should unlock cost savings across the Council through transformation projects that will leverage these modern technology approaches, potentially leading to the sustainable running of our services into the future. At this stage, it is not possible to quantify the extent of these costs savings and where they will be achieved suffice to say that the investment is necessary to provide the foundation on which these transformation projects will be developed and delivered.

Capital Funding

There will be a requirement for additional capital funding of £248k for the project, the costs for software licencing and IT hardware in the capital cost table are already included within the Councils capital programme.

Not included within the costs above are other risks that the department will be susceptible to by not proceeding with the Cloud option. The department currently relies on rental income from other Councils and the NHS to help pay for the running costs of the data centre. It is possible that they will, at some stage, also migrate to the Cloud. At that point, without any further action, it would cost the department an additional £100k per annum. Equally, should it possible to close the Data Centre as a consequence, it would also remove the risk of the department having to replace other key infrastructure located within the data centre such as cooling, generator and fire suppression systems.

Costs for Microsoft Azure are negotiated by UK government, a new three year agreement was signed in May this year for a three year period to enable public sector organisations to continue to unlock the benefits of cloud computing and business applications. The requirement for Microsoft Azure will be added to the Council's current contract with Phoenix software which will be provided at cost price.

7. LEGAL IMPLICATIONS

The resulting procurement process shall be in accordance with the Public Contracts Regulations 2015 and the Council's Contract Procurement Procedure Rules.
All contracts will be in a form approved by legal officers in the Commissioning and Procurement team.

8. RESOURCE IMPLICATIONS

There will be an impact on ITM&G staff time throughout the project, however as the proposal is to phase a migration over a four year period this can be factored into existing work plans. There will a resource reduction for the ITM&G department of two FTE's from April 2026.

9. EQUALITY AND HEALTH IMPLICATIONS

Please select one of the options below.

Option 1 ☒ Equality Impact Assessment (EIA) not required – the EIA checklist has been completed.

Option 2 ☐ In determining this matter the Executive Member needs to consider the EIA associated with this item in advance of making the decision.

Option 3 ☐ In determining this matter the Executive Board Members need to consider the EIA associated with this item in advance of making the decision.

10. CONSULTATIONS

Consultation has already taken place with the Executive member for Digital and Customer Services.

11. STATEMENT OF COMPLIANCE

The recommendations are made further to advice from the Monitoring Officer and the Section 151 Officer has confirmed that they do not incur unlawful expenditure. They are also compliant with equality legislation and an equality analysis and impact assessment has been considered. The recommendations reflect the core principles of good governance set out in the Council's Code of Corporate Governance.

12. DECLARATION OF INTEREST

All Declarations of Interest of any Executive Member consulted and note of any dispensation granted by the Chief Executive will be recorded in the Summary of Decisions published on the day following the meeting.

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DATE:	19/10/2021
BACKGROUND PAPER:	Digital Strategy – Exec Board April 2021