

<b>PROJECT BRIEF</b>	<b>Document Ref &amp; Version No: F0377904 v0.3 Draft</b>
<b>Project:</b> Upgrade Call Manager (aka CUCM) and install new UCS servers	
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**Purpose:**

This document has been produced to capture a “first cut” view of the scope, investment needed, dependencies on other projects and anticipated payback so that the constituent parts of the Project/Programme can be prioritised, funded and authorised. The Project Brief will provide the basis for the Project Authority (Project Board) to decide to authorise the creation of the Project Initiation Document (PID).

**Background:**

The technology to carry voices over computer data networks, referred to as VOIP, ‘Voice Over Internet Protocol’ was first established 25 years ago. Cisco Systems Inc. are the world market leaders in both networking equipment and in the associated communication technologies.

NCC communications use Cisco based networking technologies by default. NCC’s current VOIP system was installed 8years ago and Cisco have announced VOIP system will become unsupported in July 2017. This represents a large risk for NCC. If our current VOIP systems fail citizens will be unable to call NCC. Cisco and our network support partners Capita will no longer support efforts to resurrect the service. This could lead to an extended critical service failure.

Cisco’s dominance of the VOIP market is being challenged, through development of UCaaS (Unified Communications as a Service). UCaaS is supplied as an off-site remote VOIP service. The UCaaS market is developing rapidly with some large providers such as Microsoft’s ‘Skype for Business’ making significant inroads into the VOIP market.

Currently NCC use a combination of CUCM (Cisco Unified Communications Manager) and UCS (Unified Communications server), both elements will shortly become unsupported and so, need to be replaced. CUCM is an IP (Internet Protocol) based communications system, integrating voice, video, data and mobility products. The introduction of IP phones and the allied systems has saved NCC approximately £365K gross revenue savings per year since its inception.<sup>1</sup>

IT Services are recommending NCC upgrade our current Cisco based VOIP systems.

- Financial – Most cost effective VOIP solution for NCC. Estimates suggest implementing Skype for Business as an alternative VOIP system would cost £1.2M.
- Stability. NCC has benefited from stable, reliable VOIP systems for many years. An upgrade to the latest version of our current systems is the lowest risk way of maintaining that service reliability.
- Internal support structures and expertise. NCC’s communications equipment, employed technicians, and recent investments have been directed towards Cisco based products. This helps provide internal technical support, seamless product integration, and communication product assurance.

Cisco only allow specialist network support partners to install and configure CUCM. NCC’s network support partner is Capita PLC. Quotes obtained from Capita estimate this project will cost £781K to achieve

**Objectives:**

- Upgrade Call Manager to the latest version v11.x
- Install and migrate services to a new UCS infrastructure.
- Enhance security. Next generation encryption support.
- Test the newly available functions in CUCM v11.x, and then assess the business value.
  - Automatic provisioning of users
  - Instant Messaging
  - Conference bridge
  - Emergency call management

**Scope:**

- Financial approval and tender.
- Software and Hardware purchase and installation
- Engage Capita and agree the project delivery timescale
- Configuration and testing
- Migration and go-live
- Removal of current MC-S (Media Convergence Servers) infrastructure

**Outline Deliverables (Products):**

- Call Manager v11.x. [CUCM/datasheet-c78-735098.html](#) & [CUCM ver11](#)
  - UCS Server infrastructure. The Cisco Unified Computing System is a server platform composed of computing hardware, virtualization support, switching fabric, and management software. Our current hardware (MC-S7945) cannot support v11 of CUCM. [Cisco - Supported Servers for Releases of CUCM](#)
  - Expansion of call services upon a business request.
  - Functional testing of the new CUCM products.
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**Assumptions:**

- NCC will continue to use Cisco products to fulfil our network needs.
- Partner organisations VOIP requirements such as NCH and NRB will not be included in this project.

**Business Benefits:**

- CUCM v8.5 support from Cisco ceases 31<sup>st</sup> July 2017. NCC must move to maintain service supportability and reliability.
- Business expansion requests for new phones and new sites can be met.
- Purchase of new model VOIP handsets as necessary.
- Improve the user experience and operational efficiency through installation of the new CUCM v11 product features. E.g. automatic provisioning of users.
- Improved data security through use of next generation encryption and security products.
  - TLS 1.2, AES-256 RSA, and ECDSA-based cipher support for Session Initiation Protocol (SIP)
- Emergency Planning improvements. Administrators will be able to define ELIN – (Emergency Location Identification Numbers) for each ERL (Emergency response Location). [Cisco Emergency Responder](#)
- Protection of the £4M investment NCC has already made over the last 5 years in Cisco based networking and VOIP equipment.
- Interoperability with other Cisco based products. E.g Auto QoS, APIC-EM
- IT technical and user re-training requirements kept to a minimum.
- Future projects under consideration will seamlessly integrate with CUCM. E.g., Cisco Unified Contact Centre Express (Unified CCX) required to support the customer.

**Options considered:**

- i) Do Nothing    ii) CUCM - On-Premise    iii) UCaaS

- i) Do Nothing. NCC using an obsolete and unsupported VOIP communications system is considered too high a risk.
- ii) CUCM Cisco Unified Communications Manager. Market leading supplier of on premise UC Systems, our current supplier. Upgrade to the latest version available.
- iii) UCaaS off-site UC systems. E.g. Microsoft - Skype for Business; [Mitel](#) ; [Avaya](#) ;

Gartner Magic Quadrant for Unified Communications



<https://www.gartner.com/doc/reprints?id=1-2KYASDI&ct=150810&st=sb>

**Option1 - Do Nothing**

The current CUCM v8.5 in use at NCC has worked well for 8years, with minor upgrades and configuration changes required to maintain a good and reliable service.

Cisco’s announcement that they are making these products obsolete means if there is an issue IT services will be on their own, with no access to specialist technical expertise, and replacement equipment will no longer be available to purchase.

The ability of the public to phone NCC, and NCC colleagues having the ability to take and receive calls are critical business functions. It is considered too high a risk to leave such an important service on obsolete unsupported equipment.

### Option2 – CUCM upgrade

As above – see business benefits.

### Option3 – Microsoft’s Skype for Business.

A portion of meeting NCC’s UC requirements could be met through moving to a Microsoft UC platform. Office365 products will enable some similar features to those that will become available with a new CUCM product. E.g. Skype for Business, Instant messaging, Video calls.

#### Estimated Costs

##### Skype for Business to replace CUCM - Cost estimate

	<u>Items</u>	<u>£/unit</u>	<u>£</u>
<u>EA Licensing Extension for Skype for business</u>			
o Enterprise Subscription. O365 PlanE5 w/o PSTN Shrd Svr ALNG SU MVL O365PE3 PerUsr -	5,247	104.93	550,568
o Skype for Business - Public Switched Telephone Network. Conf Shrd Svr ALNG SubsVL MVL AddOn to O365 PlanE5	5,247	14.53	76,239
Laptop Headsets/new phones	5,000	50	250,000
New Citrix terminals e.g. Wyse3030	850	250	212,500
Consultancy 100/days			
- Redesign of Solution	100	850	85,000
- Rebuild of Solution			
<u>Other elements to be considered</u>			
Retrain all users (unknown)			
Reconfigure every computer desktop (unknown)			
3 <sup>rd</sup> Party Contact Centre Solution (unknown)			
<b>Total</b>			<b>1,174,307</b>

#### Customer’s Quality Expectations:

- Seamless functionality and switch over process.
- Improved response times to access requests.
- Security of communications

## Financial/Budget Requirements:

Quotes from Capita PLC dated March 2017 form the basis of the financial estimate below.

### UCS Hardware

<u>Qty</u>	<u>Product Description</u>	<u>Unit Cost</u>	<u>Total Cost</u>	<u>Partner Support</u>
2	Cisco Business Edition 7000H Svr (M4), Export Unrestrict SW	£16,147.72	£32,295.44	£567.73
1	Cisco Business Edition 7000M Svr (M4), Export Unrestrict. SW	£8,245.71	£8,245.71	£283.87
			<u>£40,541.15</u>	<u>£851.60</u>

### CUCM Licensing

<u>Qty</u>	<u>Product Description</u>	<u>Unit Cost</u>	<u>Total Cost</u>	<u>Cisco Software Support - SWSS (5yrs)</u>
5000	Support: SWSS UPGRADES CUWL Standard 11.x Users - Service Use O	£97.45		£487,250.00
3300	Migrate Enh UCM + App to UWL Standard Edition 11.x User	£15.03	£49,599.00	
1700	Migrate Enhanced UCM to UWL Standard Edition 11.x User	£37.58	£63,886.00	
410	Upgrade to UC Manager Essential - Less than 1K Users	£4.51	£1,849.10	
410	Support: SWSS UPGRADES Upgrade to UC Manage	£11.70		£4,797.00
25	Upgrade to UC Manager Enhanced - Less than 1K Users	£25.56	£639.00	
25	Support: SWSS UPGRADES Upgrade to UC Manage	£64.32		£1,608.00
2	Cisco Business Edition 7000H Svr (M4), Export Unrestrict SW	£15,055.02	£30,110.04	£795.40
1	Cisco Business Edition 7000M Svr (M4), Export Restricted SW	£7,687.73	£7,687.73	£397.70
			<u>£153,770.87</u>	<u>£494,848.10</u>

### ITT required for the above costs.

### Professional Services (single source – Capita PLC)

<u>Days</u>	<u>Description</u>	<u>Rate</u>	<u>Total</u>
11.5	Lead Project Engineer	£ 775	£ 8,912.5
3.0	Deployment Project Engineer	£ 1,008	£ 3,024.0
8.5	Project Management - Level 1	£ 950	£ 8,075.0
			<u>£ 20,011.50</u>

Hardware Costs	£40,541.15	£851.60	£41,393
Licensing	£153,770.87	£494,848.10	£648,619
Professional Services			£20,012
10% Contingency. These products are priced in \$. It is highly likely that a price increase from Cisco will follow in 2017.			71,000

**Total Cost** £781,024

Once the ITT process is completed, a bid to the IT Efficiency fund will follow.

## Internal Resource Estimates

Server Support - Nil

Database - Nil

Voice & Data

After the approval and procurement stages have been completed

- Detailed planning and agreeing schedule with Capita and the business leads 4weeks 20days
- Install testing and go live - 15weeks 75days

Application Change - Nil

Corporate Systems- Nil

Project Office - PRB/Lynne Taylor

## Technical Design Implications

[http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/cucm/upgrade/11\\_0\\_1/CUCM\\_BK\\_U9\\_7537E5\\_00\\_upgrade-guide-cucm\\_1101/Upgrade\\_planning.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/upgrade/11_0_1/CUCM_BK_U9_7537E5_00_upgrade-guide-cucm_1101/Upgrade_planning.html)

Yes, full technical design discussion and approval required.

## Timing:

Cisco's support for the CUCM v8.5 product and supporting hardware expires July 2017.

## Additional Comment:

Reference <sup>1</sup> - Corporate VoIP Telephony System - EXECUTIVE BOARD – 22<sup>nd</sup> December 2009