

## **Item: 8**

**Asset Management Sub-committee: 1 February 2022.**

**Information Technology Capital Replacement Programme.**

**Report by Interim Executive Director of Environmental, Property and IT Services.**

### **1. Purpose of Report**

To consider the proposed Information Technology Capital Replacement Programme for 2022/23, together with an indicative programme for 2023/24.

### **2. Recommendations**

**It is recommended:**

#### **2.1.**

That the Information Technology Capital Replacement Programme for 2022/23, together with the indicative programme for 2023/24, attached as Appendix 1 to this report, to be funded from the allocation of £420,000 per annum within the Council's current approved capital programme, be approved.

#### **2.2.**

That powers be delegated to the Interim Executive Director of Environmental, Property and IT Services, in consultation with the Head of Finance, to adjust the two-year programme, referred to at paragraph 2.1 above, as variations arise in order to maximise use of the annual capital allocation.

### **3. Background**

#### **3.1.**

Any organisation that depends on reliable and up to date information technology to deliver its services needs to allocate a proportion of its budget to an annual replacement programme.

#### **3.2.**

In April 2014, the Council agreed that an annual amount of £420,000 should be allocated to support a programme of IT Replacement. This covers devices across all Council services, and the infrastructure hardware used to deliver the services that all staff are increasingly dependent upon. This includes servers, end-user devices, fixed-wireless network links, firewalls, data storage and backup systems. It also includes server, laptop and desktop PC assets purchased by other services, but

does not include other technology such as smartboards, plant and machinery or control systems

### **3.3.**

As detailed in the Information and Communications Technology Asset Management Plan, the replacement value of the Council's tangible information technology assets was valued at £6,101,500. If the asset replacement programme assumed that 20% of the assets should be replaced every year, the budget required would be in the region of £1,220,000. As the budget is not this amount, a focus on the most urgent and business critical systems and infrastructure is required, and this is the approach that is normally taken.

### **3.4.**

At its special meeting held on 21 December 2021, when considering the allocation of one-off funding towards a series of projects considered to provide excellent recovery prospects from the COVID-19 pandemic, the Policy and Resources Committee recommended the allocation of funding to a series of recovery projects, which included one-off allocations towards the following IT related matters:

- Windows 11 – £400,000.
- Schools' IT Equipment – £500,000.
- Corporate IT Equipment – £500,000.

### **3.5.**

The report to the Policy and Resources Committee included the following information in respect of the proposed allocations:

#### **3.5.1. Windows 11**

The next version of the Windows operating system is now available and, at some point in the not-too-distant future, it will be deemed necessary to make the move to upgrade from Windows 10 as software applications move over to the new operating system. Maintaining the current operating system reduces vulnerability to cyber-attack.

It is proposed that the allocation is used for the acquisition of the necessary investment in licences for Windows 11 and that the impact of the additional spending reported through the Asset Management Sub-committee, as part of regular monitoring of the Corporate IT replacement programme.

#### **3.5.2. Schools' IT Equipment**

The age profile of the IT equipment deployed across the education service is such that many young learners are working on computer equipment that is older than they are with consequent reliability and capability constraints.

It is proposed that the allocation is used to supplement the regular replacement of schools' IT equipment delivered through the Corporate IT replacement programme

and the impact of the additional spending reported through the Asset Management Sub-committee. with input from the Education Service.

### **3.5.3. Corporate IT Equipment**

Like the schools' IT estate the Council has a corporate IT estate where a proportion of the equipment in use is of an age where it would be preferable to have it replaced. There has been an expansion of the IT equipment in use to allow home working and connection to office G drives which has meant that some equipment that would otherwise have been "retired" is still in use.

It is proposed that the allocation is used to supplement the regular replacement of corporate IT equipment and the impact of the additional spending reported through the Asset Management Sub-committee.

### **3.6.**

In addition to the normal annual allocation of £420,000, the additional allocation of £1,400,000 will allow significant investment to be made. Planning this major improvement is still in progress and will require additional consideration and financial profiling. It has been confirmed that this funding will be drawn on as necessary and does not need to be spent during 2022/23.

## **4. Capital Replacement Programme**

### **4.1.**

As the Council becomes ever more reliant on information and communications technology, it is important that the replacement programme is sufficient to ensure service continuity and resilience. Maintaining the information technology estate to ensure that it is current, supported, and reliable with the capacity to meet the continuous growth in demand is fundamental to delivering ongoing services effectively.

### **4.2.**

It is relevant to note the policy obligations that the Council must maintain an information technology infrastructure that remains "in support" with the vendor and replace technology once a manufacturer declares technology at "end of support".

### **4.3.**

The programme covers physical IT assets across the main infrastructure categories of the Information and Communications Technology Asset Management Plan 2021 to 2025, approved by Council in June 2021.

### **4.4.**

Whilst there have been considerable changes to the delivery of many services via the use of cloud services, the majority of the information technology asset base is still delivered "on premise" and therefore maintaining the continuity, capacity, currency and resilience of these remains a priority. These include:

- Equipment and technology used in server room locations in which the IT systems are housed.
- The physical and virtual servers on which IT systems run.
- The data storage systems and backup facilities on which the Council's data is held.
- The Security Gateways that protect the Council's networks and permits secure access to the Internet.
- The Wide Area Network communications links which connect Council sites to one another and to the Internet.
- The Local Area Network and Wi-Fi infrastructure within Council premises.
- The desktop and laptop end-user devices across the Council Offices and schools used by Council staff, teachers and pupils.

## **5. Detail of Capital Replacement Programme**

### **5.1.**

The proposed Information Technology Capital Replacement Programme for 2022/23 is attached as Appendix 1 to this report. An indicative programme for 2023/24 is attached as Appendix 2 and will be refined as the programme for 2022/23 is delivered.

### **5.2.**

With regard to Datacentre Replacements, the Council has two main datacentre rooms, plus additional network distribution rooms, network rooms and cabinets across Council premises. In these are IT communications cabinets, server racks plus cable management, uninterruptable power supplies (backup batteries) and, in the case of larger sites, environmental monitoring and remote management links which allow the sites to be monitored and supported remotely.

#### **5.2.1.**

In particular, the uninterruptable power supplies across Orkney's IT estate have a short mean time between failures and therefore are a priority for ongoing replacement.

#### **5.2.2.**

Responsibility for building fabric in terms of power supply, heating, ventilation, and air-conditioning sits outside of IT expenditure.

### **5.3.**

The server budget covers the replacement of servers that are end of support lifetime and cannot viably be replaced with cloud alternatives. The focus will be on the replacement of four IT servers that fit these criteria and where the ongoing operational requirement is for on-premise hosting of these servers.

### **5.3.1.**

The data backup infrastructure is constantly in need of renewal as older storage arrays require expansion or retirement. In addition to standard backups new more secure backup systems are being investigated in our fight against the threat of ransomware attacks on organisations backup and recovery data. In particular, investment will be made on immutable backups during this period. Immutable storage is an emerging technology specifically designed to combat ransomware threats. Its underlying technology is based on the premise that once data is saved it cannot be overwritten and therefore prevents ransomware attacks from changing permissions on files, therefore preventing the owner from accessing their data until a ransom is paid.

## **5.4.**

The Local Area Network Infrastructure budget for financial year 2021/22 covers the ongoing replacement of Wi-Fi controllers, additional compatible wireless access points and also the network switches that support all of the network traffic across the Council's technology estate.

### **5.4.1.**

The Wi-Fi equipment, which is heavily used, is struggling to meet the emerging demands for good cybersecurity and increasing usage. Pressures on increased usage and emerging demands of better resilience, more capacity and stronger cybersecurity again are the drivers for change. New Wi-Fi technology uses Wi-Fi 6, which brings greater speed and bandwidth. To be compatible with new end user devices the Wi-Fi infrastructure will need to be updated throughout the estate.

## **5.5.**

The Council's Wide Area Network connects many of the Council premises securely via fixed wireless links to the main mast infrastructure, no equipment has been identified in need of replacement at present. However, this infrastructure is particularly vulnerable to the weather and therefore the potential impact of weather may arise unexpectedly.

## **5.6.**

The main priority is ensuring the estate of PC laptops and desktops are kept up to date.

### **5.6.1.**

With approximately 2,700 devices across Orkney's 22 schools, the programme will allow for the replacement of 275 of these. Given that some schools are still using devices from 2013, the main focus will be to replace the oldest devices first, as far as practical. Further replacements will be achieved via the additional £500,000 funding allocation referred to at section 3.4 of this report.

### **5.6.2.**

Additionally, the rolling programme of replacement of the 1,200 corporate laptops will continue to address replacement of the oldest 10% of the devices. Again, further replacements will be achieved via the additional £500,000 funding allocation referred to at section 3.4 of this report.

## **6. Corporate Governance**

This report relates to the Council complying with its governance and financial process and procedures and therefore does not directly support and contribute to improved outcomes for communities as outlined in the Council Plan and the Local Outcomes Improvement Plan.

## **7. Financial Implications**

### **7.1.**

The capital programme includes an approved provision of £420,000 in financial years 2022/23 and 2023/24 in respect of the Information Technology Capital Replacement Programme.

### **7.2.**

Development of multi-year plans for maintaining and improving the Council's Information Technology, as set out in this report, is consistent with the Council's approach to corporate asset management planning and should over time lead to a more effective use of Council's resources.

### **7.3.**

For expenditure to be considered an improvement or enhancement and count as being capital in nature it must lengthen substantially the useful life of the asset, increase substantially the open market value, or increase substantially the extent to which the asset can be used.

### **7.4.**

It is a requirement of the Capital Project Appraisal process that all planned capital improvement works of £150,000 and above per asset or group of assets, and including works to be delivered over multiple phases, be developed into individual Capital Project Appraisal business cases for formal review and approval as may be considered appropriate going forward.

## **8. Legal Aspects**

Regularly monitoring and updating the IT Capital Replacement Programme helps the Council to meet its statutory obligation to secure best value.

## **9. Contact Officers**

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## **10. Appendices**

Appendix 1: Information Technology Replacement Programme 2022/23.

Appendix 2: Information Technology Indicative Programme 2023/24

## Information Technology Replacement Programme 2022/23.

Asset Group	Project	Reason.	Sub Total.	Total.
<b>Datacentre Replacement</b>	Server Room Replacement	Replacement of Server and Network Room Equipment including UPS (backup power), Remote Management, Monitoring and Access Controls.	£20,000	<b>£20,000</b>
<b>Server Replacements</b>	Replacement of servers that are end-of-life.	Replacement of the servers that are at end of operational lifetime and reaching or beyond vendor support. There is an increased number likely to require replacement in financial year 22/23	£30,000	<b>£55,000</b>
	Replacement of Storage and Backup Infrastructure	Replacement of storage that is approaching capacity and enhance the resilience of data backups. This will include immutable storage devices	£25,000	
<b>Local Area Network Replacement</b>	Wi-Fi Refresh	Renew and improve Wi-Fi systems to maintain capacity and currency of support, replacing end of life equipment.	£50,000	<b>£85,000</b>
	Replacement of Network Switches	Replacement of Network Switches that are end of support. Ensuring devices are in current support is an essential objective in maintaining Public Sector Network Accreditation in line with the Public Sector Action Plan	£35,000	
<b>Security Gateways</b>	Proxy/Firewall Replacements	There are none forecast as requiring replacement in this year.	£0	<b>£0</b>
<b>Wide Area Network Replacement</b>	Replacement of End of Life and Poor Performing Radio Wireless and Microwave Mast Equipment	There are none forecast as requiring replacement in this year.	£0	<b>£0</b>
<b>Device Replacement</b>	Replacement of end User Devices (Corporate).	To replace end of life end-user devices in Council Offices. This will fund approx. 120 devices from an asset base of ca 1200 devices.	£70,000	<b>£230,000</b>
	Replacement of end User Devices (Schools).	To replace end of life end-user devices in Schools. This will fund approx. 275 devices across 22 schools from an asset base of ca 3000 devices.	£160,000	
Other	Failures and Emergency Replacements of Capital Equipment.	Allocation to replace failures not covered by repairs, and any systems that fail security audit requirements. Particularly WAN wireless	£30,000	<b>£30,000</b>
			<b>Total</b>	<b>£420,000.</b>



## Information Technology Indicative Programme 2023/24.

Asset Group	Project	Reason.	Sub Total.	Total.
<b>Datacentre Replacement</b>	Server Room Replacement	Replacement of Server and Network Room Equipment including UPS (backup power), Remote Management, Monitoring and Access Controls.	£20,000	<b>£20,000</b>
<b>Server Replacements</b>	Replacement of servers that are end-of-life.	Replacement of the servers that are at end of operational lifetime and reaching or beyond vendor support.	£15,000	<b>£25,000</b>
	Replacement of Storage and Backup Infrastructure	Replacement of storage that is approaching capacity and enhance the resilience of data backups. This will include immutable storage devices	£10,000	
<b>Local Area Network Replacement</b>	Wi-Fi Modernisation	Renew and improve Wi-Fi systems to maintain capacity and currency of support, replacing end of life equipment including the introduction of 6 <sup>th</sup> generation WiFi 6 services	£50,000	<b>£85,000</b>
	Replacement of Network Switches	Replacement of Network Switches that are end of support. Ensuring devices are in current support is an essential objective in maintaining Public Sector Network Accreditation in line with the Public Sector Action Plan	£35,000	
<b>Security Gateways</b>	Proxy/Firewall Replacements	There are none forecast as requiring replacement in this year.	£0	<b>£0</b>
<b>Wide Area Network Replacement</b>	Replacement of End of Life and Poor Performing Radio Wireless and Microwave Mast Equipment	To replace core WAN WIFI equipment to ensure connectivity between our main mast sites and care homes.	£30,000	<b>£30,000</b>
<b>Device Replacement</b>	Replacement of end User Devices (Corporate).	To replace end of life end-user devices in Council Offices. This will fund approx. 120 devices from an asset base of ca 1200 devices.	£70,000	<b>£230,000</b>
	Replacement of end User Devices (Schools).	To replace end of life end-user devices in Schools. This will fund approx. 275 devices across 22 schools from an asset base of ca 3000 devices.	£160,000	
Other	Failures and Emergency Replacements of Capital Equipment.	Allocation to replace failures not covered by repairs, and any systems that fail security audit requirements. Particularly WAN wireless	£30,000	<b>£30,000</b>
			<b>Total</b>	<b>£420,000.</b>