



Report to Policy Committee

Author/Lead Officer of Report: Jon Rayner, ICT Head of Service

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Report of: *Claire Taylor, Chief Operating Officer*

Report to: *Strategy & Resources Committee*

Date of Decision: *17th April 2024*

Subject: *SDWAN Network Service Contract.*

Type of Equality Impact Assessment (EIA) undertaken	Initial <input checked="" type="checkbox"/>	Full <input type="checkbox"/>
Insert EIA reference number and attach EIA		
Has appropriate consultation/engagement taken place?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Has a Climate Impact Assessment (CIA) been undertaken?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Does the report contain confidential or exempt information?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
If YES, give details as to whether the exemption applies to the full report / part of the report and/or appendices and complete below:-		
<p><i>“The (report/appendix is not for publication because it contains exempt information under Paragraph (insert relevant paragraph number) of Schedule 12A of the Local Government Act 1972 (as amended).”</i></p>		

Purpose of Report:

The purpose of this report is to seek approval to commission a new SDWAN Network Service from an external provider as outlined in this report.

This report explains the current WAN service and its importance to the Council and schools.

This report goes on to describe the SDWAN network service and its potential benefits to the Council.

Recommendations:

It is recommended that the Strategy & Resources Committee approves the commissioning of a new SDWAN Network Service from an external Provider for a period of 5 years with an estimated value of £3.6M, as set out in this report.

Background Papers:

(Insert details of any background papers used in the compilation of the report.)

Lead Officer to complete:-	
1	I have consulted the relevant departments in respect of any relevant implications indicated on the Statutory and Council Policy Checklist, and comments have been incorporated / additional forms completed / EIA completed.
	Finance: <i>Matthew Ardern, Senior Finance Manager</i> Commercial: <i>Lucy Matthews, Procurement and Supply Chain Manager</i> Legal: <i>Richard Marik, Commercial Lawyer</i>
	Equalities & Consultation: <i>Richard Bartlett, Senior Equality and Engagement Officer</i>
	Climate: Devolved approval authority to Head of Service, Jon Rayner, Head of Service ICT Delivery
<i>Legal, financial/commercial and equalities implications must be included within the report and the name of the officer consulted must be included above.</i>	
2	SLB member who approved submission: Claire Taylor, Chief Operating Officer
3	Committee Chair consulted: <i>Councillor Tom Hunt</i>
4	I confirm that all necessary approval has been obtained in respect of the implications indicated on the Statutory and Council Policy Checklist and that the report has been approved for submission to the Committee by the SLB member indicated at 2. In addition, any additional forms have been completed and signed off as required at 1.
	Lead Officer Name: <i>Jon Rayner</i>
	Job Title: <i>Head of ICT Delivery</i>
Date: 17/04/2024	

1. PROPOSAL

Background

1.1 Virgin Media Business (VMB) Business has been partnering with Sheffield City Council for the provision of high-speed fibre-based internet & wide area network (WAN) connectivity since 2014. The Council's existing WAN contract for corporate & school connectivity ends 31st May 2024 which coincides very well with the suitability and availability of next generation Software Defined Wide Area Network (SD-WAN) network technology as the replacement.

1.2 The current Service provision consists of:

- 255 x IPVPN circuits of which
- A managed service covering the delivery, support and maintenance of the above.
- A managed Local Area Network (LAN) Service which supports and maintains the network localised within each location.

255 x IPVPN circuits

1.3 103 of the 255 IPVPN circuits deliver schools with Simple Internet.

1.4 152 of the 255 IPVPN circuits deliver Corporate sites with IPVPN to the core. This solution entails all locations connecting to a central location at Town Hall before breaking out to the Internet.

1.5 An IPVPN is a type of VPN that utilises the Internet Protocol (IP) to create a secure, private network connection over a public network infrastructure, typically the internet.

1.6 IPVPNs establish secure connections by encrypting data packets, ensuring privacy and confidentiality of transmitted information.

1.7 IPVPNs allow organisations to connect geographically dispersed locations, such as branch offices, remote sites, or mobile users, to a centralized network infrastructure securely.

1.8 The core network refers to the central part of a network infrastructure that handles high-volume, high-speed data traffic. It typically consists of robust and high-capacity routers, switches, and other networking equipment.

1.9 The core network facilitates communication between different parts of the network and ensures efficient data routing and delivery.

1.10 "IPVPN to core" therefore indicates the establishment of VPN

connections from remote locations or branches (utilising IPVPN technology) to the central or core network infrastructure of the organisation. This setup enables secure communication and data exchange between remote sites and the centralized network, allowing users at these locations to access resources, applications, and services hosted within the core network securely over the internet.

A managed service

- 1.11 The managed service covers the delivery, support and maintenance of the above.

A managed Local Area Network (LAN) Service

- 1.12 The LAN supports and maintains the network localised within each location.
- 1.13 The LAN:
- provides local connectivity within the organisation's premises;
 - connects devices such as computers, printers, servers, etc., to a local network;
 - acts as the gateway to the WAN, connecting devices to the router within the organisation's network infrastructure; and
 - facilitates internal communication, resource sharing, and access to local services and applications.
- 1.14 The LAN & WAN Service provides network access for all ICT functions. In order to connect to the Internet, or access an application, or print a document, or connect to a Teams meeting, there is a need for a network. The LAN is the local connection that provides connection to a router. The WAN connection connects you from the router to the internet. As such both are fundamentally essential for any ICT use. Every individual logs onto a laptop, there is an authentication to a central server, whether that be in the cloud (internet) or from a central server located in Town Hall. Without the LAN & WAN enabling that connection or access, no user would be able to log onto their laptop.
- 1.15 In essence, LAN and WAN services are indispensable components of any organisation's ICT infrastructure, enabling seamless connectivity, communication, and access to resources both within the organization's premises and beyond. Without these network services, the functionality and productivity of ICT systems would be severely compromised.

Commission

- 1.16 With the contract ending on 31st May 2024, there is a need to commission a new SD-WAN service from an external supplier.
- 1.17 The new service will not include the managed LAN Service.

- 1.18 The removal of this service can be undertaken as the Council are looking to bring the delivery, support and maintenance of the LAN infrastructure in house. The Council has the capacity and capability to undertake this service. Bringing this service in house enables both efficiencies in support and a faster resolution to issues and also enables a significant cost saving of circa £120,000.
- 1.19 The new service will replace the current technology with the next generation of SD WAN network technology. Each circuit we have in place currently will require at the very least the same circuit in place for service and business continuity. However, there is a huge opportunity to replace the existing IPVPN network technology with the latest technology SDWAN, and subsequently delivering a number of benefits.
- 1.20 The benefits of the SDWAN network technology include:
- *Cloud First* – The proposed solution adheres to our Digital principles of cloud first. It will enable direct local access to both public and private Cloud Services from all locations, delivering the best end user experience for key cloud-based applications such as Teams, Microsoft 365 and existing Council cloud services hosted in Azure.
 - *Cloud Efficient* – The proposed solution will enable Local Internet Breakout providing efficiencies in network traffic routing. Instead of network traffic leaving a location, travelling to a central location to then break out to the internet, there is a local break out to the internet. This also potentially provides a performance boost by cutting out non-essential network hops.
 - This also provides a more robust and resilient network infrastructure. Under IPVPN to core solution, if the Town Hall location suffers a complete Power cut, there is impact to all locations, as all locations rely on connecting centrally for an outbound connection to the internet. With SDWAN, each location is an individual identity and is unaffected by the status of other locations.
 - *Guarantees Critical Traffic* – The proposed solution will enable Quality of Service (QoS at Layer2/3 & 7). This is way of giving priority to certain applications to ensure critical business applications do not suffer from any traffic congestion on the network, resulting in a poor user experience and operational inefficiencies.
 - *Fully Managed Service* – The proposed solution will continue to deliver a Proactive monitoring, reporting and alerting service for WAN performance, therefore freeing up Council ICT and admin resource to focus on the day-to-day administration tasks.
 - *Full Data Security* – The proposed solution's SD-WAN service provides an improved security posture over the existing IPVPN solution via improvements in encryption technology.

- *Flexible Architecture* – The proposed solution will enable 3rd Party connectivity support which allows Sheffield City Council to make better use of shared buildings & resources across the City and the wider region, plus with local public and private sector organisations.

2. HOW DOES THIS DECISION CONTRIBUTE ?

- 2.1 Network Services are fundamental to the business critical functions required by all users. Everything done by the Council's users from an ICT perspective has a requirement to utilise the network, whether that is to log on to your laptop, connect to a business application, communicate to colleagues or customers, browse the internet etc.
- 2.2 Network Services work towards the Council's strategic aims by, for example, being a Good Council and Delivering High quality Service for all.
- 2.3 While we are proposing that we bring the LAN service in house as we have the capacity and capability, the Council do not have the in-house capacity to deal with the WAN services detailed at paragraph 1.2. Being a good council and delivering high quality services means ensuring our Customers are able to connect to relevant services needed to carry out their duties and thus delivering a high-quality service to all.

3. HAS THERE BEEN ANY CONSULTATION?

- 3.1 The Network Services is a back office function with no interaction with the public, therefore public consultation is not required.

4. RISK ANALYSIS AND IMPLICATIONS OF THE DECISION

4.1 Equality Implications

- 4.1.1 This proposal's impact is a positive impact; by continuing to provide the Network Service, all staff will benefit from an efficient, robust, cost effective and value for money support service.
- 4.1.2 We continue to support Service Delivery through our IT. We are mindful that some people who use our services are vulnerable, and we are aware of sensitive data we may hold. We have an obligation to adhere to strict GDPR guidelines.
- 4.1.3 The Network Service provides LAN & WAN and enables all our customers business critical connectivity to applications and services needed to carry out their duties. This ensures we continue to ensure our

IT service fully supports our Council services in alignment with all Council strategic objectives. The Council continue to strive to ensure accessibility and inclusivity within the IT landscape.

4.2 Financial implications

- 4.2.1 The proposal pricing currently sits within the existing budget envelope for Corporate sites and assumes any refreshed values will not exceed those already quoted.
- 4.2.2 The proposal excludes the ongoing cost of LAN support currently charged at £142k PA and that this will be provided by existing BAU resources.
- 4.2.3 It is assumed for Schools the current process and funding will continue, with services be delivered within the existing budget envelope. Any shortfalls post contract agreement, would be funded by efficiencies in the DI&ICT service.
- 4.2.4 The move to SD WAN requires Sheffield to supply Project Management and Technical resource. It is assumed that this will be from existing resources at no additional cost.
- 4.2.5 A saving of £120k resulting from this re-contracting has been included in the Digital Strategy from 25/26 which contributes to the overall funding of transformation activities.
- 4.2.6 The Public Contracts Regulations 2015 will apply in full to the tendering of this contract as the value is above the threshold. A procurement professional will lead to ensure compliance with the regulations.
- 4.2.7 A contract will be let up to a maximum term of 5 years which will include any extensions. This is considered the optimum term to provide stability and best value for the Council.

4.3 Legal Implications

- 4.3.1 The Council has a variety of powers and duties in relation to its constituents and employees, many of which are facilitated by access to the internet. The commission of the services proposed in this report are calculated to facilitate, or are conducive or incidental to, the discharge of these functions in accordance with s111 Local Government Act 1972. The proposal to allow schools to access the services proposed in this report is facilitated by the Local Authorities (Goods and Services) Act 1970.
- 4.3.2 The contracting proposals in this report are facilitated by the Local Government (Contracts) Act 1997.
- 4.3.3 The services proposed in this report are not “commonly recurring” under

the Council's constitution as the proposed service term exceeds 4 years.

4.4 Climate Implications

4.4.1 Implementing SDWAN as a Network Solution should provide a positive impact on Energy consumption.

4.4.2 SD WAN intelligently analyses network conditions, such as bandwidth availability, jitter and latency, enabling efficient routing of traffic across the network. SD-WAN directs traffic down the most optimal path. This intelligent routing improves network performance and reduces unnecessary data transmission.

4.4.3 Modern and specialised hardware, benefiting from significant energy improvements over legacy equipment, helps optimise traffic processing to lower energy consumption and decrease carbon emissions. By minimising network traffic and using more efficient hardware, organisations can contribute to a greener ecosystem and lower their energy costs.

4.4 Other Implications

4.4.1 No other implications

5. **ALTERNATIVE OPTIONS CONSIDERED**

5.1 Option 1: Do Nothing

This is not an option because the current contract for the services will end on 31st May 2024. As the services are still required, a new contract will be required.

5.2 Option 2: Provide SDWAN Network Service in house (in addition to the managed service).

The Council does not have resource or the expertise in house to deliver the services outlined in paragraph 1.2. As such there is a necessity to contract out.

6. **REASONS FOR RECOMMENDATIONS**

6.1 It is recommended that the Council approves the commission of a new SDWAN Network Service. This will:

- Deliver Savings against current contract.
- Deliver a more robust, efficient and simpler network service.
- Delivering a major project at a minimal cost of change with no dual running cost, transformational, project or upfront costs

- Provide in service performance upgrades to many of the locations with increases in bandwidth at no additional cost.
- Provides flexibility within the contract to account for estate rationalisation to work with the Accommodation review.

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