To:	**Trust Board**
From:	**John Clarke, Chief Information Officer**
Date:	**27 February 2014**
CQC regulation:	

Title:	**Update on UHL IT infrastructure**

Author/Responsible Director: John Clarke, Chief Information Officer

Purpose of the Report:

This report highlights the work undertaken by UHL and IBM to stabilise the current IT infrastructure and to improve the user experience going forward

The Report is provided to the Board for:

Decision		Discussion	X
Assurance	X	Endorsement	

Summary / Key Points:

Investment has been made in the core infrastructure to ensure we have modern dependable systems on which to build opportunities for change.

We have received significant new central funding to help accelerate our plans to free clinical staff from a PC and embracing a more mobile approach. We have invested in leading edge technology and have won awards and accolades for our proof of concept projects.

There has been a planned delay in the data centre project so we can properly align this with our future strategic needs. We are currently working on this with IBM and NTT and aiming for this to be resolved in June 2014.

Through 2013, we have made significant improvements to our base infrastructure. We have also been successful in bidding for additional external funding support (capital) totalling £4.15m; Safer Wards £2.8m, ePMA £0.7m and Nursing Technology £.65m

The additional funding will help us accelerate our solutions and create an exciting mix of new technologies. At the end of 2014, we will have a modern mobile approach to technology, allowing us to safely blend personal devices alongside corporate devices to maximise both our new telecommunications options as well as the new mobile clinical solutions.

Recommendations:

The Board is asked to discuss/note the

1. The steps taken in 2013/14 with regard to both the quality and support of our infrastructure.

2. The significant effort of colleagues from clinical, financial and IM&T in supporting the development and presentation of bids for funding from the various IT streams held centrally to which we have be extraordinarily successful

3. To note the initial plan for 2014/15 to ensure we will be taking significant steps forward; to revolutionise access to our systems, both within UHL and from outside UHL.

Previously considered at another corporate UHL Committee?

The UHL/IBM working groups

Board Assurance Framework:	**Performance KPIs year to date:**
Yes, part of business continuity	All KPIs for IT infrastructure have been met.

Resource Implications (eg Financial, HR):

This forms part of the IM&T capital plan. Further business cases will be produced to support the printing changes at LRI and LGH.

Assurance Implications: Yes – IG, Security and audit actions

Patient and Public Involvement (PPI) Implications: No

Stakeholder Engagement Implications: Yes, working with partners to share infrastructure

Equality Impact: N/A

Information exempt from Disclosure: No

Requirement for further review? Yes

Updates will be included in the standard Trust Board reporting cycle for IM&T.
There will be the data centre and storage strategy, including a data retention plan that will be ready in June 2014

IT Infrastructure Update

John Clarke
Chief Information Officer

Introduction

This paper provides an update on the key issues surrounding the IT infrastructure at UHL.

The focus for 2013/14 has been around stabilising our current infrastructure. Significant upgrades have happened to key clinical systems, clinical mobility, and investments have been made to we deliver these over a stable network and desktop environment.

The focus for 2014/15 is to increase our mobile capability and deliver an environment that is conducive to creating change opportunities from the use of predictable and sustainable technology.

In 2013/14 we delivered, alongside IBM, improvements in our infrastructure

- 24x7 helpdesk support & improved SLAs
- Improved mobile (corporate) access to UHL resources (email, calendars, dashboards, ED Portal etc)
- Virtual Desktop Proof of Concept (POC) (350 concurrent Users)
- Unified Communications POC
- Hospital 24x7 workflow support
- Clinical Handover POC
- Replacement archive storage
- Cardio PACS Solution
- Anywhere Printing at GH
- Successful bids for funding support (capital)
    - Safer Wards £2.8m
    - ePMA £0.7m
    - Nursing Technology £.65m

In 2014/15 we will be focusing on using the new technology we will have in place to mitigate the current pain points for UHL staff when using our technology

- Desktop Transformation
- Upgrade of the wireless network
    - Free Public Wireless
    - Removal of significant Wireless black spots
    - Extension of Mobile Phone (EE) coverage to black spots
- Increased availability of Mobile Devices
    - The ability to use your own (Bring Your Own Device)
    - The expansion of Apple iOS devices to support the increasing range of mobile clinical solutions

- Increased Availability of Mobile Applications
  - Clinical Handover
  - Nursing solution
  - Unified Communications
- Single-sign-on
- Anywhere printing at LRI and GH (subject to suitable project orders)

Anywhere Connectivity

The “anywhere Connectivity” programme is made up of a suite of projects that is focused on vastly improving the user experience for clinicians and other staff. Key feedback from the Clinical Advisory Group identified both the quality of the Desktops, especially the log on time, the use of smartcards, the amount of passwords required and the availability of sufficient equipment as a key risk.

Desktop Transformation

The desktop transformation programmes objective is to move the reliance away from the desktop and provide this from within the datacentre. We currently have this as a proof of concept which was successful. WE are now building the operational environment and it will be available from April 2014.

The main advantage is how the user interact with the system; a user can remove a smartcard (ours not NPfIT) move to any other machine and log back in (<5 secs) and be back to where were they removed the card. This has key advantages of the current system which limits the use of the computers, limited by the capability to support multiple users, as well has having a significant positive impact on information governance

Single-Sign-On Technology

A key request from the clinical teams was to reduce the number of passwords that they need to use. We currently have 800 users of the single-sign-on system and we have purchased the required licences to cover all clinical staff. We will be re-launching the sign up process, mindful of the risk assessment, to new users in April 2014. An additional benefit of this approach is that users can re-set their own passwords by utilising additional information such as secret questions/answers.

Printing Transformation

We are currently deploying the new printing project at Glenfield. This programme replaces the current printer stock and provides a reliable professional service going forward. There will be one print queue and all users will be able to receive their prints from any of the new printers by means of their smart card. The audits have been completed for the LRI and GH and we are currently awaiting the proposal from IBM to extend the programme to these sites.

Mobile Working

In 2013/14 we invested in mobile clinical solutions; in the main this was through the NerveCenter solution. We will be continuing to improve this solution, the next go-live is the clinical handover tool. The Clinical Handover’s proof of concept project won UHL a national award in 2013 for digital innovation and demonstrated the real advantage of clinically led IT programmes.

We have received additional funding from the Department of Health Safer Wards programme to help us develop both the infrastructure to support mobile working. This will allow us to accelerate our plans and provide a series of opportunities to improve our services.

We have been also successful in securing funding for nursing technology which will further develop the NerveCenter solution to provide a mobile solution to support processes such as nursing observation collection.

Unified Communications

We have been running a pilot in 2013/14 to test the infrastructure and software that will allow use connected devices (tablets, phones, PCs) to communicate across the trust. Part of the funding from the DH Safer Wards funding was to extend this provision across more users. This technology will be available in Q1 2014/15 and will allow users to use there devices as a telephone, instant messaging and video conferencing.

Data Centre

Part of the contract with IBM was the creation of a new modern Data Centre to host the new applications that we will be implementing in UHL. This was a pre-requisite for both EDRM and EPR programmes. However as we are pursuing a proof of concept with EDRM we can wait until the choice of EPR vendor is known. This will allow UHL to tailor the data centre approach to the EPR requirements. The was a small risk that if we had placed this order before the EPR vendor was known we could potentially dis-advantage certain bidder who could not use the original solution or would de-value the investment.

We have designed the optimum data centre solution, based on current known information, and any variance through the EPR programme will reduce the costs. The likely EPR choice will be known in Q1 2014/14 and therefore we will be able to finalise the designs.

Wireless

Over the past few years UHL has made significant investment in it's wireless technology. There is good coverage in clinical areas but there are some known black spots. Some of the access points are close to 7 years old and are obsolete. In 2014 there is a programme, funded from the DH money, to replace some of these and focusing on delivering the mobile applications and unified comms technologies.

As part of the wireless project we will be upgrading the RFID technology we use for tracking high value items in the trust.

Data Storage

We have a key risk in how we manage Data Storage at UHL. We have made a significant investment 5 years ago in storage technology which is now proving expensive to maintain. This is exasperated by the exponential rise in storage requirements. The new imaging modalities have increased of requirements to 4.5Tb of new storage a month. Our storage is almost full; our current cost of

storage, including archives, is c6k/Tb of data so imaging alone is accounting for £27k/Month if we were to continue with our current provider.

There is a project, with IBM and UHL, currently looking at the storage strategy. This has a linkage to the Data Centre project but we will be able to deploy the new storage at UHL if needed. At the same time we are looking at the data retention policy, and its enforcement, at UHL with a view to reducing the current storage

East Midlands PACS Procurement

UHL invest £50k in the EMRad project to look at the collective procurement of a new PACS solution. Our current contract runs until June 2016. The other Trusts in the East Midlands have a more pressing need than UHL to start their migration to a new supplier due to their current implementation. The procurement is looking to create a framework contract and is looking to be completed in June/July 2014. We are not bound to take the solution but significant savings have been identified as well as improved opportunities to work with images across all trusts who take the solution.

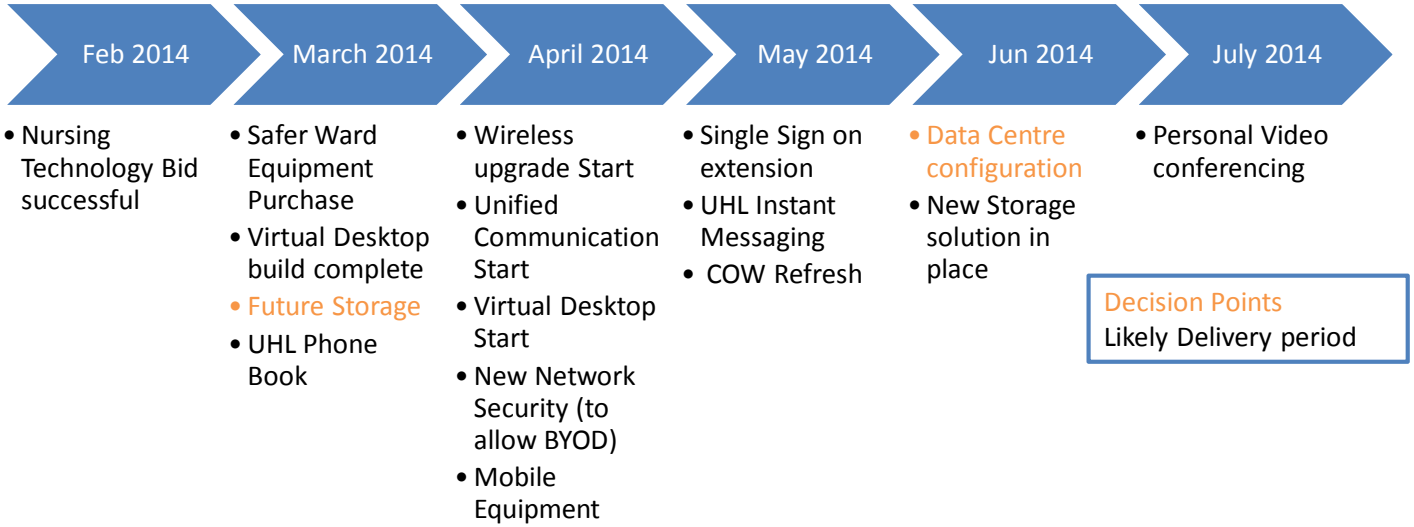
Conclusion

We have taken incremental steps forward in 2013/14 with regard to both the quality and support of our infrastructure.

In 2014/15 we will be taking significant steps forward; we will revolutionise access to our systems, both within UHL and from outside UHL. We will be able to support significant developments of mobile computing. We are continuing to develop, alongside IBM, strategic relationships with key vendors to take advantage of our new infrastructure.

Appendix 1 – Outline Plan

Infrastructure 6 month Timeline



Significant future work 2014/15

Email Replacement
PACS Replacement Procurement (Jun 2016)
Replacement of ICM and roll out to outpatients