NHS
Blood and Transplant

Business Case Summary
Connectivity/DCCI Programme

June 2022

SRO:	Dan Jeffrey
Accountable Executive:	Andrew O'Connor
Business Lead:	TBC
Programme Manager:	Catherine Ongers
Project Managers:	John Molloy

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Contents

Section 1: Introduction

- Context
- Background
- What is requested in this Business Case
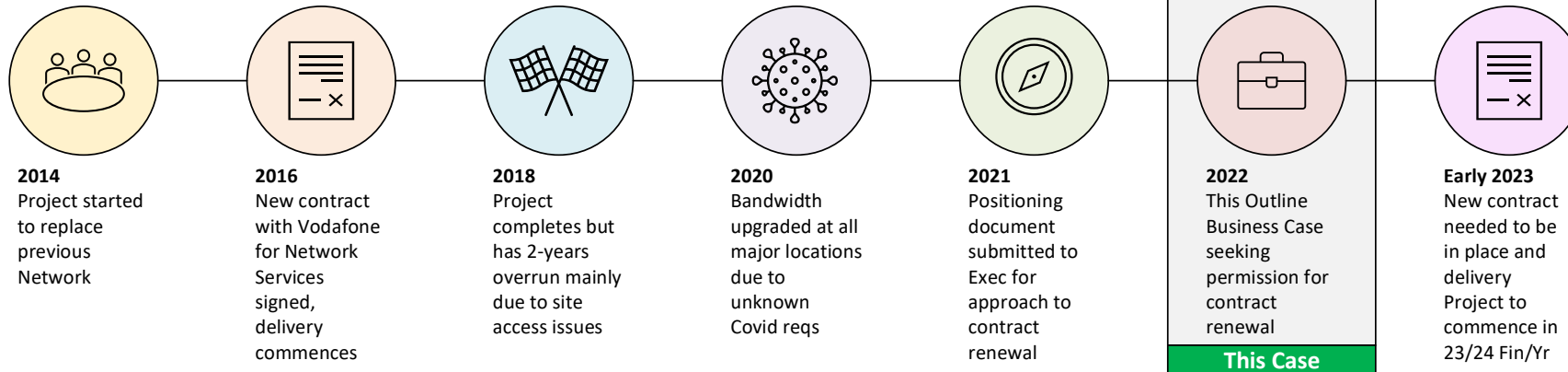
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Introduction

Context

- NHSBT has a contract with Vodafone for Connectivity Services which expires in February 2023
- There are 93 locations connected to the Vodafone Wide Area Network (WAN) across the UK
- These range from very small blood collection team bases through to large centers such as Filton and two co-location data centers
- This Vodafone contract includes services for the Wide and Local Area networks (WAN & LAN), Network links to Cloud providers, the Internet, Wi-Fi and associated management services

Background

2014
Project started to replace previous Network

2016
New contract with Vodafone for Network Services signed, delivery commences

2018
Project completes but has 2-years overrun mainly due to site access issues

2020
Bandwidth upgraded at all major locations due to unknown Covid reqs

2021
Positioning document submitted to Exec for approach to contract renewal

2022
This Outline Business Case seeking permission for contract renewal

This Case

Early 2023
New contract needed to be in place and delivery Project to commence in 23/24 Fin/Yr

What is requested in this Business Case?

- **Approval to proceed with FBC for Option 2 (A) of this Outline Business Case – to seek a new contract with Vodafone for a 5-year term**
- **Subject to FBC being within a 20% tolerance of OBC seek approval from the Executive for final approval without returning to the Board**
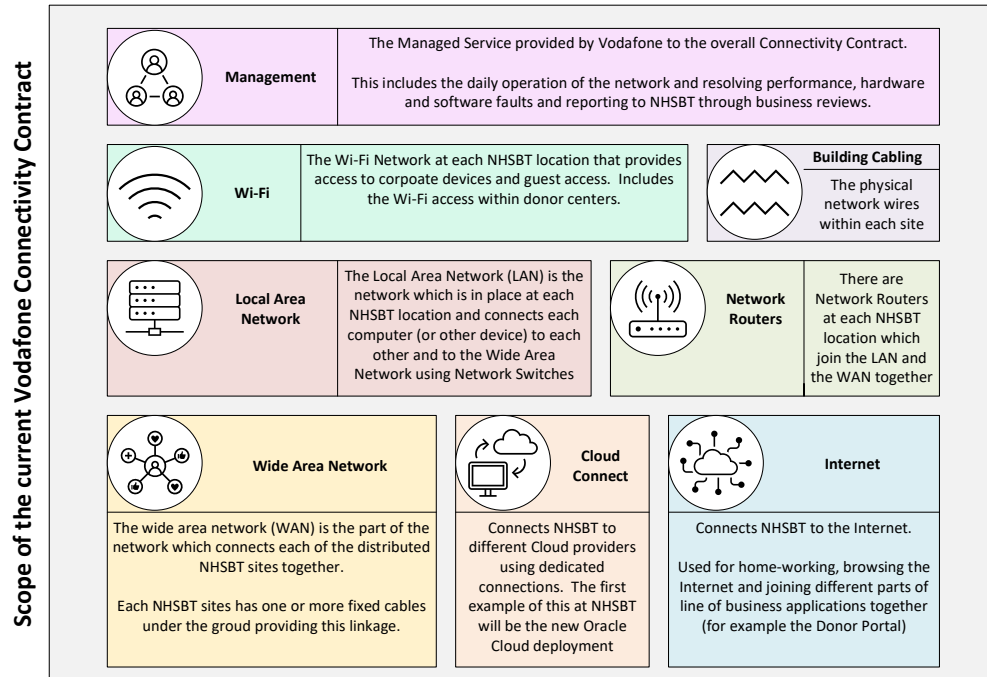
Section 2: Strategic Case

(What is the problem we need to solve and why is this work required?)

- Drivers for Change
- Objectives and Outcomes Sought
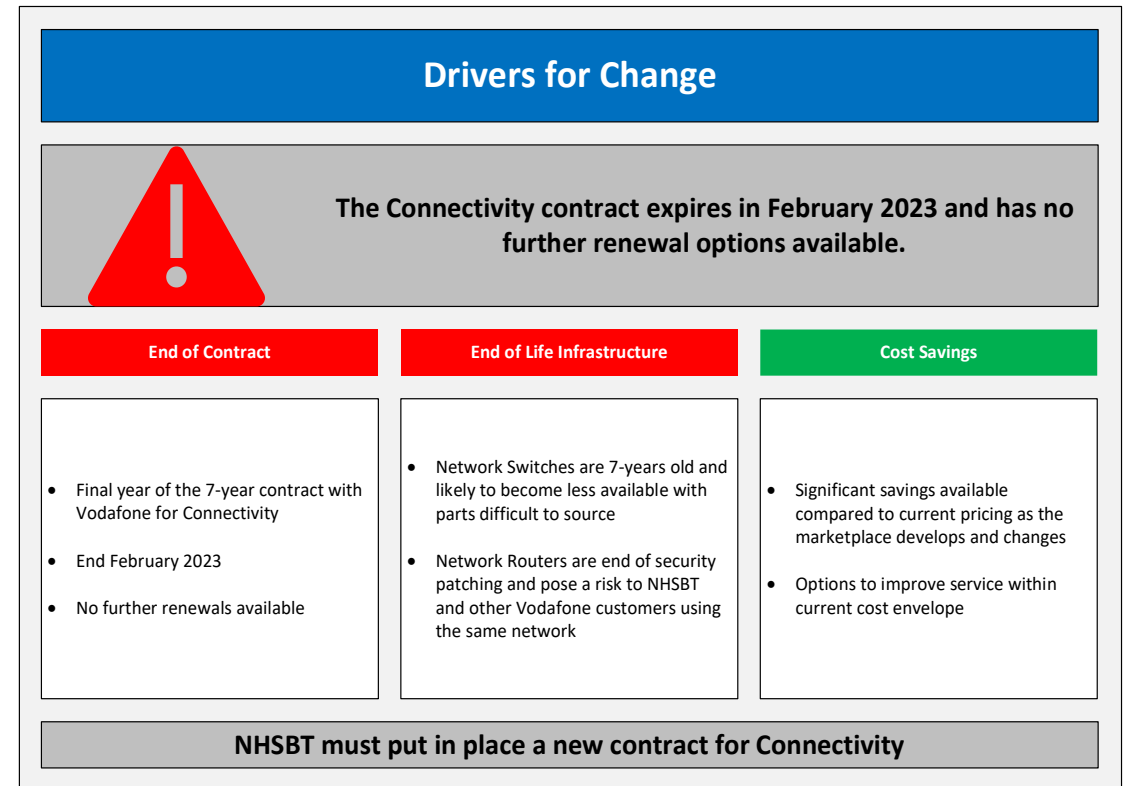- Scope

Strategic Case

Strategic Context

- In order to support its critical business services, NHSBT requires disaster-tolerant voice and data networks. Disaster-tolerant is the characteristic attributed to a system that can withstand a catastrophic failure and still function with some degree of normality.

- The Cabinet Office, through the PSN (Public Service Network) team, currently mandates government departments and their ALBs to use PSN-compliant network and telephony components, and to procure using the PSN frameworks.

- Under the current contract most of the network equipment on our sites is owned by NHSBT and this equipment will be past end-of-life by February 2023 and will need to be replaced as part of any new contract.

Scope of the current Vodafone Connectivity Contract

| Management | The Managed Service provided by Vodafone to the overall Connectivity Contract. This includes the daily operation of the network and resolving performance, hardware and software faults and reporting to NHSBT through business reviews. |

| Wi-Fi | The Wi-Fi Network at each NHSBT location that provides access to corpoate devices and guest access. Includes the Wi-Fi access within donor centers. | Building Cabling | The physical network wires within each site |

| Local Area Network | The Local Area Network (LAN) is the network which is in place at each NHSBT location and connects each computer (or other device) to each other and to the Wide Area Network using Network Switches | Network Routers | There are Network Routers at each NHSBT location which join the LAN and the WAN together |

| Wide Area Network | Cloud Connect | Internet |

The wide area network (WAN) is the part of the network which connects each of the distributed NHSBT sites together.

Each NHSBT sites has one or more fixed cables under the groud providing this linkage.

Connects NHSBT to different Cloud providers using dedicated connections. The first example of this at NHSBT will be the new Oracle Cloud deployment

Connects NHSBT to the Internet.

Used for home-working, browsing the Internet and joining different parts of line of business applications together (for example the Donor Portal)

Case for Change

- February 2023 will be the final year of a 7-year contract with Vodafone for connectivity services

- Most of the Infrastructure will require replacement due to its age and the lack of availability of security patch sets which places NHSBT and other Vodafone customers using the same network at risk

- There are significant savings available through a new contract with Vodafone on a like for like basis and which prevents the need for significant building works to install new cables

Drivers for Change

The Connectivity contract expires in February 2023 and has no further renewal options available.

End of Contract	End of Life Infrastructure	Cost Savings
- Final year of the 7-year contract with Vodafone for Connectivity - End February 2023 - No further renewals available	- Network Switches are 7-years old and likely to become less available with parts difficult to source - Network Routers are end of security patching and pose a risk to NHSBT and other Vodafone customers using the same network	- Significant savings available compared to current pricing as the marketplace develops and changes - Options to improve service within current cost envelope

NHSBT must put in place a new contract for Connectivity

Strategic Case

Scope

In Scope
a. New contract with Vodafone for Connectivity Services
b. All out of date network Infrastructure replaced
c. Significant recurring cost savings provided
d. Contingency for upgrade to bandwidth included in forecasts

Exclusions
a. Existing Wi-Fi replacement moved to 25/26 under separate Business Case
b. Upgrades to Internet bandwidth (except for those specified in the OBC)
c. Changing from existing MPLS network technology to SD-WAN

Outcomes & Objectives Sought

Known Supplier Landscape

The current supplier and level of service is known to NHSBT
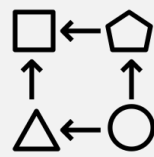
Tried and Tested Approach

Technology is well proven at NHSBT over many years

Management

Significantly improves the management of the network

Earlier Risk Mitigation

The elderly Infrastructure is replaced quickly

Compliant with Procurement best Practise

New contract using standard OGC framework

Ways of Working

Supplier and project teams have existing and strong working relationships

Cost Reductions

Significant recurring revenue savings

Performant

Provides additional bandwidth at sites that are oversubscribed today

New Ideas

Contract will offer ways to test new technology throughout it's life
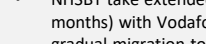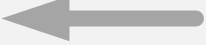
Section 3: Economic Case
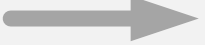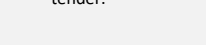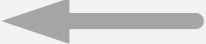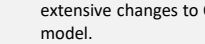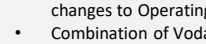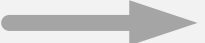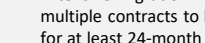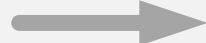
(What are the potential solutions? Which is preferred and why; is it best value for money?)

- Approach
- Long List Options
- Short List Options
- Preferred Option

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Economic Case

Approach

- In developing the economic case, the author followed HMG Green Book methodology and produced 3 viable "strategic options" to deliver the solution

- A technology review was also undertaken to determine NHSBT's readiness to move from MPLS network solution to SD-WAN (See Appendix 3 for high level comparison)
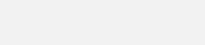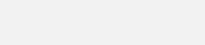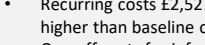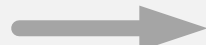
- The following options were considered when developing the preferred way forward:

  - **Option 1** is the 'do minimal' case; not viable in view of the lack of a commercial option and the age of the equipment.

  - **Option 2** is the recommended option, causing least business disruption by renewing the contract and refreshing the Infrastructure. Ability to add further bandwidth with in-year funding requests as needed.

  - **Option 3** provides an alternative using new technology but has much higher delivery costs and offers little benefit to NHSBT until many more applications and services have been moved to Cloud. It will be the preferred option at the next contract renewal in 2027.

  - **Option 4** *(discounted October 2021 by NHSBT Exec and shown for completeness)* is similar to Option 3 but with a new supplier. It was discounted through an October submission to the Exec (See Appendix 4)

Economic Case – Short List Options Summary

	Business As Usual (BAU)	Option 1 : Do Minimum *Renew 'Run' contract only*	Option 2: Preferred Way Forward *Optimise Network*	Option 3: Current Provider *New Technology*	Option 4: New Provider *New Technology*
1 Scope as outlined in the strategic case	**1.0 As-is** • There are no legal extensions available on the existing Vodafone contract. This would require a breach and ad-hoc arrangement with Vodafone	←	**1.2 Minimise business disruption** • NHSBT procure the new connectivity solution under an RM3808 NSF2 direct award contract. This approach is supported by Procurement and Vodafone.	→	**1.4 Minimise business disruption** • NHSBT take extended period (24-months) with Vodafone to manage gradual migration to new network. • Extensive and complex integration of networks required.
2 Solution the 'how' in terms of delivering the scope	**2.0 Existing Model** • Through ad-hoc arrangements involving breach. Vodafone legal may not be willing to accept this approach to renewal.	←	**2.2 Managed negotiation** • Renew contract with Vodafone through direct award framework	→	**2.4 Managed negotiation** • Procure through suitable competitive tender.
3 Delivery the 'who' in terms of delivering the solution	**3.0 Existing Team** • DDTS SMT and Procurement.	←	**3.2 Programme team** • Dedicated Project Team from within NHSBT using local CSA resources. Well practised replacement.	**3.3 Programme Team** • New Technology will bring extensive changes to Operating model.	**3.3 Programme Team** • New Technology will bring extensive changes to Operating model. • Combination of Vodafone and potential new Network service provider
4 Implementation the 'when' in terms of delivering the solution	**4.0 Contract end** • Vodafone unlikely to accept due to age of our Network Infrastructure and risk this would create to other VF customers.	→	**4.2 Contract end** • New Contact in place by February 2023	**4.3 Contract end** • Extensive migration needing multiple contracts to be in place for at least 24-month migration period	→
5 Funding the funding required to deliver the above dimensions	**5.0 Current Budget** • Funded from current Business as Usual. • Current baseline costs are £2,173,758 per annum	**5.1 Current Budget** • Recurring costs £1,539,317 (£634k savings)	**5.2 Existing NHSBT Budget** • Recurring costs £1,539,317 (£634k savings) • Infrastructure replaced through Capital Investment Project. (£2,267,404) including 11% optimism bias	**5.3 Additional transformation budget** • Recurring costs £2,527,578 (£345k higher than baseline costs) • One off costs for infrastructure replacement is £6,846,363 including 30% optimum bias	→

Section 4: Commercial Case

(Is the Commercial Model viable?)

- Commercial Overview
- Commercial Agreements

Commercial Case - Overview

Introduction

- NHSBT will manage the delivery of the Programme, we will:
  - Work with Vodafone to change the end-of-life Infrastructure.
  - Prioritise a small team of NHSBT staff who have 'done this before' (Technical and Programme).
  - The framework we intend to use (Network Services 2 (NSF2) allows NHSBT to meet the needs of Public Sector Contracting Authorities but make a direct award
  - Despite the current market costs increasing, Cisco increasing their costs by 17%, in line with inflation, and the changing exchange rate, NHSBT has secured a 29.19% cost reduction in the WAN run costs.

Approach

Procurement Approach

Crown Commercial Service

Network Services 2

Telecommunications services including networks for the entire public sector, their associated bodies and agencies, the voluntary sector and charities.

This framework a range of services; including -

- voice and data provision
- internet access
- WiFi
- radio
- security and surveillance
- audio and video conferencing
- equipment
- maintenance and support services

Why Direct Award -

- Save NHSBT time, effort, internal resources and therefore money by not having to go through a full RFI, RFP tender cycle. £1m was returned to Transformation funding in 2022/23 opposed to starting this process.
- NHSBT benefit commercially as the existing circuits are already in the ground so few circuit installs are required at the majority sites.
- NHSBT benefit from a resource perspective as there will be no WAN migration period required.
- This approach will minimise the impact of wayleave issues which can add significant delays to WAN installations.
- This approach will minimise the impact of excess construction charges as the majority of the WAN network to existing locations is in place.
- Still provides savings in the region of 20% against current recurring charges.

This approach is fully endorsed by NHSBT Procurement who have been instrumental in agreeing this way forward and fully support by Vodafone Commercial.

Vendor Rating for Vodafone
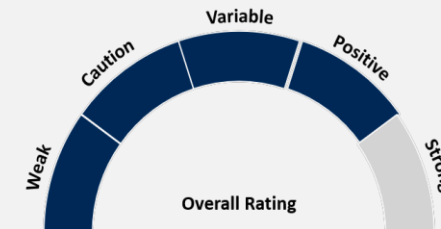
	Weak	Caution	Variable	Positive	Strong
Product/Service					
Support/Account Management					
Pricing Structure					
Technology/Methodology					
Strategy					
Corporate Viability					

Source: Gartner (July 2021)
ID: 744841

Gartner

Section 5: Financial Case

(Is the Preferred Option affordable?)

- Funding Request
- Financial Model

Financial Case – Recurring Costs

What is the funding being requested for the next stage?

- Approval to proceed to FBC for Option 2 (A) of this Outline Business Case – to seek a new contract with Vodafone for a 5-year term.
- Subject to FBC being within a 20% tolerance of OBC seek approval to proceed from the Programme Board and Executive Team without returning NHSBT Board.

Funding the Preferred Option

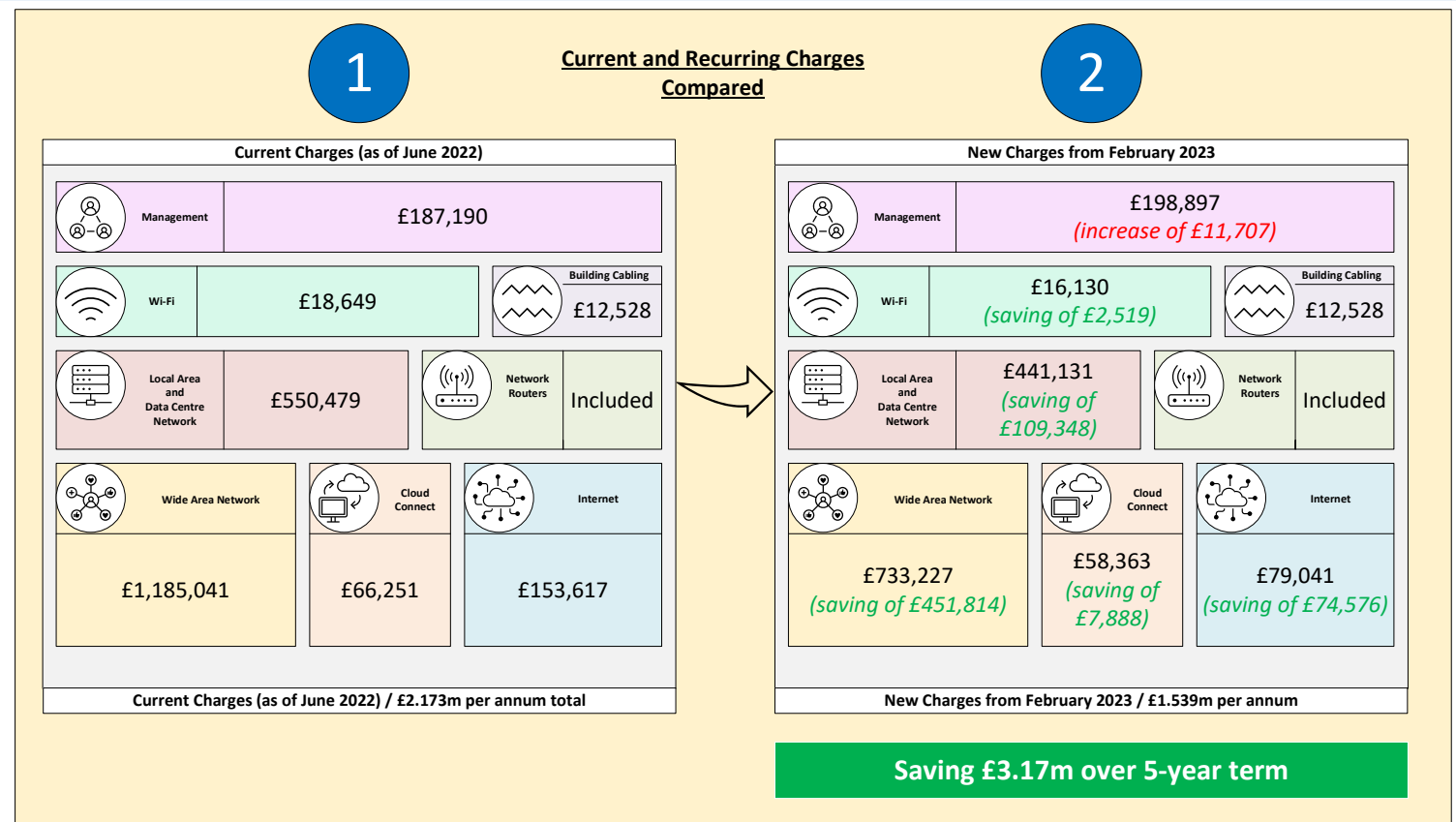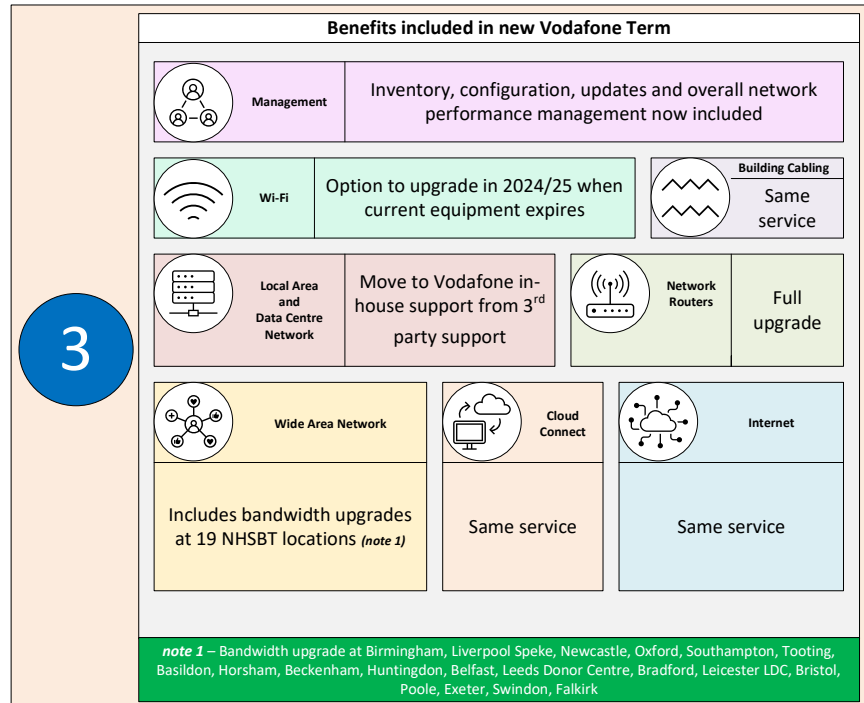- Recurring charges for Connectivity services will be £9.1m inclusive of VAT for the 5-year term.
- **This represents savings of £634k per annum over the 5-year duration of the contract compared to existing baseline costs.**

Benefits included in new Vodafone Term

Management	Inventory, configuration, updates and overall network performance management now included

Wi-Fi	Option to upgrade in 2024/25 when current equipment expires	**Building Cabling**	Same service

Local Area and Data Centre Network	Move to Vodafone in-house support from 3rd party support	**Network Routers**	Full upgrade

Wide Area Network		**Cloud Connect**		**Internet**	
Includes bandwidth upgrades at 19 NHSBT locations *(note 1)*		Same service		Same service	

note 1 – Bandwidth upgrade at Birmingham, Liverpool Speke, Newcastle, Oxford, Southampton, Tooting, Basildon, Horsham, Beckenham, Huntingdon, Belfast, Leeds Donor Centre, Bradford, Leicester LDC, Bristol, Poole, Exeter, Swindon, Falkirk

① Current and Recurring Charges Compared ②

Current Charges (as of June 2022)

Management	£187,190

Wi-Fi	£18,649	Building Cabling	£12,528

Local Area and Data Centre Network	£550,479	Network Routers	Included

Wide Area Network	Cloud Connect	Internet
£1,185,041	£66,251	£153,617

Current Charges (as of June 2022) / £2.173m per annum total

New Charges from February 2023

Management	£198,897 *(increase of £11,707)*

Wi-Fi	£16,130 *(saving of £2,519)*	Building Cabling	£12,528

Local Area and Data Centre Network	£441,131 *(saving of £109,348)*	Network Routers	Included

Wide Area Network	Cloud Connect	Internet
£733,227 *(saving of £451,814)*	£58,363 *(saving of £7,888)*	£79,041 *(saving of £74,576)*

New Charges from February 2023 / £1.539m per annum

Saving £3.17m over 5-year term

Financial Case – One Off Project Delivery Costs

NHS Blood and Transplant

What is the funding being requested for the next stage?

- Approval to proceed to FBC for Option 2 (A) of this Outline Business Case – to seek a new contract with Vodafone for a 5-year term.
- Subject to FBC being within a 20% tolerance of OBC seek approval to proceed from the Programme Board and Executive Team without returning to NHSBT Board.

Funding the Preferred Option

- £2m has been allocated within the Transformation budget, over the next 3 years, to support the one-off project implementation costs.
- Project costs are £2.042m inclusive of VAT within the 2022/23 and 2023/24 Financial Year. An additional 11% optimism bias is excluded from this total. This is included within DDTS forecasts.
- The majority of NHSBT location have legacy and out of support network equipment. This investment refreshes all of this equipment at 88 locations with new Cisco equipment. And means that all local and wide area network equipment at NHSBT locations will be fully supported through until the end of this contract.
- Significant effort has been placed on avoiding high price increases in network equipment due to the worldwide semi-conductor shortages.
- This includes all Vodafone Project management costs but assumes that NHSBT resources would be made available from internal resource pools.
- Upgrade to bandwidth and respective costs for building works to upgrade these circuits are included with the following sites being included within scope for upgrade Basildon, Beckenham, Belfast, Birmingham, Bradford, Bristol, Exeter, Falkirk, Horsham, Hull, Huntingdon, Leeds Donor Centre, Leicester LDC, Liverpool Speke, Newcastle, Oxford, Poole, Southampton, Swindon, Tooting.

4

Capital Project Costs to upgrade Infrastructure

Management / Implementation	£241,452
Wi-Fi	Delay replacement till 2026/27
	Building Cabling — £60K
Local Area Network	£1,357,542
Network Routers	£275,712
Wide Area Network	£108,000
Cloud Connect	No costs
Internet	No costs

Capital Project Costs to upgrade Infrastructure / £2.042m + 11% OB
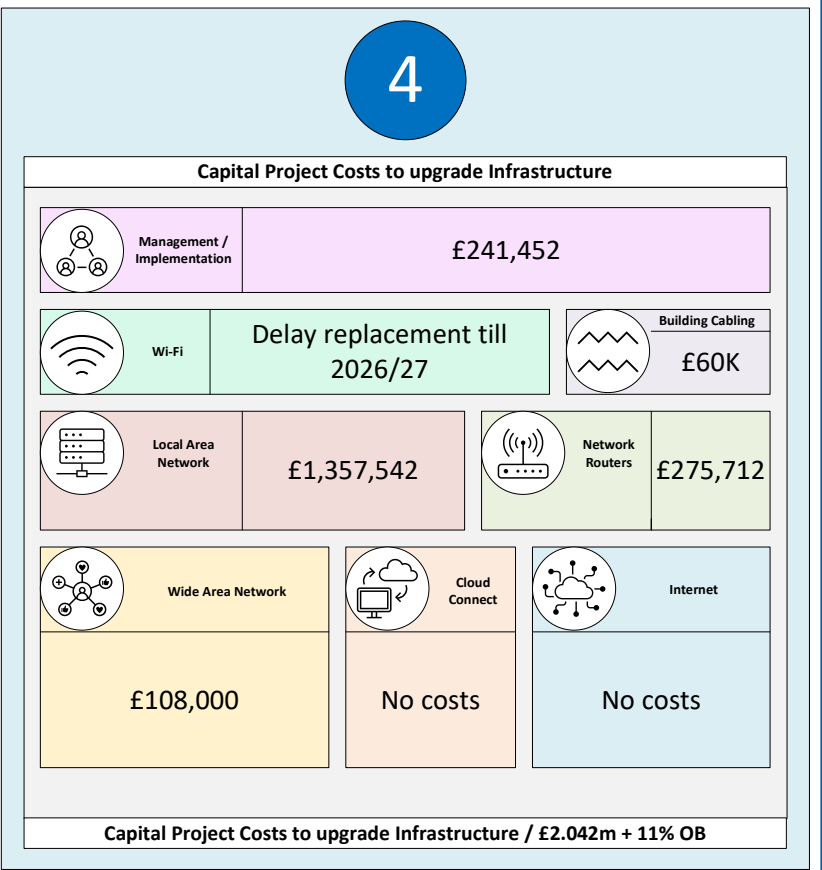
Financial Case – Budget & Funding Model

Phase	Cost Type	Internal Budget / External Funding Stream	Yr1	Yr2	Yr3	Yr4	Yr5	Total
Programme / Project Delivery (Initiation to Closure)	**Sunk Costs**		£0	£0	£0	£0	£0	£0
	Sunk Costs	None	£0	£0	£0	£0	£0	£0
	Cost for the Next Phase (OBC – FBC)		£0	£0	£0	£0	£0	£0
	Recurring	None	£0	£0	£0	£0	£0	£0
	Non-recurring	None	£0	£0	£0	£0	£0	£0
	Capital (external funding)	None	£0	£0	£0	£0	£0	£0
	Cost for Delivery (FBC to Close)		£3,806,723	£0	£0	£0	£0	£3,806,723
	Recurring	Internal	£1,539,319	£0	£0	£0	£0	£0
	Non-recurring	None	£0	£0	£0	£0	£0	£0
	Capital (external funding) (incl. Optimum Bias)	Internal	£2,267,404	£0	£0	£0	£0	£0
	Programme / Project Total		£3,806,723	£0	£0	£0	£0	£3,806,723
Service Costs (Post-Closure)	Recurring	Internal	£0	£1,539,319	£1,539,319	£1,539,319	£1,539,319	£6,157,276
	Non-recurring	None	£0	£0	£0	£0	£0	£0
	Capital (external funding)	Internal	£0	£0	£0	£0	£0	£0
	Service Cost Total		£0	£1,539,319	£1,539,319	£1,539,319	£1,539,319	£6,157,276
TOTAL COST of OWNERSHIP (TCO)			**£3,806,723**	**£1,539,319**	**£1,539,319**	**£1,539,319**	**£1,539,319**	**£9,963,999**

- *Based on the new recurring cost profile, NHSBT will have £634,439 savings per year.*

Governance and Assurance

NHS Blood and Transplant

NHS Blood and Transplant **Executive Team**

Data Centre Critical Infrastructure Programme Board

Sets the Programme Scope
the Strategic Case

Agrees the funding
how the delivery will be paid for

SRO: Wendy Clark, CDIO
Andrew O'Connor, Accountable Executive
Dean Neill, Director Blood
Rob Bradburn, Chief Financial Officer
Adrian Chandler, Procurement
Mark Whelan, Quality
Katherine Sowden, Programme Assurance
Ian Britton, Specialist Services
Dave Lockett, IT Live Services
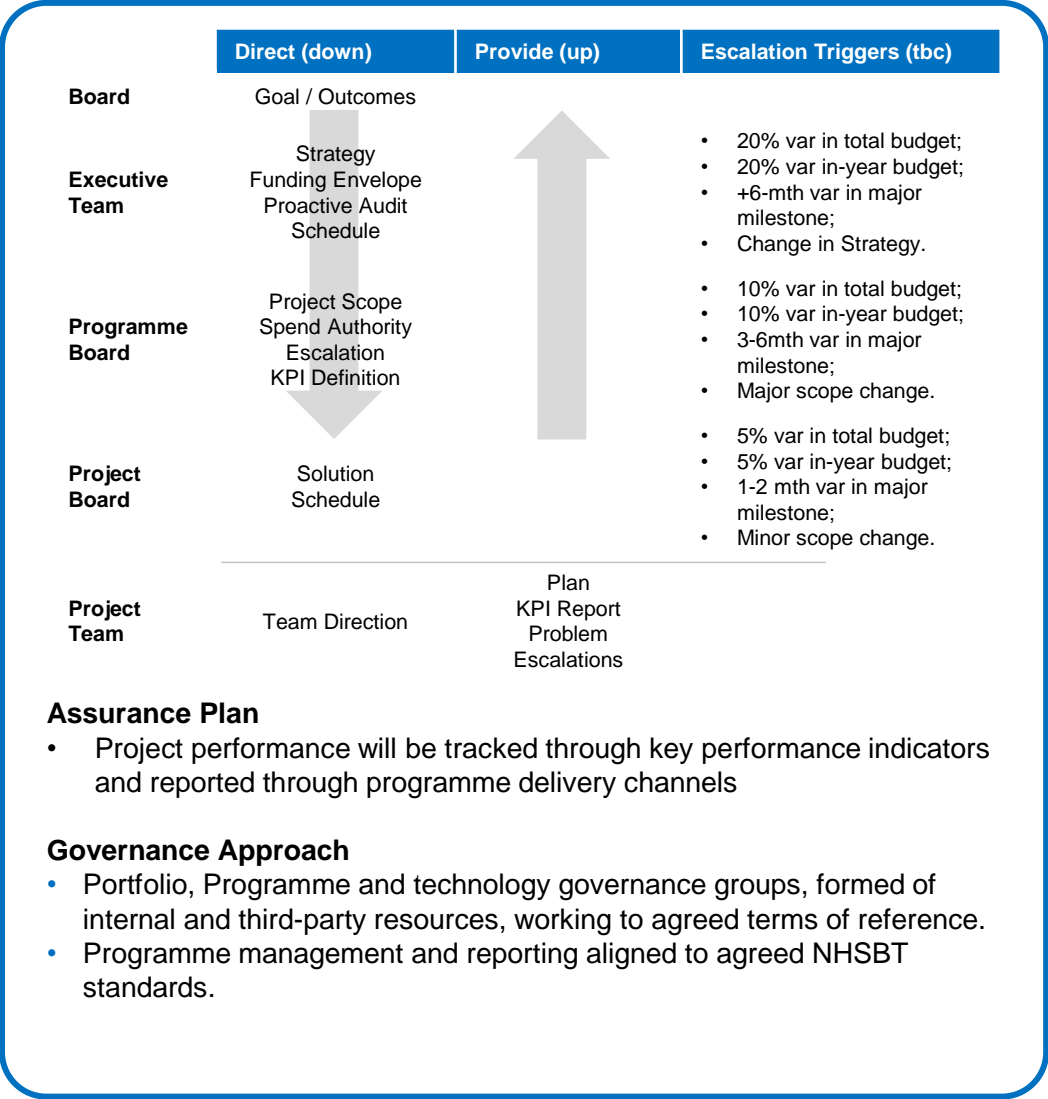Richard Rackham, Business Continuity

Connectivity Project Board

Sets the Solution
how the scope will be delivered

Andrew O'Connor, Accountable Executive
Will Baker, Live Services
Dan Jeffrey, Information Governance and Security
Chris Sims, Financial Lead
John Molloy, Project Manager
Cat Ongers, Portfolio & Programme Manager
TBC, Delivery Lead
Frank Kashoro, Quality Lead
Andrew Reeves, Supplier (Vodafone Account Manager)
Adrian Chandler – Procurement Lead (during Contract delivery)

Connectivity Project Team

Leads and orchestrates
the delivery of the solution

John Molloy, Programme Manager
TBC, Delivery Lead
TBC, Networks Lead
Operations Engineer, TBC (new resource)
Service and Design Lead, TBC (new resource)
CSA resource (supporting Vodafone engineers) – TBC
Vodafone engineers, Project Manager and support team
Ian Roberts – Contracts & Supplier Management Lead

	Direct (down)	Provide (up)	Escalation Triggers (tbc)
Board	Goal / Outcomes		
Executive Team	Strategy Funding Envelope Proactive Audit Schedule		• 20% var in total budget; • 20% var in-year budget; • +6-mth var in major milestone; • Change in Strategy.
Programme Board	Project Scope Spend Authority Escalation KPI Definition		• 10% var in total budget; • 10% var in-year budget; • 3-6mth var in major milestone; • Major scope change.
Project Board	Solution Schedule		• 5% var in total budget; • 5% var in-year budget; • 1-2 mth var in major milestone; • Minor scope change.
Project Team	Team Direction	Plan KPI Report Problem Escalations	

Assurance Plan
• Project performance will be tracked through key performance indicators and reported through programme delivery channels

Governance Approach
• Portfolio, Programme and technology governance groups, formed of internal and third-party resources, working to agreed terms of reference.
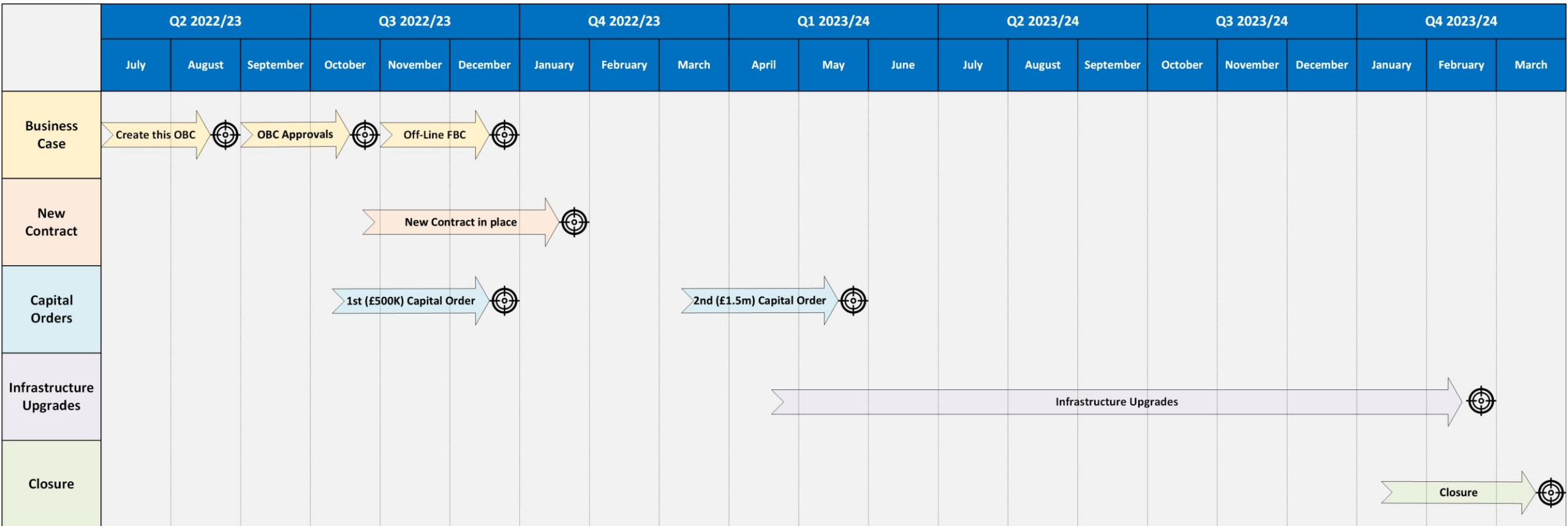• Programme management and reporting aligned to agreed NHSBT standards.

The Management Case:

This project will:

- Secure a new 5-year contract with Vodafone for Connectivity services, based on a like for like approach, whilst ensuring end of life hardware is replaced and bandwidth "hot spots" are remediated.

- Support Vodafone, using a small project team, to ensure least disruption to NHSBT sites during any hardware swap out

- Areas that are covered by the new contract but will not be upgraded during the delivery stage are:
  - Wi-Fi service (the current equipment is in support for 3 years and any replacement will be under a new Business Case but can be procured through the same framework or a competitive tender)
  - Internet circuits
  - Cloud Connect
  - Building cabling

- Contract that allows bandwidth to be added and reduced (with relevant cost reduction) at each NHSBT location and allows for newer technologies to be implemented in year 4 and 5 without incurring cancelation charges.

- The Outline Business Case for this project:
  - Adopts a delivery approach that NHSBT have used successfully before and using lessons learned from the previous project to ensure timescales and costs are in line with the delivery approach.

Management Case - High-Level Programme Plan

	Q2 2022/23			Q3 2022/23			Q4 2022/23			Q1 2023/24			Q2 2023/24			Q3 2023/24			Q4 2023/24		
	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March
Business Case	Create this OBC ⊕		OBC Approvals ⊕		Off-Line FBC ⊕																
New Contract				New Contract in place ⊕																	
Capital Orders			1st (£500K) Capital Order ⊕							2nd (£1.5m) Capital Order ⊕											
Infrastructure Upgrades										Infrastructure Upgrades											⊕
Closure																			Closure		⊕

Management Case - Key RAID Summary

ID	Type	Title	Description	Effect	Inherent Risk Score	Mitigation	Residual Risk Score
1	**Risk**	Resourcing	• NHSBT staff not made available to support the roll out of the new WAN/LAN infrastructure.	• Project is delayed whilst securing resources • Additional costs incurred recruiting contractors	High	• Vodafone will be undertaking the infrastructure swap out. • Internal resources to be approved via the Project Resource Profile process. • Project able to slip without incurring any significant charges/issues.	Low
2	**Risk**	Service Outages	• Unexpected issues arising during Infrastructure upgrades	• Extended Service outages	High	• There will be a staged swap out and the old switch will not be removed until it is confirmed (and validated) that the new switch is working correctly.	Low
3	**Risk**	Requirements Change	• Changes in baseline network requirements influenced by developing and ongoing Infrastructure and Business requirements	• The FBC is based on data which is no longer fully accurate, which may affect the price or transition plan.	High	• Contingency for Microsoft Teams has been built-in to this OBC. • Other requirements should be funded through relevant Business Cases.	Medium
4	**Risk**	Approvals	• Approvals to spend can be given within the required timeframe and funding will be available	• Project would be delayed	Medium	• Savings may no longer be available from Vodafone. • Vodafone reserve the right to terminate the network if an agreement is not in place.	Low
5	**Risk**	Pricing	• Prices for LAN and WAN hardware are quoted via Cisco and in US Dollars, there is a risk that the exchange rate may affect final pricing when ready to purchase	• Costs could increase depending on the exchange rate at time of placing the order for hardware (following FBC approval). This could affect the overall cost profile of the project.	High	• Incorporate contingency for this risk within the cost profile for the project. • Ensure quote is valid for 60 days prior to FBC submission to allow enough time for governance approvals	Medium
6	**Assumption**	Resourcing	• As this project is delivering a mandatory requirement, it is assumed that the project will be able to secure all the BAU resources required due to its high priority.	• Should this not be the case, the costs for resources will increase the overall cost of the project.	High	• Further work will be undertaken between OBC and FBC stage to confirm delivery plan which will assist in determining resource profile required for delivery.	Medium
7	**Assumption**	Requirements	• This project is a contract renewal on like for like terms. It is therefore assumed the requirements from the initial contract are still relevant and meet the needs of NHSBT	• There may be a requirement to amend these in light of changes over the years of the contract.	Medium	• A due diligence workshop will be undertaken with Vodafone between OBC and FBC stage to ensure all requirements are noted and met.	Low

Management Case – Key Dependencies

Description	Impact* (H/M/L)	Impact if not delivered
Outbound: Dependent on this programme – <u>delivering these dependencies will impact this programme's plans**</u>		
None at OBC stage	N/A	*N/A*
Inbound: This programme is dependent on the following:		
Local Infrastructure Programme Assurance that computer rooms at local sites are tidy and cabled correctly to ensure to reduce risk of engineers removing the wrong cables to disrupting service.	M	*Risk of disruption at local site should the wrong cables be removed.*

* Impact on this programme in terms of cost, time and scope L= low, M = medium, H= high
** Delivering these dependencies will have an impact on this programme's time, scope and cost

Appendices:

- Bandwidth "Hot Spots" to be remediated
- Vodafone SLA Adherence

NHS
Blood and Transplant

BANDWIDTH UPGRADE

Vodafone has recommended 20 sites for bandwidth upgrade (whether that is a simple port upgrade or full bearer and router upgrade) as they are currently "running hot":

- Basildon
- Beckenham
- Belfast
- Birmingham
- Bradford
- Bristol
- Exeter
- Falkirk
- Horsham
- Hull

- Huntingdon
- Leeds Donor Centre
- Leicester LDC
- Liverpool Speke
- Newcastle
- Oxford
- Poole
- Southampton
- Swindon
- Tooting

The costs for these upgrades has been included within the costs in the OBC, including the ongoing run costs for the 5-year contract term.

The following sites are being upgraded as part of BAU in 22/23, however the ongoing run costs for the upgrade are included in the recurring costs.

- Ashford Team Base
- Morecombe Team Base

- Park Royal
- Reading

Vodafone – adherence to SLA
SLA Availability 21/22

Service Level	SLA/KPI Target	July 21	August	September	October	November	December	January 22	February	March	April	May	June	July
IP-VPN – Cat A	99.99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
IP-VPN – Cat B	99.95%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
IP-VPN – Cat C	99.80%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
IP-VPN – Cat D	96.60%	100%	100%	100%	100%	100%	100%	100%	100&	100%	100%	100%	96.84%	
STORM (Core Platform Availability)	99.99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
IP-PBX (Call Managers)	99.97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Lyndon Place (LAN Availability)	99.97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Cole Valley (LAN Availability)	99.97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	

Analysis

- All service levels achieved SLA
- No repeat failures
- STORM and Data Centre availability both operated at 100%

Recommendations

Links to corrective action i.e.

- CSIP
- Risk Register