

PFCC Decision Report

Report reference number: 025-24 (207-23)

Classification: OFFICIAL

Title of report: IT Technical Refresh 2024/25

Area of county / stakeholders affected: Force wide

Report by:

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Chief Officer: Claire Medhurst (Director of Support Services)

Date of report: 21/02/2024

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1. Executive Summary

The purpose of this report is to seek approval of the Stage C IT Technical Refresh 2024/25 Business Case for Essex (attached at Appendix A) with revenue recurring costs of £0.215m, one off revenue set up costs of £0.125m, and capital costs of £3.675m in 2024/25. The total cost to Essex Police is £4.015m.

The annual cycle of technical refresh across IT infrastructure and computers is essential to maintaining secure, resilient access to IT systems for all police officers and support staff. In 2024/25, technical refresh covers the following areas:

ARC Data Centres	On-Premise Infrastructure	End User Devices
Isilon storage servers *	Chronicle servers	Desktops
Load balancers	External drive security	Laptops
Secure internet gateway	Windows 11	Printers
Server replacement	Network switches	Monitors
Cloud management	Network firewalls	Smartphones
	WIFI	IP telephones
	Structured cabling	Video conferencing

	Video conferencing	
	FCR infrastructure	
	Oracle ODA	
	Milestone (CCTV)	

*Isilon storage server replacement required as the existing ones were relocated to the ARC data centre from on-site and are now scheduled for replacement.

2. Recommendations

This decision report requests that funding is provided in support of Option 1, to enable IT Services to deliver an efficient, effective, stable, secure, and robust infrastructure and end user device service to the forces in line with the services listed above for the 2024/25 financial year. All items requested are to replace existing and agreed hardware and services. Growth because of new requirements is not included and would be subject to separate business cases.

This proposal requests continued investment in server, storage, and network infrastructure after the move of both forces' data centres to Crown Hosting / Ark Data Centres and includes the remaining Essex estate IT infrastructure that is required to maintain internal force network connectivity and security. This proposal also includes the end user device replacement, which for 2024/25 consists of laptops, desktops, monitors, smart phones, printers, body worn video, Digital Forensics Unit devices, IP telephones, and video conferencing equipment. Refresh of most end user devices falls between three and five years with most, including laptops, being on a four-year replacement cycle.

It is therefore recommended that expenditure of £4.015m, comprised of £3.675m capital, £0.125m one-off revenue and £0.215m recurring revenue funding (annually), outlined in the Stage C Business Case, is agreed for the IT Technical Refresh programme to continue in the 2024/25 financial year.

This is allowed for from the capital programme and is set out in the MTF5 24/25-28/29.

This Decision Report is only requesting approval of the year one costs as set out in this report at section 9 below.

3. Background to the Proposal

The annual cycle of technical refresh across IT infrastructure and end user devices is essential to maintaining resilient and secure access to IT systems for all police officers and support staff, which remediates the risk seen in previous years where the IT infrastructure was unstable. The technical refresh process is the cycle of regularly updating key elements of an IT infrastructure to maximise system performance. Instead of using systems until they can no longer function, it is good practice proactively to upgrade or replace components of an infrastructure on a regular schedule. Maintaining IT infrastructure is costly and can be more so for legacy systems and services. Legacy technology that has not been updated can lead to poor performance and service delivery, inefficiencies in energy and space

consumption, and bloated administrative and maintenance overheads, impacting on operational business, and service to and confidence of the public. Alongside this, there are increased risks of maintaining ageing IT assets where a failure is likely rather than just possible.

To support force savings targets, IT has also agreed to reduce resource by 7.2% from April 2024 meaning we need to be even more aware of workload when managing break / fix vs delivery of new. An effective, efficient replacement programme will alleviate additional pressure on IT staff by removing unnecessary faults due to age or compatibility. This will help address corporate concerns and budget challenges.

A technical refresh programme relates to more than just infrastructure, which is made up of servers, storage, network devices and all the services these require to function. Technical refresh also extends to most IT services that are consumed from applications to services that are used by everyone in the organisation to a single user requirement. All users have a need to use laptops, desktops, and mobile devices. By having a technical refresh programme, critical infrastructure and continued investment in the IT infrastructure will address current in-year capacity limitations and return or maintain the wider IT infrastructure to a position where it is fit for purpose and more able to meet in-year growth. The technical infrastructure refresh programme will improve performance and functionality and continue to improve our security position by eliminating security issues identified by IT Health Checks and support our ability to meet the minimum-security Assurance for Policing standards. This is a key element of managing the forces' cyber risk. Significant growth in data storage requirements will be subject to stand alone business cases submitted by the relevant organisational department.

This work will support the wider IT Programme of Work, the new data centre, and estates transformation, and will have a major positive impact on our IT security by removing old, unsupported IT systems. The move to more 'agile' devices from conventional desktops will support a more agile work force which is an enabler for proposed estate changes and will enable new working practices and maximise the use of valuable office space. Scoping of a new desktop experience using mobile devices and docks is being trialled in force but will not affect the 2024/25 refresh budget.

4. Proposal and Associated Benefits

Each year the IT technical refresh business case is completed to outline the spend required to ensure the IT infrastructure and end user devices comply with the most up to date security patches and technology compatibility. This means all hardware must meet the appropriate operation system compatibility and remain in support for security and compliance patches with the manufacturer for both hardware and operating system.

Essex Police adheres to the National Enabling Programme (NEP) Design Refresh 3 (DR3) for end user devices and must ensure it is compliant with cyber security standards which are a requirement of the National Cyber Security Centre (NCSC).

IT technical refresh is designed to ensure IT is delivering infrastructure and end user services that can provide maximum performance, stability, and security for the forces. It ensures hardware is renewed before it becomes maintenance heavy and performance impacting. We have seen in previous years that a lack of investment can lead to inefficiencies in service provision that can directly impact operational policing. Since 2019, investment in IT infrastructure, end user hardware and services, including the provision of the Ark data centres, has seen a decrease in critical incidents impacting operational policing by 31%.

Due to the nature of a business-as-usual technical refresh programme such as this that requires investment in technology, there are no cashable savings. This proposal presents non-cashable benefits as follows:

- Cost avoidance via continued improvement of highly available networking between police devices, sites and third-party services which form a large part of both operational and non-operational policing.
- The avoidance of downtime due to failing infrastructure or that which is not suitable for the ever-increasing size of digital media will undoubtedly improve policing efficiency and outcomes.
- Avoidance of risk of out-of-support hardware which falls below national standards for connection to the PSN (Police Services Network), risking disconnection from this network and inherent vulnerability to cyber threats.
- Increased compliance with national standards relating to both policing and the General Data Protection Regulation (GDPR); maintaining accreditation and avoiding the risk of data breaches and resulting fines from the Information Commissioner's Office (ICO).
- Increased compatibility with future technology enabled by national programmes such as National Identity & Access Management (NIAM) and the National Law Enforcement Data Programme (NLEDS).
- Maintenance of improved Wi-Fi provision will be an enabler to maximise the capability of mobile devices and increase the value provided by an increasingly agile workforce.
- Replacement of aging end user devices is an enabler for full exploitation of agile working and latest operational system upgrades required.

There is a detailed plan for the technical refresh that follows many different technology platforms and devices, and as such the procurement activity relating to these will be requested throughout the financial year. As with previous years, we will have a dedicated programme to track progress and spend which in turn updates Corporate Finance.

In summary, by approving the funding for the 2024/25 technical refresh programme, the forces will be ensuring the ongoing security, integrity, availability and high performance of their IT services, hardware and devices, infrastructure, and IT management tools. Failure to invest in previous years has proven to cause service instability.

The focus of both forces most recently has been to speak openly to their workforce, inviting them to provide real time feedback on what can be improved to make their roles more efficient and effective. In Essex, the 6,000 Conversations Tour showed

officers and staff are passionate about their equipment provision and how it performs for them, driving the force to invest in laptops for all police officers. The technical refresh ensures these devices, and their supporting software, applications and infrastructure are maintained and replaced to ensure continuation of the operational policing services conducted using them, as well as their mobile phones, body worn videos and Airwave (the latter two are covered under separate bids or budgets for device refresh but not for their underlying infrastructure).

5. Options Analysis

IT Services are recommending Option 1 is approved.

The options are limited when it comes to refreshing infrastructure and end-user hardware. In years gone by, the replacement of such hardware could be delayed at the risk of increased likelihood of failure. Now however the risk is much greater over time from increased vulnerability to cyber threat. Where previously vendors would support hardware and its firmware for five to 10 years, it is more common now for them to cease updates / support between three and five years after release. Therefore, the resulting options are:

Option 1 (the recommended option and ‘business as usual’): Approve the annual funding as outlined in this business case for the IT Technical Refresh Programme 2024/25.

Option 2 (“do minimum” option): Each individual element of the technical refresh programme would need to be assessed and scrutinised to understand the risk associated with removing that specific element’s funding from this business case. For 2024/25 there are a total of 35 elements to the technical refresh. Many are inter- or co-dependant on another, and all are linked to operational policing functions.

6. Consultation and Engagement

The following parties have been consulted, internal to Essex Police:

Information Security
7 Force Commercial Services
Corporate Finance
Strategic Change
Estates

7. Strategic Links

The Essex PFCC’s Police and Crime Plan 2021 – 2024 states the intent to:

- *“Use technology more to help Essex Police be visible in their communities including developing mobile applications and enabling better connectivity”.*
- *“Invest in Body Worn Video and Tasers to help keep public, officers and staff safe and be effective in their roles”.*
- *“Continue to maximise the benefits of collaboration between Essex and Kent Police”.*

- *“Identify drivers who need remedial education by investing in technology to enable the police to process the increasing volume of video evidence supplied from dash-cams...”*

The Essex Force Plan states that:



Technical infrastructure refresh will support all the above statements. Over the next 12 months, work will continue on the upgrade of local networking infrastructure to support the increasing volumes of network traffic uploaded from body-worn, digital interview and dashcam footage, whilst moving towards a ‘zero-trust’ model to reduce the likelihood of cyber-attack. Devices will be fit for purpose, agile where possible and provide IT services efficiently and effectively, upgraded to the most current technology and not ‘like for like,’ with the added benefits of additional capacity, function and utility.

8. Police operational implications

The technical infrastructure refresh programme has been planned in line with the Essex Chief Officer Group’s requirement to have a secure, stable, and resilient platform on which all technical operational policing activity can take place, focusing on capacity and continuity of service.

As already detailed, it cannot be underestimated the impact degraded, underperforming devices and infrastructure have on operational policing and the visibility and availability of police in Essex.

9. Financial implications

The Stage C business case was endorsed by the force during the 2023/24 budget setting process and funding has been set aside within the Subject to Approval Capital Programme.

This decision report relates to the Stage C Technical Refresh Business Case and is seeking approval for funding in 2024/25 only. The budget requirement to deliver the IT Technical Refresh Programme for Essex is £4.015m, comprised of £3.675m capital, £0.125m one off revenue and £0.215m recurring annual revenue funding.

It should be noted that the above financing costs are already budgeted in the MTFs as part of the subject to approval capital projects. These values will be updated to reflect the revised subject to approval requirement for years 2024/25 to 2028/29 for this capital programme and are being provided for information only in respect of understanding the cost implications to the force of proceeding with this project.

The figures below exclude the costs associated with borrowing in respect of this project however it should be noted that this will lead to an increase in the force's capital financing requirement (CFR). This will result in charges to the revenue account relating to minimum revenue provision (MRP) and interest payable. For this project in year one, these costs will equate to the capital investment value of £3,674.9k being charged as MRP in instalments over the useful economic life of the related asset. In respect of interest payable for external borrowing it is assumed that the force will incur financing costs of approximately 5% for a period of seven years. On the assumption the principal is not repaid in full until the end of the borrowing term, this will result in total charges to the revenue account of proceeding with this project of £4,961.12k, incorporating both the MRP and interest elements.

FUNDING SUMMARY – CORPORATE FINANCE USE ONLY

	Year 1 2024/25	Year 2 2025/26	Year 3 2026/27	Year 4 2027/28	Year 5 2028/29	Total
CAPITAL COSTS	£000	£000	£000	£000	£000	£000
(ESSEX ONLY)						
Stage B - budget setting	4,181.0	4,283.4	2,780.1	5,988.5	-	17,233.0
Stage C	3,674.9	2,827.8	4,403.6	4,413.7	3,446.7	18,766.7
Variance: Stage C compared to budget setting provision (if applicable)	(506.1)	(1,455.6)	1,623.5	(1,574.8)	3,446.7	1,533.7
REVENUE SET-UP COSTS SUMMARY						
(ESSEX ONLY)						
Stage B - budget setting	70.0	29.6	20.0	10.0	-	129.6
Stage C	125.0	29.6	20.0	10.0	-	184.6
Variance: Stage C compared to budget setting provision (if applicable)	55.0	-	-	-	-	55.0
REVENUE RECURRING COST SUMMARY						
(ESSEX ONLY)						
Stage B - budget setting	242.0	266.8	242.1	235.5	-	986.4
Stage C	215.0	239.7	215.0	238.8	58.5	967.0
Variance: Stage C compared to budget setting provision (if applicable)	(27.0)	(27.1)	(27.1)	3.3	58.5	(19.4)
TOTAL PROJECT COSTS						
STAGE B - BUDGET SETTING	4,493.0	4,579.8	3,042.2	6,234.0	-	18,349.0
STAGE C	4,014.9	3,097.1	4,638.6	4,662.5	3,505.2	19,918.3
NET IMPACT ON CAPITAL PROGRAMME-(SURPLUS)/DEFICIT	(478.1)	(1,482.7)	1,596.4	(1,571.5)	3,505.2	1,569.3

The above table shows the cost difference between the Stage B and Stage C business cases. There has been a reduction of £478.1k for Essex, broken down to:

A reduction of £506.1k in capital from £4,181k to £3,674.9k.

An increase of £55k in revenue set-up costs from £70k to £125k.

A reduction of £27k in revenue recurring costs per annum from £242k to £215k.

These reductions have been made after reviewing the programme of work within IT for 2023/24, 2024/25 and 2025/26. This reflects changes and re-prioritisation that have occurred throughout 2023/24 via the Digital Transformation Oversight Board (DTOB) which prioritises demand for IT against available resources (financial and staff).

For Essex, the reduction in £506.1k of capital is because of the removal of the Airwave handset replacement programme. A recommendation was made to refresh all Essex radios in 2024/25 however subsequently requirements to refresh radios have changed due to various developments including recruitment plans, radio failure and attrition rates. A separate business case for 2023/24 of £0.250m and of £3.684m in 2024/25 was approved which will also enable an overall saving (and avoid a potential additional cost) by securing 2023/24 unit costs for the 2024/25 purchase. PFCC Decision Report 099-23 refers.

The £55k increase comes from a one-off revenue cost to develop Windows 11 to meet the timescales to replace Windows 10 by October 2025. All the revenue and the capital has been built into the MTF5.

The £27k reduction in revenue recurring relates to adjusted market pricing to make the figures as correct as possible in the business case / DR.

The table below provides a summary of the expected costs of technical infrastructure refresh from 2024 to 2029. We are asking for approval of spend in Year 1 (2024/25) only as part of this decision report.

1. DETAIL OF COSTS						
	Year 1 2024/25 £'000 Essex	Year 2 2025/26 £'000 Essex	Year 3 2026/27 £'000 Essex	Year 4 2027/28 £'000 Essex	Year 5 2028/29 £'000 Essex	TOTAL £'000 Essex
Capital cost						
Infrastructure	871.50	526.10	1,147.10	2,321.90	579.50	5,446.10
End User Devices	2,803.40	2,301.70	3,256.50	2,091.80	2,867.20	13,320.60
Total Capital cost	3,674.90	2,827.80	4,403.60	4,413.70	3,446.70	18,766.70
Revenue set up cost						
Infrastructure	125.00	29.60	20.00	10.00	0.00	184.60
End User Devices	0.00	0.00	0.00	0.00	0.00	0.00
Total Revenue set up cost	125.00	29.60	20.00	10.00	0.00	184.60
Revenue recurring cost						
Infrastructure	215.00	239.70	215.00	238.80	58.50	967.00
End User Devices	0.00	0.00	0.00	0.00	0.00	0.00
Total Revenue recurring cost	215.00	239.70	215.00	238.80	58.50	967.00
Total Costs	4,014.90	3,097.10	4,638.60	4,662.50	3,505.20	19,918.30

10. Legal implications

The Essex server and network support and maintenance are covered under a contracted agreement with a supplier. We are contractually bound to maintain the hardware and its supporting infrastructure as part of this support and maintenance.

11. Staffing implications

No additional resources are required to complete the replacement work associated with this business case, however failure to deliver a robust, planned replacement programme within IT Services will result in an increase in incidents and service failures. This diverts IT staff from delivering new and maintaining existing services to operational policing which in turn provides degraded services to officers and staff. All this means that all staff must give up more time dealing with IT issues.

12. Equality, Diversity and Inclusion implications

A secure, resilient, stable infrastructure allows services such as M365 (Teams, Yammer, SharePoint etc) to support officers and staff with technical reasonable adjustments as well as providing force wide platforms to share, engage with and present equality, diversity and inclusion awareness and training.

13. Risks and Mitigations

End user devices have a finite lifespan for manufacturer warranty, operating system compatibility and capacity related performance. Failing to refresh devices can lead to cyber security risks when security patching ends, degraded performance relating to memory and processor specification, and additional costs for out of warranty repairs.

An infrastructure that has the latest security defences and is running the latest versions of operating system software etc will greatly help address the cyber security risk for a robust infrastructure to protect the confidentiality, integrity and availability of force systems and the data within them. It is an expected national standard that all devices (computer, servers, and networking equipment) are updated with the latest security at no less regularity than monthly to ensure the latest supplier patches and updates protect the device from ever evolving cyber threats.

14. Governance Boards

This proposal has been through the following governance boards:

September 2023 - The stage B Technical Refresh business case was submitted to the Chief Officer Group as part of budget setting.

February 2023 – The stage C Technical Infrastructure Refresh business case was submitted to the Chief Officer Group.

March 2024 – PFCC Strategic Board

15. Links to Future Plans

The ongoing refresh of our technical infrastructure and user devices is pivotal to IT providing a full catalogue of services to Essex Police.

Growth in officers and staff increases the capacity requirements on all elements of server, network and end user device services. An ongoing refresh programme supported by appropriate funding allows IT Services to ensure the Police and Crime Plan promises to “Deliver over 300 more officers” and “Use technology more to help Essex Police to be visible in their communities...” are fulfilled by ensuring the supporting services and infrastructure that are needed to deliver those promises are secure, resilient, and sustainable.

As Essex looks at its physical estate, including the headquarters site where much of the server and infrastructure service is based, IT needs to ensure we keep ahead of the requirement for relocation of services. This is only possible if the technical infrastructure is up to date and performing securely, efficiently, and resiliently, which is only achieved with a robust refresh programme.

16. Background Papers and Appendices


[REDACTED]

[REDACTED]

[REDACTED]

Report Approval

The report will be signed off by the PFCC's Chief Executive and Chief Finance Officer prior to review and sign off by the PFCC / DPFCC.

Chief Executive / M.O. Sign: 

Print: P. Brent-Isherwood

Date: 23 February 2024

Chief Financial Officer Sign: 

Print: Janet Perry

Date: 24 February 2024

Publication

Is the report for publication? YES NO

If 'NO', please give reasons for non-publication (Where relevant, cite the security classification of the document(s). State 'None' if applicable)

Subject to redaction, as set out below

If the report is not for publication, the Chief Executive will decide if and how the public can be informed of the decision.

Redaction

If the report is for publication, is redaction required:

1. Of Decision Sheet? YES NO 2. Of Appendix? YES NO

If 'YES', please provide details of required redaction:

Appendix A and Background Paper – Commercially sensitive data

Date redaction carried out:

Chief Finance Officer / Chief Executive Sign Off – for Redactions only

If redaction is required, the Treasurer or Chief Executive is to sign off that redaction has been completed.

Sign: 

Print:Darren.Horsman -.Deputy.MO.....

Chief Executive / Chief Finance Officer

Decision and Final Sign Off

I agree the recommendations to this report:

Sign: 

Print: Roger Hirst

PFCC/Deputy PFCC

Date signed: 13/03/2024

I do not agree the recommendations to this report because:

.....
.....
.....

Sign:

Print:

PFCC/Deputy PFCC

Date signed: