

Public Report

Birmingham City Council

Report to Cabinet

8th November 2022



Subject: Digital Strategy 2022-25 – Technology Roadmap
Report of: Director, Digital and Customer Services
Relevant Cabinet Member: Councillor Jayne Francis
Relevant O &S Chair(s): Resources, Councillor Akhlaq Ahmed
Report author: Cheryl Doran, CIO and Assistant Director IT & Digital

Are specific wards affected?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No – All wards affected
If yes, name(s) of ward(s):		
Is this a key decision?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
If relevant, add Forward Plan Reference: 010533/2022		
Is the decision eligible for call-in?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does the report contain confidential or exempt information?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
If relevant, provide exempt information paragraph number or reason if confidential: Appendixes. Financial Appraisal for MSEA (FILL IN THE NUMBERS) and the background document the procurement briefing note.		

1 Executive Summary

- 1.1 The Council's Digital Strategy 2022-25 was approved by Cabinet in March 2022. The Strategy sets out clear ambitions for the Council which will change and improve how services are delivered, meeting the Council's aspiration by using digital, data and technology advances to enable, support and innovate products, services, and business models.
- 1.2 The Digital Strategy will ensure that citizens and businesses are at the centre of how we design and deliver better technology-enabled services, accelerate digital adoption, meet the needs of our citizens and businesses, enhance the value delivered and improve customer services whilst becoming more productive, leaner,

and more efficient. We have come a long way since we took back control of our IT services and our new Digital Strategy will accelerate our ambition to be the best Digital Council, enabled by a user centred and data driven Digital Service.

- 1.3 The purpose of this report is to update Cabinet on the Technology Roadmap, the new “platform+agile” enterprise architecture approach, the new technology governance framework, and the immediate procurement implications.
- 1.4 The Technology Roadmap enables the Digital Strategy 2022-25 based on five defined outcome-focused user-centric themes that enable, enhance, and empower our customers and people. It builds on the success of the previous ICT & Digital Strategy 2016-21 which was based on the themes Simplify, Standardise and Share, and the capabilities demonstrated during the COVID-19 pandemic.
- 1.5 A review of our core technology platforms, capabilities, technology governance framework and delivery approaches has been undertaken.

2 Recommendations

That Cabinet: -

- 2.1 Endorse the enterprise architecture approach, the associated technology roadmap and platform+agile approach (Appendices A & B).
- 2.2 Endorse the establishment of a governance framework which includes a single Technical Design Authority to approve all new technology procurements and ensure that we have first looked at the re-use of existing solutions, platforms, or capabilities before considering new investments (Appendix C).
- 2.3 Approve the planned procurement for the Microsoft 365 E5 enterprise licence and Microsoft Azure cloud platform subscription services to meet planned demand over the next three years (Appendix D & E).

3 Background

- 3.1 The Council’s Digital Strategy 2022-25 was approved by Cabinet in March 2022. The Strategy sets out clear ambitions for the Council’s use of digital, data and technology assets to reimagine, design, deliver and operate our services, to achieve the greatest value and impact where it is needed most. This will deliver a better experience for citizens, staff, businesses, and visitors – services that are effective, simple, joined up, and straightforward to use.
- 3.2 The Digital Strategy 2022-25 lays out five themes, which together will maximise the opportunities to embed digital and innovation in what we do at all levels across the organisation. These themes are:
 - Creating online services that are easy to use
 - Improving our data and evidence-based decision making
 - Giving our Council teams the right digital tools to do their jobs
 - Building the Council’s digital and data skills

- Building the best technology to support Council services

3.3 This report covers the enablement of the fifth theme “building the best technology to support the Council’s services”. This theme explained at a high level how we would achieve the set ambition of “ensuring our technology and digital infrastructure is responsive, secure and adaptive to meet the changing needs of our citizens, businesses and staff”. The following points are relevant for this report:

- evaluate our existing technology replacing it with new, up-to-date solutions where it is no longer working, and work closely with providers and industry experts to get the most out of the technology that is still useful
- trial new technologies
- use new platforms that don’t require specialist knowledge to allow teams across the Council to produce new applications quickly
- work in the open and communicate our plans and activity throughout the Council
- rapidly test innovations to understand if they are going to work before we formally take ideas forward

3.4 We have established work programmes to help deliver these objectives and developed an enterprise reference architecture (Appendix A) attached to this report, which is linked to our vision of a best-in-class Digital Council.

3.5 As part of the fifth theme, we will focus on putting in place the foundation platforms as part of an integrated technology roadmap (Appendix B), to support the creation of the next generation of public services, which will aim to exceed expectations, and accelerate our ambition to be the best Digital Council, enabled by a user-centred and data-driven Digital Service.

3.6 Using the agile delivery practice, we have already leveraged the platform approach by using the Microsoft Azure platform in the delivery of the fieldworker programme. The components that have been created can now be reused by other services that require similar functionality without the need to start from scratch. Using the platform+agile approach we can leverage these proven and sustainable platforms, establishing a culture of continuous innovation, and rapid early delivery of technology-enabled change to improve the services we deliver to our customers and enhance the Council’s ability and agility in the face of fast-changing situations.

3.7 The Digital Strategy 2022-25 and our existing investments show that public cloud services offer the best available platforms (in our case Microsoft 365 and Microsoft Azure). These platforms provide the best bundle of functionality, sustainability, affordability, security, ubiquitous availability, and innovation. The implementation of Oracle Cloud ERP has introduced an additional platform.

4 Platform+Agile Approach

- 4.1 The platform+agile approach is founded on the simple and common-sense idea that when we can, we should use standardised and well-proven platforms to build new applications. This decreases the number of variables and unknowns and hence reduces delivery time, risk, and cost.
- 4.2 Platform+agile is the opposite approach from our previous strategy which saw each application and system as a unique, one-off event. The old thinking was partly inherited from a strategic partnership which was incentivised to grow the Council's technology estate rather than optimise its efficiency and effectiveness, with fundamental contractual blockers to disincentivise a reduction in that estate. The fundamental mindset of platform+agile is that each application inherits as much as possible of the standard and common functionality of the platforms we have invested in.
- 4.3 Using this approach each solution/application is not viewed as unique; rather it is a variation of components/things that already exist. The use of existing components enables us to start projects quickly and cheaply, and then to deliver a minimal viable product much more rapidly than otherwise possible, getting feedback from real users and iterating based on that.
- 4.4 The approach uses secure public cloud services and the latest innovations in agile methodologies, development tools, integration, and mobile device ecosystems. It enables fast delivery of new systems in complex organisational settings at less effort, cost, and risk.
- 4.5 Beginning with trusted secure platforms also enables us to be more agile because we can get started quickly (often using in-house teams and utilising existing platforms) and implement solutions that we know are secure and will scale to meet current and future needs. 'Platform-less' agile would lead to new digital innovations, prototypes or pilot systems developed outside of our enterprise platforms; these may be fine in an exploratory sense but are inherently not production ready, resulting in increased complexity, cost and delays.
- 4.6 The platform+agile approach empowers staff to incrementally change the project's direction in every agile sprint session to better align business needs with technical possibilities, project delivery realities and rapidly changing demands.
- 4.7 In the platform+agile approach, the platform is much more than the vendor and technology. It is also the bundle of procurement arrangements, contracts, vendor and partner relationships, development frameworks, methodologies, microservices, security and integration templates, APIs, operational dev/ops tools and processes that enable us to deliver projects.
- 4.8 Each project delivers an application on the platform and incrementally deepens and builds out the platform's functionality and our confidence in its use. This creates a self-reinforcing sense of confidence in the platform and our ability to deploy systems using it. It will also help to integrate technology and data solutions that might arise from the Digital City Programme and Roadmap.

5 Microsoft 365 E5 Platform

- 5.1 Microsoft 365 E5 is an Enterprise solution with best-in-class productivity apps (Word, Excel, PowerPoint, Outlook, OneNote, SharePoint, OneDrive, Microsoft Teams, Power BI Pro, Windows, and Microsoft Endpoint Manager) and advanced security, compliance, voice, and analytical capabilities.
- 5.2 The renewal of the Microsoft 365 Enterprise Agreement aligns with the Digital Strategy. The uplift to the Microsoft 365 E5 enterprise licenses supports and enables the replacement of the Council corporate telephony solution, and the implementation of the Cyber Security, New Ways of Working programmes alongside providing improved compliance management.
- 5.3 Moving to the Microsoft 365 E5 enterprise licenses reduces the complexity of the current technology ecosystem whilst increasing levels of functionality and security. It enables cost removal, and cost avoidance improves productivity and the potential for staff to work more efficiently and effectively regardless of location, or device using new technologies.
- 5.4 The multi-year Microsoft 365 E5 platform investment streamlines procurement of technology platforms and services. It rationalises and consolidates key cyber security and compliance capabilities enabling us to be more agile because we can get started quickly using in-house teams without doing any procurement because we have already procured the platform and we know is secure and will scale.

6 Microsoft Azure Platform

- 6.1 The Microsoft Azure cloud platform is a secure public cloud computing platform with solutions including Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) that can be used for services such as analytics, virtual computing, storage, networking, and much more. It can be used to replace or supplement your on-premises servers.
- 6.2 The Microsoft Azure cloud platform subscription services already support and enable the existing Field worker platform and Insight Data as a Service platform. As part of the platform+agile approach, these platforms will be leveraged to deliver better digitally solutions and increased innovation.
- 6.3 In line with the Digital Strategy 2022-25 and the platform+agile approach the Microsoft Azure platform enables us to be more agile because we can get started quickly using in-house teams without doing any additional procurement. Using the platform, we can implement solutions that we know are secure and will scale, quickly implement minimum viable products, or MVP, and then iterate the solution based on user feedback.

7 Governance Framework

- 7.1 Fit for purpose and fit for use governance enables well-orchestrated technology-enabled organisational change using defined requirement architecture, design,

principles and standards alongside fit for purpose programme, project and change management practices.

7.2 The new governance framework (Appendix C) attached to this report will adopt a portfolio-based approach that drives strategic execution and maximises business value delivery through the selection, optimisation, and oversight of project investments which align with business goals and strategies. The governance framework will:

- Define the portfolio through a work intake and phase-gate process that prioritises and approves projects based on criteria such as alignment with strategic objectives, complexity/risk versus value assessment, legislative or regulatory compliance, avoidance of technical debt and resource availability.
- Continually evaluate project value in order to assign resources to the most important projects, ensure project costs are kept within budgets, and project outcomes remain relevant.
- Manage the sequencing and timing of approved projects based on priority, resource constraints and dependencies and continuously reprioritise the portfolio based on current limitations and constraints and monitor the progress of projects and programmes
- Evaluate, measure, and track project benefits at the portfolio level to ensure that value is delivered by comparing expected benefits with actual benefits realised.
- Report on progress to stakeholders and coordinate overall delivery issues, ensuring the availability of technical as well as service staff for user testing

7.3 The governance framework work intake and the phase-gate process will introduce a single Technical Design Authority (TDA) to maintain the integrity of the technology ecosystem through the application of architecture principles, standards and patterns. It ensures that all new and existing technology solutions remain aligned with the Digital Strategy and governing principles.

7.4 In line with the platform+agile approach the TDA considers the cross-organisational impacts of a solution, ensuring that new solutions do not break existing service provision or duplicate functionality without good reason.

7.5 The TDA will approve all new technology procurements and ensure that we have first looked at the re-use of existing solutions, platforms, or capabilities before considering new investments.

7.6 This means that business units will no longer make technical decisions, engage technology partners, and procure technology solutions in isolation and without the involvement of the Council's digital, data and technology teams. To support strategic technology decision-making, the way business requirements are gathered will need to focus on outcomes and user needs rather than technical specifications. This

approach will require a change in culture, digital skills and leadership education and active involvement

8 Options considered and Recommended Proposal

- 8.1 Do nothing and continue to procure discrete solutions that solve specific business problems and may duplicate existing functionality and features that the organisation has already invested in. This will result in increased technical complexity, and cost and reduce the pace of innovation and user adoption. This is what the Council inherited from its previous Strategic Partnership.
- 8.2 Adopt a tactical approach, procuring solutions from partners as and when required based on a best-of-breed model. This will result in increased technical complexity, and integration costs and reduce the pace of innovation and user adoption.
- 8.3 Adoption of a platform+agile approach that leverages proven and sustainable platforms, the introduction of an integrated digital, data and technology governance framework including a single technical design authority to oversee the technical demand pipeline and ensure reuse and leveraging of existing technology investments to maximise business value. This is the recommended option and will result in reduced technical complexity and cost, increased pace of innovation, better customer and staff experience and greater user adoption and improved outcomes.

9 Consultation

- 9.1 The Digital Strategy 2022-25 that this report supports and enables was designed following extensive citizen and internal consultation.
- 9.2 We have in place extensive engagement within the directorate, operational and programme teams and have their needs in hand with the provision of these foundation platforms.

10 Risk Management

- 10.1 The adoption of the specified foundation platforms and associated approaches will support the Council in the reduction of the likelihood of the following strategic risks.
 - Cyber-attack – The Microsoft 365 E5 provides access to Microsoft's top-tier security technologies and enables the full benefits of an integrated, holistic approach to security through consolidated tools to manage the detection and prevention of attack
 - Loss of sensitive data and avoidance of associated ICO penalties – by preventing the unintentional or accidental sharing of sensitive information and enablement of classification and labelling of documents which means users will be less likely to share sensitive data outside the organisation.

11 Compliance Issues:

11.1 The adoption of the specified foundation platforms and associated approaches will support the Council in the reduction of the likelihood of the following compliance risks.

- Legislation and data protection laws – enable the identification, management, and security of the large amount of sensitive data held by the Council.
- GDPR compliance - help show compliance at audit, offering detailed reports of what data we have, where, and the proven ability to keep it safe
- Avoidance of penalties IOC – help respond to legal investigations or requests, easily identify persons of interest, and associated data sources, and apply legal holds to that data.

11.2 The recommended decisions are consistent with the Council's priorities, plans and strategies, supporting the Council's stated mission and commitments to ensure we are a truly customer-centric organisation. The digital strategy works alongside other programmes of change to maximise the opportunities to embed digital and innovation to support the Council's outcomes, addressing inequalities and striving for continuous improvement that will accelerate our ambition to be the best digital Council.

12 Legal Implications

12.1 The Council is under a duty under Section 3 of the Local Government Act 1999 to make arrangements to secure continuous improvement in which its functions are exercised, having regard to a combination of economy, efficiency and effectiveness. The Council has a duty under Section 135 of the Local Government Act 1972 to make standing orders for the supply of goods and services or the execution of works.

12.2 The City Council will carry out this work under the General Powers of Competence Section 1 of the Localism Act 2011.

13 Financial Implications (Private Appendix D)

13.1 The proposed Microsoft 365 E5 and Microsoft Azure subscription contract can be met within existing service budgets through consolidation and rationalisation of the technology ecosystem resulting in a net nil cost as shown in (Private Appendix D) attached to this report.

14 Procurement Implications (if required)

14.1 Microsoft products and services are traditionally sold through reseller agreements. There is a wide variety of suppliers who can deliver our requirements. Having considered the available routes to market the recommendation is to use the TePAS (Technology Service and Associated Products RM6068 framework) to compete the licenses and cloud consumption costs.

15 Public Sector Equality Duty

15.1 No adverse impacts were identified. A copy of the report is attached.

16 Appendices

16.1 These are as follows:

- Appendix A: Enterprise Reference Architecture
- Appendix B: Technology Roadmap
- Appendix C: Technology Governance Framework
- Appendix D: (Private appendix) Financial appraisal
- Appendix E: (Private appendix) Microsoft EA procurement briefing note
- Appendix F: Equalities Impact Assessment

17 Background Documents

17.1 Report to Cabinet on March 2022 - Digital Strategy 2022-25

17.2 Report to Cabinet on 18th May 2021 - Update on the delivery of the Birmingham City Council Information and Communications Technology and Digital Strategy (2016-2021)