Clinical Informatics Annual Plan 2010-11   **Agenda 41/10**

Summary

1. The five-year IM&T Strategy approved by the Board in autumn 2008 is being delivered through a series of annual IT implementation plans. These set out the actions required to deliver the strategy and support the Trust's clinical and business processes going forward.

2. This paper details the implementation plan for 2010 /11 with its focus on the national priorities of Quality, Innovation, Productivity and Prevention (QIPP). These are:

   - **To connect all -**To support the empowering of patients and staff, to drive improvements in health services and to increase productivity, the national focus is on identifying and making use of familiar technologies which will enable people to use their preferred communication channels to access health services and to connect people

   - **To support new models of care -** Innovative use of new and emerging technology and systems design should be used to challenge and transform existing models of care and self-care, and to support the radical thinking required for delivery of QIPP.

   - **To impact transition costs-**-Effective use of technology can make a significant impact on costs, by removing geography and time constraints and delivering transactions online thus increasing convenience, cutting out the middle person and shortening the supply chain.

   - **To integrate Planning and performance-**The Clinical Informatics plan aims to support the delivery of key national policies, as well as regional and local initiatives through the development of integrated and service-driven information architecture.

3. We are charged with moving from a 'replace all' to a 'connect all philosophy'. In order to achieve and sustain this we must build a robust and effective local technical infrastructure with the technical readiness to underpin higher-level informatics programmes and support service transformation.

4. The work programme for the year includes improvements to the Trust network and infrastructure and recommends that they be implemented over the next two years *(appendix A)*.

5. The programme also suggests further improvement and development in key areas in order that a sound foundation is built for future implementation of particular systems and technologies to support patient care and service redesign *(appendix B).*

6. The resounding message from clinicians is that although the introduction of new systems significantly improves patient care, it is becoming increasingly cumbersome and time consuming to log onto multiple applications. This year's programme introduces technology to support the principals of 'connecting all '' which aims to make life easier for clinicians and improve patient safety and confidentiality. Central to this are systems that enable the sharing of images, test results and data locally and across health care boundaries in a safe and encrypted environment *(appendices B & C).*

Programme of Work 2010 - 11

7. The programme is sub divided into five work areas:
   - Technical Infrastructure
   - Service Developments and Patient Care
   - National Initiatives
   - Information Management
   - Information Governance

8. These are considered in more detail below.

<u>Technical Infrastructure</u>

9. A robust technical infrastructure requires appropriate current technology able to support the needs of local, regional and national programmes and the expectations of the national QIPP vision. The Trusts' current infrastructure is placing growing constraints on its ability to achieve this aim and in turn increasing clinical and business risks.   There are two immediate needs which must be addressed:
   - To update (and continue to maintain) the desktop equipment (PCs) that provide the access to all trust systems for staff users
   - To update network switching equipment enabling implementation of modern networking protocols which will support newer technologies such as video conferencing

10. The IT technical programme contains a number of key projects which ensure provision of an infrastructure capable of meeting current and future demands. It includes projects to enable more efficient use of technology with lower environmental impact e.g. server virtualisation.

11. The key projects relating to Infrastructure, network strategy and server management are summarised below*:*
    - **Desk top hardware refresh** – in order to address the aging desk top issues a leasing option has been considered. We have been unable to progress this because of the significant revenue impact which the Trust is unable to absorb and the excess costs which will arise from our continued rationalisation of services and accommodation. This is currently absorbed in house with limited ad hoc support but considerably increases the costs of the leasing option such that it is significantly more expensive than the in-house / capital spend approach. The 2010-11 Plan will involve a rolling programme of desk top replacement resulting in the upgrade of all Trust PCs to Windows XP and 2007
    - **Network refresh** –The St Albans network requires upgrading and the current Cisco technology is expensive to procure and maintain
    - **Server virtualisation** – consolidation of many servers into one virtual server pool will reduce long term costs of replacing old servers, energy use and the carbon footprint. This project will be taken forward as part of the ongoing reconfiguration of the Hemel site.
    - **Disaster recovery and business continuity** – The Trust is tendering for a server room disaster recovery service and work is ongoing to ensure business continuity is in place for all Trust networked systems.
    - **Server room hosting and relocation**- the Watford server room is being reconfigured to consolidate the PACS server room in the main maternity block.
    - **Additional projects seen as essential for the Trust's future development are:**
    - **NHS mail** – the plan is to work towards migration as existing email systems approaches end of life over the next 2 to 3 years

- **Remote access** - This would provide home working facilities for staff. This project would provide an SSL VPN solution capable of providing a large number of staff with the ability to work from home or from an external location as long as there is an internet connection.

- **Renewal of the Antivirus and content filtering software** embracing the EoE Sophos framework agreement. This will enable the Trust to reduce the licence renewal costs for both Antivirus and content filtering software until March 31 2015

N.B. *A comprehensive list of all the Technical Infrastructure projects including delivery timescales and costs is in **appendix A***

Service Development and Patient care - New Initiatives

12. The aim is to develop existing clinical and business systems to support improved quality and productivity and thereby enable more efficient and cost effective work processes and service redesign.

13. Work streams are primarily focused on continued delivery of systems that will enhance/improve the quality of patient care by providing clinicians with the tools to record and monitor their practice. The resounding message from clinicians is that it is becoming increasingly cumbersome and time consuming to log onto multiple applications.

14. The introduction of technologies supporting the principals of *'connecting all* 'plus making life easier for clinicians and improving patient safety and confidentiality include:

- Single sign on
- Patient context management
- Image sharing
- Electronic discharges and email transfer to GP's

15. All the above will help to streamline workflows, speed up processes, and so improve through-put and efficiency. Single sign-on should also reduce pressure on the IT helpdesk by decreasing the number of password reset calls.

Service Development and Patient care - Projects carried over from 2009/10

16. A number of the key 2009/10 work streams had a 2 year timeframe and these continue into 2010/11. 2009/10 work streams included in this years work programme are:

- Bed management System (BMS)-Trust wide roll-out
- TheatreMan upgrade
- Anglia ICE -Order communications and results reporting (OCM)-Trust wide
- PACS version 2
- Chemo e-prescribing
- Pathology system replacement

17. The success of the work programme relies on provision of adequate IT Training and communication to ensure that the benefits are fully realised and services improved. A prerequisite of the development of an electronically managed bed system and improved information is real time data entry by all staff as the activity occurs. This requires a rolling programme of training and support for both clinical and non-clinical staff.

18. The IT plan recognises current financial constrains of the Trust and aims to address some of the training issues by:

- Introducing web based e-learning tools to support data quality and basic skills training delivery.

- Requiring that all business cases reviewed by IT include technical, assessment, training, business change, process redesign and benefits realisation.
- Engaging with the divisional leads for all IT application projects to support the delivery programme thereby ensuring local ownership of the applications /information and full benefits realisation.

*N.B. A comprehensive list of all the Information management projects including delivery timescales and cost is in **appendix B***

<u>National initiatives</u>

19. A new direction for the National Programme for IT has been agreed which will give the NHS more involvement in decision-making with respect to scope and timing of implementations.

20. PCTs, supported by Strategic Health Authorities (SHAs), will continue to lead the local health informatics agenda: ensuring understanding and ownership by senior management and clinical leaders; expediting deployment of centrally and regionally provided applications; maximising utilisation and benefits realisation from informatics investments; and tracking the costs and benefits from these investments appropriately.

21. The main work streams for 2010/11 are:

- Registration Authority – smart card deployment
- Picture Archiving and Communications Systems (PAC's) Release 2
- Sharing portal
- NHS Number DSCN 32/2008

22. These are considered in more detail below.

Registration Authority (RA)

23. Connecting for Health deployments require staff to use 'smart cards' to access national systems. Smart cards, certificates and PIN numbers must be maintained to allow user's access to systems at all times. Systems either in use or being deployed in the Trust requiring smart cards include:

- SystmOne
- Choose and Book
- PACS version 2
- Secondary User Services (SUS)
- Electronic Staff Record (ESR) Online Learning Management system

PACS V2

24. PAC's v2 phase 2 is the next step towards a fully NHS compliant PACS system for securely managing patient image data which will be concluded by the LSP PACS LRS Release covering concepts such as Legitimate Relationships and Patient Consent.

25. This will address currently experience storage issues by upgrading the existing PACS to the spine compliant Version 2 and requires smart card access .It will also enable the Trust to link to the National Data Store and have the refresh of the current PACS work stations purchase within the contract.

Image Sharing Portal (IEP)

26. The introduction of (PACS) across the NHS has created the need for the sharing of DICOM images between Trusts to support patient care pathways. This is of special importance in the case of emergency transfers to tertiary care, but is also used to support other tertiary referrals and MDT referrals between Trusts. In the pre-PACS environment, this was achieved through the sending of hard-copy films.

27. In the absence of the promised "national" solution for image sharing the Trust is taking advantage of Strategic Health Authority financial assistance in the funding of an interim solution, the Image Exchange Portal (IEP).

   NHS number DSCN 32/2008

28. This challenges all NHS organisations to;

   - Support and enable the mandated use of the NHS Number as set out in the NHS Operating Framework 2008/9 and 2009/10
   - Use the NHS Number (and its bar-coded equivalent) in/on all correspondence, notes, patient wristbands and patient care systems to support accuracy in identifying patients and linking records.
   - Put processes in place to ensure that patients can know their own NHS Number and are encouraged to make a note of it (for example through patient literature that explains the NHS Number, its uses and advantages, and how patients can use it to increase safety).

29. *N.B the projects supporting the above work streams with estimated delivery timescales and possible costs are in **appendix C***

Information management

30. Robust and clinically driven information systems are a key requisite of management and governance. Information/data warehouse reporting is supported by improvements to the existing warehouse suite and the coming year will require on-going ad hoc development of WhichDr and the commissioning of bespoke programmes to enable:

   - Data Quality Development - WhichDr
   - PAS upgrade stage 3 - InfoCom to a SQL platform with the need to update/rewrite feeds from Infocom to the data warehouse
   - New developments on Infoflex - interfacing to the data warehouse eg: Bed Management
   - CMiS interface- Maternity feeds to the data warehouse
   - New TheatreMan interface- pulling data to Prodacapo (to support Service Line Reporting) and the data warehouse
   - New Pathology System - feeds to data warehouse.
   - Clinical Support new therapies system - feeds to data warehouse

31. N.B. *A comprehensive list of all the Information management projects including delivery timescales and costs is in **appendix D***

Information Governance

32. Information Governance is also high on the agenda. To maintain connectivity to national applications and the national 'N3' network we must meet national standards for IT Security, corporate records management and strategy. These are assessed through the national Information Governance Toolkit and the associated Statement of Compliance (SOC). Whilst the Trust is currently compliant standards are rising, and it is expected that the 2010-11 IG Toolkit will dictate priorities in this area.

33. The next version of the IG Toolkit is not due to be released until July 2010. In the interim we will continue work based on 2009/10 priorities. These are:
   - Implement the Corporate Records Management Policy - complete the audit and inventory of Corporate Record keeping (paper and electronic).
   - Developing an Information Risk Management framework - support the Senior Information Responsible Officer and meet IG 301.

- Develop and implement the NHS Number Standard for Secondary Care -to meet IG 401.
- Pseudonymisation Implementation Project – Enabling the NHS to undertake secondary use of patient data in a legal, safe and secure manner by April 2011.

Financial Implications

34. It is recognised that the success of the Clinical Informatics programme relies on the availability of resource supported by capital and revenue funding.

35. Whilst the Capital programme is already significantly over committed the urgent need to refresh the Trust's aging desktop hardware and operating systems must take precedence over other infrastructure upgrades .This coupled with planned capital allocation in the region £2.6 million for the new pathology system and £66,000 to upgrade PAC's has added to the pressures. (Financial summary - appendix E).

36. At the same time the need to implement cost effective disaster recovery for the Trust server rooms and upgrade anti virus software cannot be ignored .Delivering national applications adds the requirement to implement new and resource heavy RA work streams and there is a Trust Board commitment to deploy Single Sign-on and Clinical Context Management.

37. These place additional pressures on the Clinical Informatics revenue budgets. Funding will be dependant on robust and realistic business cases that include business change and benefit realisation signed up to and owned by all the relevant stakeholders across the Trust.

38. Summary

39. The Clinical Informatics Annual Plan for 2010-11 reflects both the strategic direction set out in the Five Year Plan agreed by the board in 2008, national priorities and initiatives, and the evolving clinical and business needs of the trust. Improvements to the IT infrastructure will take place during the year aimed at ensuring that system developments can be taken forward as planned. Further related schemes are planned for subsequent years and initial work will be taken forward on these.

40. The work programme for the year inevitably reflects the pressures on the Trust's capital and revenue budgets. However, essential work on the IT infrastructure and replacement and development of major systems will be delivered during the year.

The Trust board is asked to note and approve this Plan.

Nick Evans
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March 2010