

Secure Web Gateway

To: Strategy and Resources Committee

Meeting Date: 27th June 2022

From: Sam Smith Assistant Director of IT & Digital Services

Electoral division(s): All

Key decision: Yes

Forward Plan ref: 2022/056

Outcome: This report sets out the background to the request to procure a set of services (Secure Web Gateway) for Cambridgeshire County Council.

The outcome, if agreed, is secure, flexible, scalable gateway services that will support the future strategic ambitions of Cambridgeshire County Council in line with the joint IT Strategy approved by both Peterborough City and Cambridgeshire County Councils in July 2019.

Recommendation: The Strategy and Resources Committee is asked to:

- a) Agree to the procurement of a set of services (Secure Web Gateway) via an approved framework agreement.
- b) Agree to delegate the award of this contract to the Section 151 Officer in consultation with the Chair and Vice Chair of the Strategy and Resources Committee.

Officer contact:

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1. Background

- 1.1 Prior to October 2020, IT services were provided through the LGSS shared service. This included key infrastructure services including those that manage the access to and the security of the Council's network. In particular the services that provide networking, corporate security filtering and the VPN client used by all Cambridgeshire County Council laptops. Those solutions are still in place and functional but are ageing and need to be replaced to remain secure, efficient and supported.
- 1.2 A Virtual Private Network (VPN) effectively provides a walled garden for our organisation and trusts anything sitting inside that walled garden. A user working from home would use that VPN to allow them into the walled garden and access services within it.
- 1.3 The IT & Digital Service are currently planning for replacement options in line with the Joint IT Strategy approved by Cambridgeshire County Council in July 2019.
- 1.4 The IT strategy is a Cloud first strategy, which reflects changes to the nature of IT solutions and systems over the last few years.
- 1.5 Since 2019 a lot of work has been undertaken as part of the IT Strategy, including the move of the Data Centre from Shire Hall to Sand Martin House in Peterborough and upgrades to many systems and processes. As a result, the Council is now well placed to take advantage of new cloud-based solutions.

2. Main Issues

- 2.1. Remote working has been vital during the Covid 19 pandemic. As most staff had already been provided with laptops it was possible to react very quickly to the need to work from home during the 2020 lockdowns and the subsequent months, therefore maintaining productivity levels and allowing continuity of services to the public.
- 2.2. This reliance on working remotely will continue, with hybrid working from multiple locations for staff. In order for work to be something that staff 'do' rather than somewhere they 'go' it is essential that the IT systems support this and that the arbitrary links between staff and any particular office building are removed.
- 2.3. The remote and hybrid working model has also increased the reliance on the IT infrastructure especially outside of what has traditionally been seen as 'Core Hours' as staff and Members use the systems at times and from locations that are most effective for them.
- 2.4. There is still a significant dependency on IT staff and Council office locations to provide fully configured laptops to staff and Members and this means the distribution of those devices is not as efficient as it could be and requires travel to the Council building at several points during the life-cycle of the devices.
- 2.5. Cyber security is a significant and ongoing threat to all organisations, and this has been especially acute for government organisations at all levels during the pandemic and more recently the war in Ukraine. The need for rapid, 24x7 response to continually evolving threats makes the essential work of protecting the Council's data and systems increasingly

important and more difficult with existing (and ageing) technology.

- 2.6. The existing infrastructure that provides essential services including networking, corporate security filtering and the VPN client is ageing and if not replaced will become unsupported (known as end of life) and more critically it will not be secure or provide the flexible, scalable and cost-effective solution that the Council needs for the future.
- 2.7. The National Cyber Security Centre (NCSC) recommends moving to a Zero trust model which our current solution does not support. A Zero trust model does not simply rely on trusting that, because you are on the network that you are allowed to access the services you have requested. Zero trust is an architectural approach where inherent trust in the network is removed, the network is assumed hostile and each request is verified based on an access policy. Traditional networks and VPNs make this difficult to achieve, with Secure Web Gateways being at the heart of any design to move towards this recommended more secure architectural model. ([Zero trust architecture design principles](#))
- 2.8. Current systems are hosted locally (On-Premise) and this has an impact on the environment. There is a commitment from the authority to reduce its environmental impact and this would be achieved more quickly through use of cloud solutions as the providers have comprehensive plans on how to reach net zero or carbon negative targets within the decade.

3 Recommended Approach

- 3.1 The recommended approach is to commence a procurement process for a set of services (Secure Web Gateway)
- 3.2 The rationale for this approach is:
 - To support the strategy for transition to cloud computing by moving networking and corporate security filtering to the cloud and removing legacy security arrangements for access to cloud services.
 - To support the council's move to a Zero trust networking architecture.
 - To ensure the future flexibility and security of the Council's infrastructure.
 - To build on the work that has been undertaken in recent years to upgrade and virtualise IT systems.
 - To optimise the technical 'traffic' between the user, the cloud services (especially 365) and the data centre, improving overall user experience and productivity.
 - To improve productivity and reduce environmental impact by enabling staff to receive new devices through the post and for those devices to be repaired remotely.
 - To rationalise contracts relating to this area of infrastructure and enable stronger contract management.
- 3.3 As noted in the IT Strategy approved in 2019, IT Services delivered from the Cloud realises multiple benefits, such as:
 - Innovation
 - Security, resilience and governance
 - Citizen self-service

- Flexible and collaborative working
- Access to a far greater range of digital services
- Automation of services where possible
- Rationalisation of business systems
- Integration of IT systems

3.4 For the systems covered by this paper the benefits around security and resilience are important to note. From a security perspective cloud-based service providers are able to identify and mitigate security threats almost immediately. From a technical perspective they are also able to configure services to maximise the resilience of the systems. Collectively this ensures that systems are available and ready to be used at all times with less downtime and less change if there is a cyber security breach.

4. Cost and Governance

- 4.1 The procurement and implementation of replacement systems will be within the established governance of the IT Strategy programme and follow the internal financial governance of the Council.
- 4.2 Final costs for these systems will not be known until the procurement process has completed and a specific solution is selected, however analysis that has been done so far indicates that some additional spend will be required in the financial year 2022/23. This funding is being considered as part of council-wide budget reset at the same Strategy and Resources Committee, 27 June 2022. As the procurement process progresses and technical options are refined if any further financial investment that is required, either capital and/or revenue, it will be identified and taken through the 2023/24 business planning process.
- 4.3 A full procurement exercise will be undertaken to ensure that the council gets best value for money and this will include technical design work to finalise the solution.
- 4.4 In addition to the procurement and financial governance procedures outlined above, the IT & Digital strategy is currently being refreshed and the technical approach outlined in this paper will be reviewed as part of that process to provide external assurance.

5. Alignment with corporate priorities

5.1 Environment and Sustainability

- The cloud solutions that we are looking to use have comprehensive plans on how to reach net zero or carbon negative targets within the decade.

5.2 Health and Care

- Having effective, reliable tools for staff to use across the Council is fundamental to our ability to deliver Health & Care services.

5.3 Places and Communities

- Having effective, reliable tools for staff to use across the Council is fundamental to our ability to deliver services to our places and communities.

5.4 Children and Young People

- Having effective, reliable tools for staff to use across the Council is fundamental to our ability to deliver services to our children and young people.

5.5 Transport

- The cloud solutions that we are looking to use will support the reduction in travel by officers as they will be able to work effectively from any location securely and effectively.

6. Significant Implications

6.1 Resource Implications

The following bullet points set out details of significant implications identified by officers:

- There are several solutions for the replacement of these services, all of them carry significant cost.
- Each solution also requires significant levels of technical skills to implement, and this work will need to be carefully managed. The most appropriately skilled people in ITDS will need to be assigned to this work.
- There will be changes to how staff interact with the solution and support, guidance and training will be needed to assist with the transition.

6.2 Procurement/Contractual/Council Contract Procedure Rules Implications

- The Cambridgeshire procurement team has been engaged throughout and we will be using a recognised local government framework (RM6068 Technology Products and Associated Services) for procurements.

6.3 Statutory, Legal and Risk Implications

- Advice has been received from Pathfinder Legal Services in support of this procurement.

6.4 Equality and Diversity Implications

There are no significant implications within this category.

6.5 Engagement and Communications Implications

There are no significant implications within this category.

6.6 Localism and Local Member Involvement

There are no significant implications within this category.

6.7 Public Health Implications

There are no significant implications within this category.

6.8 Environment and Climate Change Implications on Priority Areas

6.8.1 Implication 1: Energy efficient, low carbon buildings.

Positive/neutral/negative Status: Positive

Cloud based providers are aiming to be NetZero and therefore if a replacement is cloud based the implication would be positive.

6.8.2 Implication 2: Low carbon transport.

Positive/neutral/negative Status: Positive

These proposals will support work from any location and therefore support reduction in travel.

6.8.3 Implication 3: Green spaces, peatland, afforestation, habitats and land management.

Positive/neutral/negative Status: Neutral

6.8.4 Implication 4: Waste Management and Tackling Plastic Pollution.

Positive/neutral/negative Status: Neutral

Should the services be moved to a cloud-based solution there won't be any new equipment and therefore there would be no plastic used, generated or wasted.

6.8.5 Implication 5: Water use, availability, and management:

Positive/neutral/negative Status: Neutral

6.8.6 Implication 6: Air Pollution.

Positive/neutral/negative Status: Neutral

6.8.7 Implication 7: Resilience of our services and infrastructure and supporting vulnerable people to cope with climate change.

Positive/neutral/negative Status: Neutral

Have the resource implications been cleared by Finance? Yes

Name of Financial Officer: Helen Boutell

Have the procurement/contractual/ Council Contract Procedure Rules implications been cleared by the Head of Procurement? Yes

Name of Officer: Clare Ellis

Has the impact on statutory, legal and risk implications been cleared by the Council's Monitoring Officer or Pathfinder Legal? Yes

Name of Legal Officer: Fiona McMillan

Have the equality and diversity implications been cleared by your Service Contact?

Not applicable

Have any engagement and communication implications been cleared by Communications?

Yes

Name of Officer: Christine Birchall

Have any localism and Local Member involvement issues been cleared by your Service Contact?

Not applicable

Have any Public Health implications been cleared by Public Health?

Not applicable

If a Key decision, have any Environment and Climate Change implications been cleared by the Climate Change Officer? Yes

Name of Officer: Emily Bolton

7. Source documents

7.1 There are no source documents