# Walsall Healthcare NHS Trust

# Information Communication and Technology Strategy

# 2013-2018

## Document Title

# Information Communication and Technology Strategy

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| **0.7 Update** | | Updated strategic context and Lorenzo as system of choice |

## Link with External Standards

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## Key Dates

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**INTRODUCTION**

Walsall Healthcare is committed to improving the quality and value of its services in Walsall. The infrastructure and management resources have recently been strengthened to support its objectives and, while investment is already delivering significant gains, there is still much to do.

Walsall Healthcare's vision statement is:

**To provide first class, integrated health services for the people we serve in the right place at the right time.**
*First class means we deliver good patient experience, Safe, High Quality Services through services that are organised around the patient and that deliver good use of available resources.*

Our strategy for delivering the vision is:

| |
|---|
| 1. First Class Patient Experience |
| 2. Safe, High Quality Services |
| 3. Integrated Care |
| 4. An Engaged & Empowered Workforce |
| 5. Good Use of Resources |
| 6. An Effective NHS FT |

Based upon the current backdrop of the NHS as a whole, national and local strategic and operational drivers and pressures, we have identified the need to re-define our Information Communications and Technology (ICT) strategy. This is in recognition of the need to ensure that fit for purpose solutions are in place that underpins the strategic, operation and management of our activities whilst providing opportunities to innovate within a managed risk framework.

As the Information Management & Technology (IM&T) agenda unfolds both nationally (largely as a result of the National Programme for Information Technology - [NPfIT]) and locally (in particular, the need to replace ageing critical legacy systems) there is an urgent need for us to develop, approve and implement an over-arching strategy that takes full account of the following:

- Support Walsall Healthcare's Integrated Business Plan
- Implementation of the Service Development Strategy
- Support the QIPP Agenda
- Future development to support the business processes of the organisation, e.g. Payment by Results (PbR), C(QUIN) and Key Performance Indicator (KPI) reporting i.e. the Corporate Dashboard's

- The development of an integrated strategy for all core systems post Transforming Community Services
- The requirements of NHS Connecting for Health (an agency of the Department of Health) and associated committed system deployments, e.g. Lorenzo
- Future developments to support improvements in patient care and integration.
- Further integration of various IT systems – clinical and non-clinical
- The organisational and operational relationship that will provide for the optimum model for disaster recovery whilst ensuring appropriate levels of business continuity are maintained for all business critical systems.

In addition to the more general requirements listed above, there are a number of specific local drivers linked to the need to replace existing legacy systems and deployments of national solutions that are already underway. These include:

- The Patient Administration System to replace the aging McKesson STAR (Acute based services) contract which expires in March 2014 and i.PM (Community based services) – Lorenzo will be the system to replace these to support the requirements of a fully integrated healthcare provider

- Picture Archiving and Communication System (PACS) – where the current national contract expires in 2014 and where options are currently under consideration.

## INFORMATICS VISION

The effective use of information, communications and technology is a key component of delivering Walsall Healthcare's overall vision and is essential in:

- Supporting clinical decision-making
- Measuring quality and performance
- Informing effective service planning
- Delivering efficient and cost effective business support processes.

Our informatics vision statement is:

*"To fully utilise and maximise technology in the delivery of the safe high quality services that are fully integrated to provide a first class patient experience"*

We will create a vibrant and innovative environment where all those who work for Walsall Healthcare and our partners in the health community, are empowered and expect to use IT systems as naturally as they would use pen and paper or printed records, reducing duplication and improving quality.

Clinicians will have the accurate information they need, when and where they need it, to make optimal decisions, enhancing patient care. Patients will experience a smooth, timely and safe journey along a care pathway, free of repeated requests for the same information.

In addition, technology and devices throughout the IT industry are being developed and matured at a rapid pace. It is essential that the Informatics Service is innovative,

keeps abreast of and implements 'new ways of working', whilst recognising that 'all that glitters is not gold'.

The strategy is set within the context of:

- Walsall Healthcare's Integrated Business Plan
- Clinical and Quality Strategy
- Achievement of NHS Foundation Trust status
- NHS Operating Framework
- The Power of Information: putting all of us in control of the health and care information we need
- Equity and excellence: Liberating the NHS
- NHS Information Revolution
- Changing Commissioning Arrangements
- Connecting for Health (CfH) Programme
- Choose and Book and Patient Choice
- Clinical Governance and Clinical Negligence Scheme for Trusts (CNST)
- Human Resources (HR) Strategy and Electronic Staff Record (ESR) Development.


## EXTERNAL DRIVERS

### Wider NHS Context

The national context set out in High Quality Care for All directs the NHS to place quality at the heart of everything that it does. The key objectives of a quality service are better patient experience, best effective care and improved patient safety, delivered through initiatives that encompass Quality, Innovation, Productivity and Prevention (QIPP).

The *NHS 2010–2015: from good to great* and *The Operating Framework for the NHS in England 2011/12*  identified specific areas requiring accelerated performance through transformation including long term conditions, cancer, cardiac care, stroke care and maternity care. The general direction is to prevent people getting ill, focusing on obesity, drugs and alcohol and to treat patients close to their home, in the community or primary care but avoiding secondary care services where possible. Patients are to be empowered through the NHS Constitution and have rights where previously they had expectations. Care will be personalised around the patient's needs and not at the convenience of the healthcare institution. The NHS must make these changes and continuous improvements without further additional funding, finding the required £15-20 billion from efficiencies over the next three years. The response to meeting the national strategic objectives is set out in the Trust's Strategic Vision and Integrated Business Plan.

*Power of Information:* This strategy sets a ten-year framework for transforming information for health and care. It aims to harness information and new technologies to achieve higher quality care and improve outcomes for patients and service users. Underpinned by the Health and Social Care Act 2012, it covers public health, healthcare and social care in adult and children's services in England.

This strategy sets the following ambitions:

- Information used to drive integrated care across the entire health and social care sector, both within and between organisations;
- Information regarded as a health and care service in its own right for us all – with appropriate support in using information available for those who need it, so that information benefits everyone and helps reduce inequalities;
- A change in culture and mindset, in which our health and care professionals, organisations and systems recognise that information in our own care records is fundamentally about us – so that it becomes normal for us to access our own records easily;
- Information recorded once, at our first contact with professional staff, and shared securely between those providing our care – supported by consistent use of information standards that enable data to flow (interoperability) between systems whilst keeping our confidential information safe and secure;
- Our electronic care records progressively become the source for core information used to improve our care, improve services and to inform research, etc. –reducing bureaucratic data collections and enabling us to measure quality;
- A culture of transparency, where access to high-quality, evidence-based information about services and the quality of care held by Government and health and care services is openly and easily available to us all;
- An information-led culture where all health and care professionals – and local bodies whose policies influence our health, such as local councils – take responsibility for recording, sharing and using information to improve our care.
- The widespread use of modern technology to make health and care services more convenient, accessible and efficient;
- An information system built on innovative and integrated solutions and local decision-making, within a framework of national standards that ensure information can move freely, safely, and securely around the system.

**Connecting for Health (CfH Programme)**

The Connecting for Health Programme established an external context for this strategy. NHS Connecting for Health, which came into operation on 1 April 2005, is an agency of the Department of Health. Its purpose is to deliver the National Programme for IT, and to maintain the national critical business systems in order to enable clinicians and other NHS staff to increase their efficiency and effectiveness.

It is doing this by:

- creating an NHS Care Records Service to improve the sharing of patients' records across the NHS with their consent
- making it easier and faster for GPs and other primary care staff to book hospital appointments for patients
- providing a system for the electronic transmission of prescriptions
- ensuring that the IT infrastructure can meet NHS needs now and in the future.

Walsall Healthcare's previous strategy was written with the assumption that it would take the national offering that was procured on behalf of the NHS. We have spent

considerable time and effort preparing for this. We have evaluating this option and embedded in the strategic and operational direction.

**INTERNAL DRIVERS**

There are a series of internal drivers sitting behind the development of this strategy, namely our six strategic imperatives:

**First Class Patient Experience**
- Individualised care & personal choices
- Creating emotional connections to little things that make a difference
- Engagement with local community
- Responsive to patient priorities

**Safe, High Quality Services**
- No longer middle of the pack
- Consistent evidence-based solutions & high standards in all services
- Improved care for older people, dementia support and end of life care
- Improvements in key pathways

**Integrated Care**
- Radically different model of integrated care
- Designed & driven by front-line teams
- Multi-agency partnership approach
- Shift of care closer to home (hospital breaking out into the community)

**An Engaged & Empowered Workforce**
- Front line clinical leaders responsible for continuous improvement
- Shared identity, standards & sense of team across the whole of Walsall Healthcare
- Praise for achievements & efforts
- Leadership that engages & empowers
- Responsive to front line priorities

**Good Use of Resources**
- Resourcing aligned to clinical strategy
- High levels of efficiency (including patient flow, outputs, theatres)
- Leaner central functions & fewer layers
- Sustainable delivery of CIP & surplus

**An Effective NHS Foundation Trust**
- Well governed organisation putting patients at heart of decision-making
- Delivering on the promises we make
- Strong supporting strategies including this overarching informatics strategy
- Sustainable future as a Foundation Trust

These pose a significant challenge and therefore we need to ensure our responses are well developed, planned, adequately resourced and efficiently executed. Informatics is seen as a key enabler in delivering a successfully implemented cost improvement programme. These are described and addressed below.

**WHERE ARE WE NOW?**

**Setting the Scene**

Informatics is delivered by a shared service covering the Local Health Economy. The Informatics Directorate was created in 1998 and has delivered significant benefit to service users. A review of the directorate and its future structure has been completed. The existence of shared service arrangements has enabled the development of a clinical portal, "FUSION". During the time of the last informatics strategy, the user base of the clinical portal "Fusion" has risen from 800 users to over 3000 users, making this the centre to a clinician's everyday life. Taking into account Information security measures, other organisations can access the information making this an attractive proposition for our partnerships and customers. A&E and ward areas are able to manage the workflow through applications such as A&E Whiteboard and VISION. Specialised services are alerted in respect to patients being admitted to hospital therefore improving the care around the patient and reducing unnecessary community attendances and informing the correct specialised service that a patient has a particular condition. Correspondence is through the Fusion Electronic Discharge Summary functionality and is available to GPs as soon as the patient is discharged from Walsall Healthcare Inpatient episode. The use of Fusion transcends organisations and geographical boundaries. It is used in social care, in other NHS Trusts and GP surgeries outside the Walsall area.

A review of all existing national and local informatics projects has recently been completed as part of developing this strategy and identifies 75 'strategic tasks and projects' required to meet our requirements The review provides a clear picture of the Informatics role in the transformation and modernisation of Walsall Healthcare and this is being managed through the Information Executive Group (IEG). Historically, the feeling within Walsall Healthcare has been that projects to improve IT are put forward but 'little happens' or happens but with little benefit. The importance of this Information Executive and the responsibility of its membership are vital to the identification, clinical engagement and alignment with our objectives and successful delivery of Information and Technology solutions.

There are significant challenges given the financial climate and changes in the technological landscape with the introduction of telehealth, telecare and telemedicine into the market along with the future workforce demands, all of which will require prioritisation through IEG.

The roadmap for Informatics shared service is moving host organisations from NHS Walsall to Walsall Healthcare, with service level agreements between us as providers to continue supporting our local Walsall Clinical Commissioning Group (CCG)

**Our Success Stories**

The review shows that considerable progress has been made improving both IT systems and integrating a Clinical Portal (Fusion), now recognised as one of Walsall Healthcare's unique selling points as it transcends all care settings (GP, Community, Acute, Social Care, Tertiary and partners/organisations outside of Walsall). The other developments include a community wide Wi-fi infrastructure, capacity management

(VISION), Electronic Discharge Summaries, Order Communications of requests from GPs to Acute, Frail Elderly Virtual Ward, new Pharmacy system, new Radiology system, Picture Archiving and Communication (PACS) system, Therapies system, Maternity system (expected December 2012, Endoscopy system, various pathways and all integrated into the Fusion (Clinical Portal) providing a patient centric view of information.

## WHERE ARE WE GOING?

Following a consultation period during summer 2011 which included business, clinical and technical representation, these have been reviewed in early 2013 and it was agreed that the primary objectives are to:

1) Achieve transformation in the way information is perceived, managed and used
2) Improve workflow by entering data only once and eradicating as much paper as possible
3) Ensure all staff have access to and receive the training they need to make effective use of technology
4) Focus on the provision of first class clinical care of patients, using integrated care and enhanced care pathways
5) Make more effective use of technology in the delivery of patient care
6) More access to information through new workstations and other mobile devices
7) Integrate information systems and business processes related to the procurement and management of IT systems and infrastructure; reduce costs and duplication
8) Embed a culture of data accountability; ensuring staff take responsibility for information within IT Systems and ensuring that data is kept safe
9) Ensure the Trust is fully prepared for Foundation Trust status
10) Continue and enhance the successful partnership arrangements with primary care, social care and other partner organisations.

## Electronic Patient Record

Walsall Healthcare is one of the leaders in Electronic Patient Record (EPR) development and now needs to focus on defining the record and deliver a scanning solution by 2015 but moving to a full EPR with full electronic data capture over the next five years with Lorenzo being the central in the delivery of this.
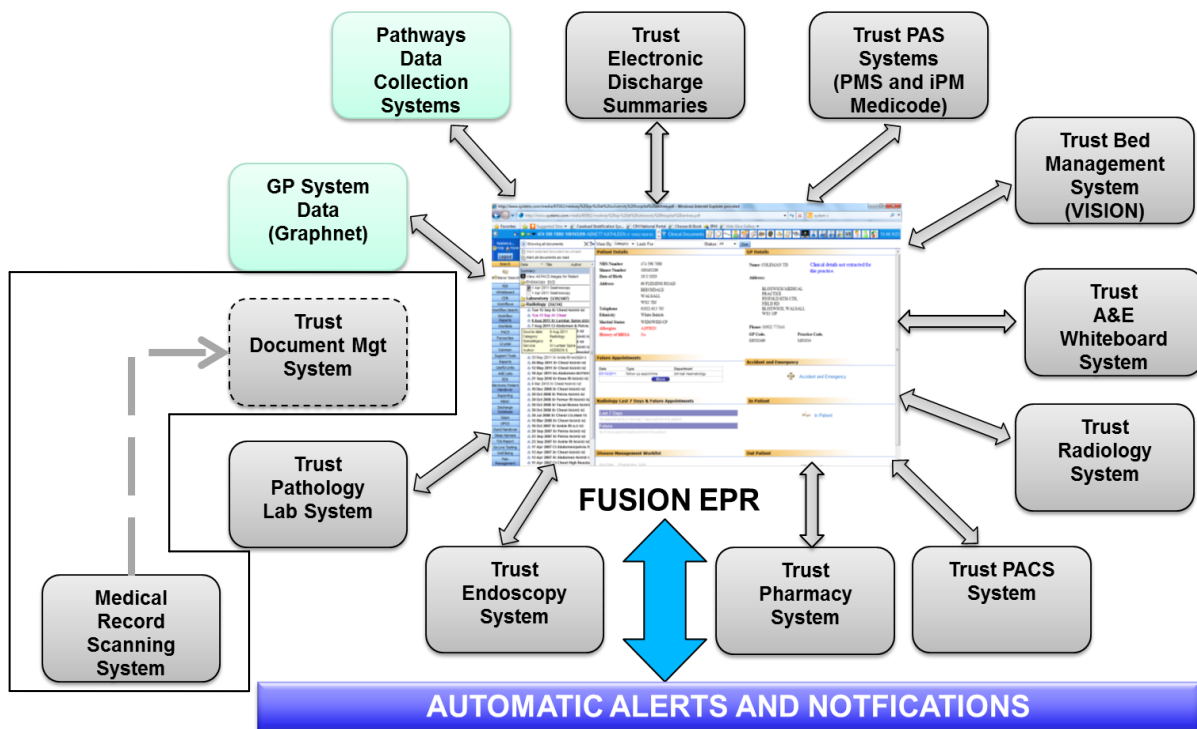
This full Electronic Patient Record (FEPR) is an evolving concept defined as a systematic collection of electronic health information about individual patients or populations. It is a record in digital format that is capable of being shared across different health care settings, by being embedded in network-connected enterprise-wide information systems. EPR may include a whole range of data in comprehensive or summary form, including demographics, medical history, medication and allergies, immunisation status, laboratory test results, radiology images, vital signs, personal statistics like age/weight with integrated pathways and decision support (see Figures 1 and 2).

## Figure 1 – EPR Vision
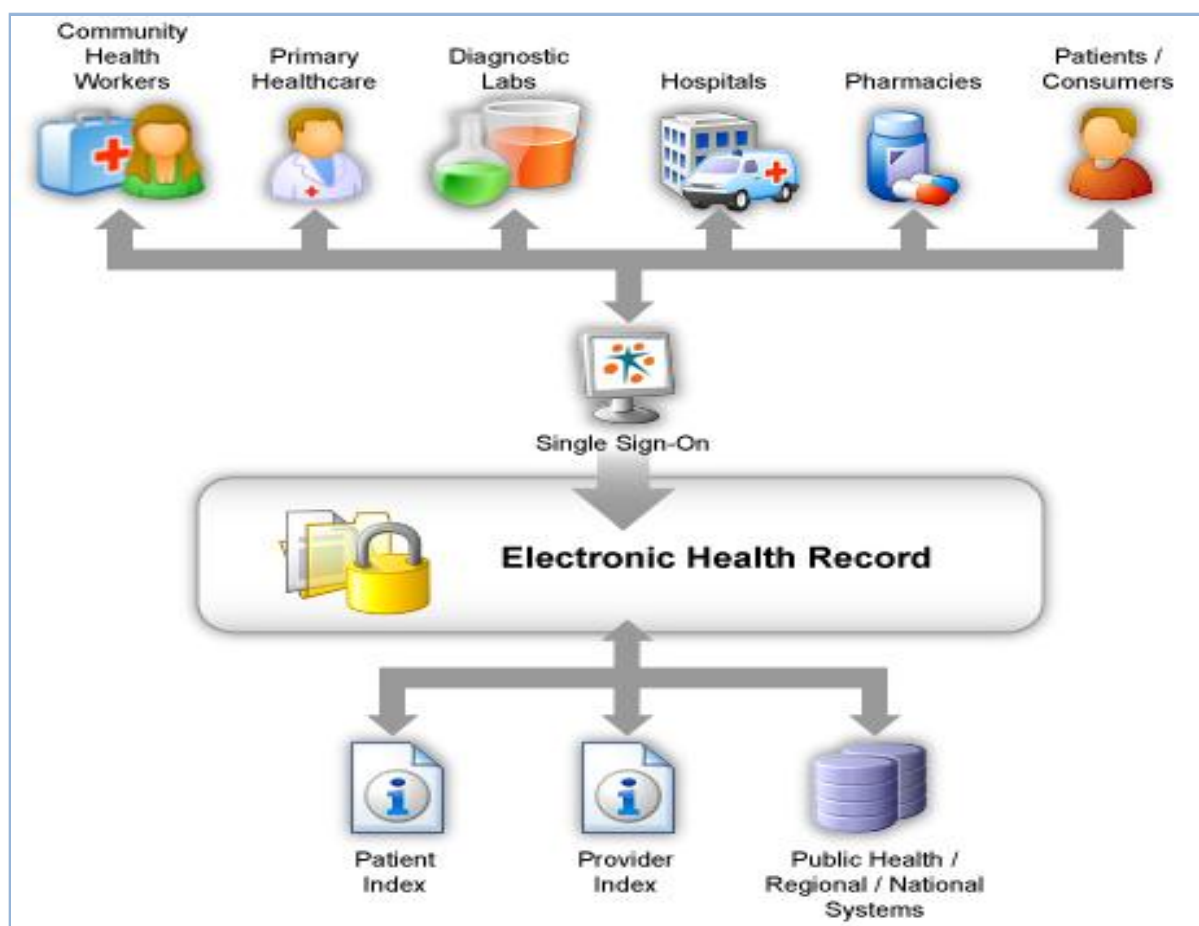
A Full-Electronic Patient Record (F-EPR) would provide the ability to scan and archive historic medical records and make live clinical records available in electronic form to users across the Walsall health economy. In the construction of new clinical records a variety of technologies would be employed to enable the creator to form a wholly electronic entry or complete a paper copy that would rapidly be transferred to electronic media via scanning.

**Figure 2 – Fusion EPR**

Pathways Data Collection Systems · Trust Electronic Discharge Summaries · Trust PAS Systems (PMS and iPM Medicode) · Trust Bed Management System (VISION) · GP System Data (Graphnet) · Trust Document Mgt System · Trust A&E Whiteboard System · Trust Pathology Lab System · Trust Radiology System · Medical Record Scanning System · FUSION EPR · Trust Endoscopy System · Trust Pharmacy System · Trust PACS System · **AUTOMATIC ALERTS AND NOTFICATIONS**

Currently, we operate a largely paper based healthcare records service. Functionally this does not have the development capability or capacity to provide the quality of service needed for the delivery of high quality patient care. This is characterised by the time to retrieve and deliver records and cost in both storage and delivery of patient records to clinicians. In addition, meeting the mandatory standards of health records is difficult with multiple paper records.

With the exception of note tracking, the current health records system makes little use of new technology and electronic based data capture. The main records library provides storage and retrieval service for the current patient record with additional capacity to store records offsite through a third party company.

We have made considerable strides to achieve an operational Electronic Patient Record through our Fusion system. Fusion is ranked within the top 10% of EPR's in the country following a NHS benchmarking exercise. Figure 2 demonstrates the rich data available but Fusion is only partially used regarding its ability to be an EPR by some clinicians. However, the addition of history and correspondence elements through scanning would bring it to a full EPR, which can then deliver effective clinical records in the future. This move to a fully functional EPR would:
1. Enhance the functions of the "Fusion" clinical system to display a full patient health record with a gradual move to Lorenzo EPR.
2. Deliver an ability to digitally archive historic health records improving storage and accessibility
3. Deliver the technical ability to create new health records in digital format
4. Deliver an exemplary Quality Health Record that achieves and exceeds the standards for Health Records & Information Governance.

Over time, we will reduce the use of the paper-based case note as a clinical information system, replacing this with an expanded Electronic Patient Record.

In addition to the specific schemes outlined above we need to continue the development of effective use of modern technology. Some of the existing information and supporting IT systems remain fragmented making them difficult for clinicians to use. There is still record duplication absorbing time and resources, and increasing the potential for errors. The key themes are 'Managing Change' and 'Connect All'.

**'CHANGE'** because this strategy through delivering solutions to business and clinical service improvement programmes signals a step-change in the way we manage, perceive and invest in information and technology. A challenge for us is to ensure that staff are maximising the use of it's IT systems. This also has strong links into the Service Improvement and Organisational Development Strategies as this brings a number of cultural challenges to the forefront when introducing more IT into the clinician environment.

**'CONNECT ALL'** because it is the way we will tackle the problems and risks caused by fragmented information and IT systems environment we find ourselves in, and the huge amounts of resource wasted in duplication. This is why Fusion EPR is crucial and important part of the strategic plan. The figure below illustrates the current application landscape and how Fusion is the vehicle of the EPR bring together best of breed system. It is important that we continue to integrate these.

### Figure 3 – Application Landscape
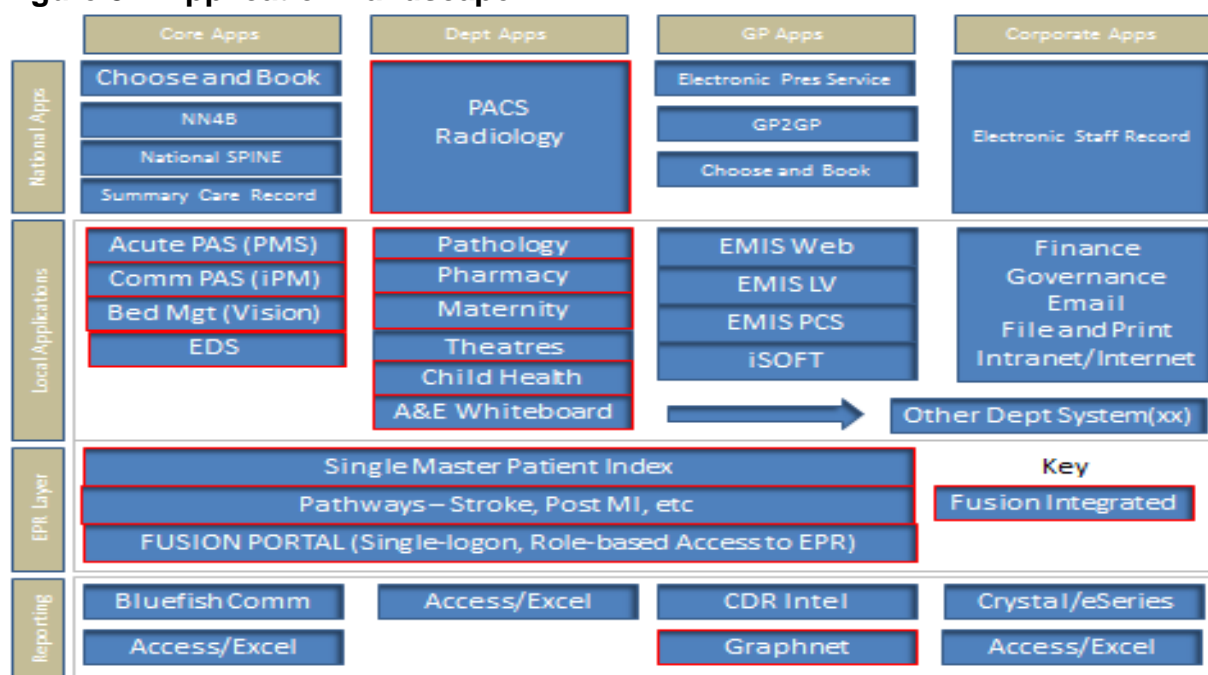


There are three fundamental immediate challenges;

1. Reduce the Cost of Ownership – We currently spend £1.83m on over 100 applications. It is important with the initiatives going forward outlined in the strategy will reduce the number of systems required and maximise the functionality within our core systems.
2. System Ownership – with the growing legal and information governance agenda it is important that we have robust processes to ensure that systems are managed to a satisfactory level.
3. Reporting and Business Intelligence - The challenge is to build on this and enhance the disparate reporting element into an underpinning Business

Intelligence Strategy that supports the Integrated Business Plan and our objectives.

## Full EPR - Strategic Context

In order for the EPR vision, investment and a change in product set is required. A move to a fully integrating EPR solution in Fusion and a step change in a move towards Lorenzo EPR. This will allow the trust to deliver improved data sharing and interoperability with partners, integration with medical records scanning and business intelligence system to support the trust decision making process. This will provide the platform to improved communications with patients across a number of mediums. A robust IT infrastructure is essential with a fully trained workforce to utilise the technology that is available.

## Figure 4 – Full EPR Strategic Context
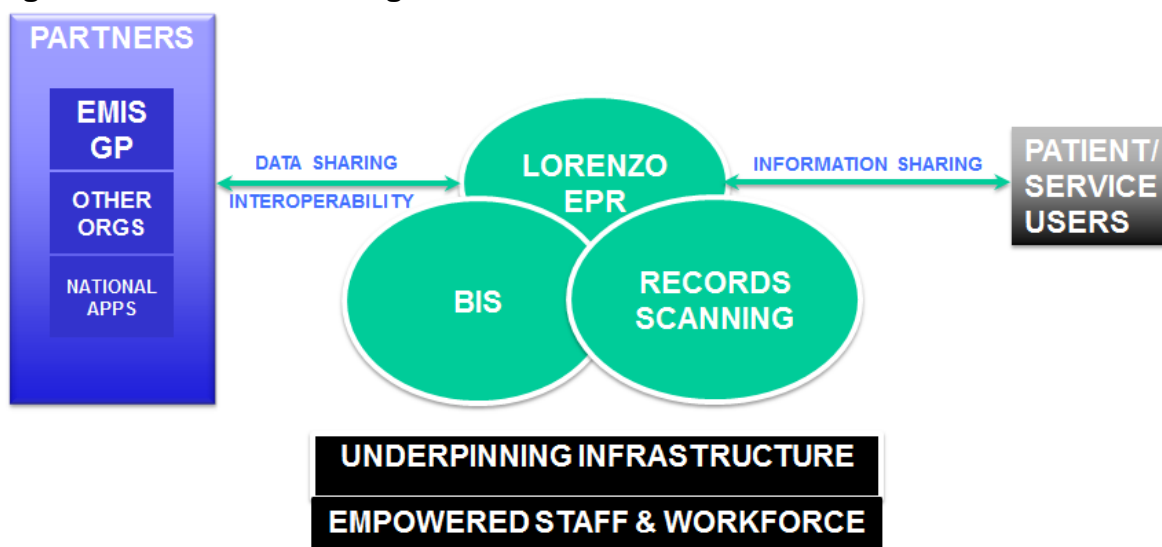


## Clinical 5

Clincal 5 builds on Lord Darzi's Next Stage Review of the NHS by describing how informatics can support the delivery of better, safer care for patients, improve the health service through better research, planning and management, and empower patients to make more informed choices about their health and care.

In particular, it identifies a pressing requirement for secondary care systems that meet the information needs of clinicians. And it goes on to identify the five key elements – termed the 'Clinical 5' – that are needed to "create a 'tipping point' in the acceptability and demand for strategic IT systems".

1. *PAS with sophisticated reporting.* The PAS is fully integrated with the clinical and departmental solutions and is interoperable with third party clinical applications. This also includes the need of a *Business Intelligence Solution*.
2. *Order Communications and Diagnostics Reporting* allows you to electronically order and receive results from any compliant departmental

system, including radiology, pathology and other services. They also include links to primary care.

3.  ***Letters with coding*** supports coded and free format documentation of all types including A&E letters, discharge summaries, clinic letters and referral letters.

4.  ***Scheduling***. supports multi-resource scheduling which hallows patients, orders and services to be scheduled together.

5.  ***e-Prescribing*** supports prescribing and medicine administration.

|   | CLINICAL 5 | RAG | Progress |
|---|---|---|---|
| 1 | PAS with integration and Sophisticated Reporting | G | **CURRENT STATE**<br>• Acute services currently has a spine compliant PAS (McKesson STAR PMS) for Choose and Book and 18 weeks. Extended contract with CfH until 2014.<br>• Community Services use i.PM as the main PAS system under the CfH contract.<br>• Strategically, the PAS Master Patient Index (MPI) acts as Master MPI for the majority of departmental systems via the use of HL7 interfaces where supported. Proposals for new systems must support links to PAS - STAR PMS acts as a master MPI to provide a single point of management for the core MPI. Ideally, these links should also support 18 weeks monitoring<br><br>• Fully integrated with Clinical Information Portal "FUSION"<br><br>• The Trust information departments already have an internally developed reporting tool CHILI for complex reporting and BlueFish for Community Reporting<br><br>**FUTURE STATE**<br><br>• Lorenzo Care Management will be implemented across the trust in March 2014 along with Emergency Care module.<br><br>• This is a complex project. It will affect every user as in essence it will be replacing the IT engine room of Walsall Healthcare and will take significant resource from both informatics and our end users.<br><br>• Business Intelligence business case has been approved and project underway. |
| 2 | Order Communications & Diagnostics Reporting | G | **CURRENT STATE**<br><br>• FUSION has provided Results Reporting across the patch (both primary, community and secondary care) for 3 years. |

| | | | • Planned that OCS will be supported from within Fusion to provide a common entry point across the LHE.<br><br>• Building on this success, Order Communications has been roll-out to GPs and throughout the Trust.<br><br>• This is attractive development to sustain current customers and attract new custom.<br><br>**FUTURE STATE**<br><br>• The trust will need to review this in light of the new Lorenzo product set and changing in delivery models for Pathology and other associated services. |
|---|---|---|---|
| 3 | Letters with Coding | **G** | **CURRENT STATE**<br><br>• Electronic Discharge Summaries and A&E letters are available through FUSION to primary care and GPs immediately after discharge.<br><br>• Local project through the Digital Dictation Project is underway to make clinic letters available in the same way.<br><br>• Solutions being pilot for total integration of any document from Secondary to Primary Care using the MIG. A programme in place to deliver Inpatient, Outpatient and A&E correspondence directly into GP systems. |
| 4 | Scheduling (for beds, test and theatres) | **G** | **CURRENT STATE**<br><br>• We currently have functionality to perform scheduling. It is well recognised that all of the functionality within the systems is not utilised and change programme in place to remedy this through the Service Improvement Programme.<br><br>• Real-time data entry is imperative to the success and operationally this needs to be addressed.<br><br>• We have invested in a Therapies system to improve scheduling into Allied Health Professional (AHP) services and looking into extending this to Community workers.<br><br>• We have deployed a project called "VISION" to |

| | | | improve capacity and scheduling within the organisation to help with efficiency and patient experience.<br><br>**<u>FUTURE STATE</u>**<br><br>• Need to maximise the use of VISION in the hospital<br>• Replace the current theatre system that will connect to other systems. Options currently being explored as existing provider contract expires in December 2014.<br>• Extend the use of therapies system and integrate into Fusion.<br>• Replace functionality with Lorenzo is due in 2014/15 |
|---|---|---|---|
| 5 | E-Prescribing (inc. TTO) | **A** | **<u>CURRENT STATE</u>**<br><br>• We have invested in Pharmacy System "ASCRIBE"<br>• Trust is currently evaluating the Lorenzo offering as potential part of the Lorenzo product suite. This is due for final evaluation in the Summer 2013. |

## Patient Safety and Data Quality Principles

It is important that the following patient safety and data quality principles and considerations are adhered to through the implementation of this strategy:

1. Patients are correctly and accurately identified from their first registration and then throughout their journey through the health system
2. Detailed, accurate & timely clinical information is available to professionals whilst protecting the privacy and confidentiality of sensitive information
3. Clinical data received from third party systems, such as test results, is accurately matched to the correct patient record using robust and reliable algorithms
4. Only one patient record can be open at any one time, minimising the risk of mistakes or confusion
5. The Common User Interface (CUI) for health guidance, designed to ensure patient safety in a number of areas, is adhered to
6. Ensure that specialised systems provides cost-effective patient infection control surveillance and reporting
7. Tracking allows users to locate, monitor and track assets, patients, staff, medical equipment, blood products and case notes
8. Ensure that the appropriate Information Governance guidance is implemented as a matter of course.

**Project Portfolio**

This section outlines the priority project portfolio for Walsall Healthcare. This portfolio has been developed to underpin the overall Integrated Business Plan and enables us to realise the quality and efficiency benefits. There are two projects that are absolutely imperative to be deployed due to contractual issues which are a replacement of the PAS and PACS systems. These are highly complex projects that will need a high level of commitment in terms of resource, not only from the informatics directorate but from our end users as a whole. The other schemes are potentially 'invest to save' that need developing into full business cases which will be described in the document later on an individual basis.

**Figure 5 – Project Timeline (2013-18)**
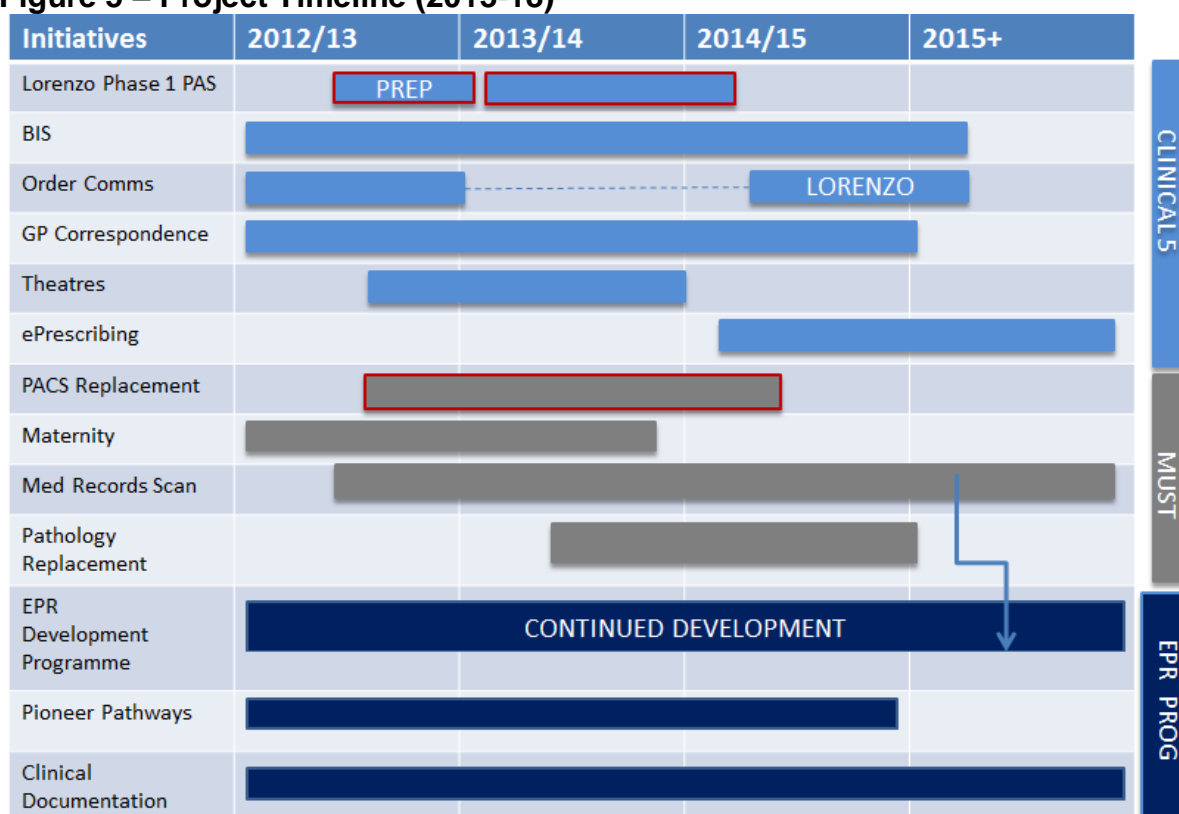


The figure below describes the funding and resource implications over the next five years.are based on Lorenzo as the replacement PAS leading to a full EPR implementation that will cover the requirements of the 'Clinical 5' as outlined earlier. Overall there is a need for £15m investment over the next five years (included in the LTFM).

## Figure 6 – Project Funding and Expenditure
New finance table to go in here

### Additional Advised Projects (Trust)

| Type | DESCRIPTION OF CAPITAL WORKS | 2011/12 | 2012/13 | 2013/14 | 2014/15 | 2015/16 | 2016/17 | Total |
|---|---|---|---|---|---|---|---|---|
| UPGRADE | Hardware & Software | 350 | 350 | 350 | 350 | 350 | 350 | 2,100 |
| CLINICAL 5 | Lorenzo PAS | 100 | 300 | 352 | 50 | | | 802 |
| CLINICAL 5 | BIS | 60 | 300 | | | | | 360 |
| CLINICAL 5 | Order Communications | 44 | 100 | | | | | 144 |
| CLINICAL 5 | Digital Dictation | 130 | | | | | | 130 |
| CLINICAL 5 | Theatres | | | 107 | | | | 107 |
| CLINICAL 5 | ePrescribing | | | 344 | | | | 344 |
| MUST DO | PACS (2013/14) Replacement | 200 | | 2,500 | 1,300 | | | 4,000 |
| MUST DO | Maternity | 175 | | | | | | 175 |
| MUST DO | Medical Records Scanning and EPR Development * | 500 | 900 | 900 | 900 | 900 | 900 | 5,000 |
| MUST DO | Pathology Refresh (NEW) * | | | 25 | 100 | | | 125 |
| MUST DO | Lorenzo Roadmap | | | | | 500 | 500 | 1,000 |
| QIPP | Pioneer Pathway | | 140 | | | | | 140 |
| | Total IM&T Projects Subject to Business Cases | 1,209 | 1,740 | 4,228 | 2,350 | 1,400 | 1,400 | 12,327 |
| | Staffing Costs | 379 | 812 | 618 | 459 | 459 | 459 | 3,186 |
| TOTAL | | 1,588 | 2,552 | 4,846 | 2,809 | 1,859 | 1,859 | 15,513 |
| * = NEW Projects introduced into Captial Programme | | | | | | | | |

### Breakdown of Capital Expenditure
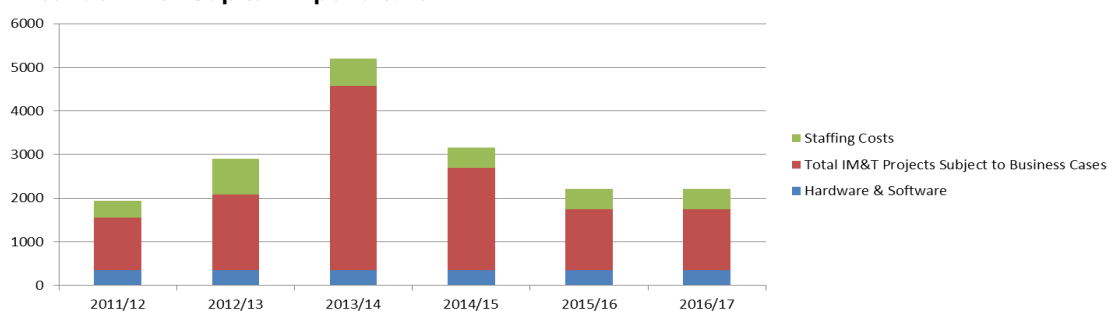


**Note:**

(1)   All projects are subject to approved business case to secure funding

## WHAT DOES THIS MEAN?

## HIGH-LEVEL DELIVERABLES

1.  Maternity information available from 2011 and via Fusion to wider clinical areas by 2012
2.  Initial Fusion Mobile version via mobile technology in 2013
3.  All current systems reviewed and utilised to maximum potential by end of 2013
4.  New PAS functionality by Mar 2014 and integrated patient administration across Walsall Healthcare
5.  All Pioneer Pathways linked into Fusion by 2013. Roll-out in Lorenzo from 2014.
6.  Early Telehealth components realised in summer 2012
7.  Greater Access to Mobile Devices – summer 2012
8.  PACS Replacement system in 2013
9.  New Theatres system in place and integrated into EPR by 2013-14
10. Order Communications for pathology and radiology requests by used all GPs and departments in late 2011. Available to other customers in 2012 in order to increase our market
11. BIS initial dashboards available in Summer 2013 data quality and corporate Dashboards Winter 2013.
12. All clinic letters transmitted into GP systems by Mid-2012 in line within Commissioning Guidelines. Full roll-out during 2013 for all correspondence.
13. Medical records scanned and available through EPR by 2013-14.

# LORENZO IMPLEMENTATION PROGRAMME

### Phase 1 – REPLACE PAS IN ACUTE and COMMUNITY

1. This will consist of 1300 McKesson STAR users and approximately 900 i.PM users across 42 sites. Move to a new integrated PAS system across the trust and decommission McKesson STAR and i.PM by January 2014. This includes Emergency Care functionality :
   a. Registration
   b. Referrals
   c. Accident and Emergency
   d. Inpatient/Bed Management
   e. Outpatient and Clinic Management
   f. Contact Activity
   g. Daycare (new functionality)
   h. Pathway Management/RTT
   i. Caseload Management
   j. Coding ICD10/OPC4/SNOMED
   k. Reporting
   l. SLA/Contracting
   m. Business Intelligence Requirements
   n. Key Performance Indicators
   o. Performance Mgt

2. Fusion to be a repository for all legacy information from existing systems.

3. To redesign and transform the admin and clerical processes that supports the patient journey

4. Initial Clinical Documents to support processes in A&E and Diabetes

5. Development of new Data Warehouse to support Lorenzo

6. Interfaces developed for integration with GP systems

7. Redesign of Service Desk services and processes

8. Significant Infrastructure improvements and extensions to support Lorenzo implementations of non-WES compliant equipment and provision of more mobile equipment

9. Training and support for clinical and administrative staff

10. Smartcard and IG support for an additional 1500 users


### Phase 2 – DEPLOYMENT OF LORENZO CLINICALS

1. Introduce the capability for trust to build and implement clinical documents and care plans which will be agreed with the trust and be strategically aligned. This includes the production of all electric discharge summaries through Lorenzo

2. Implement Results and Reporting within new solution alongside Fusion

3. Deployment of Static Care Plans for nursing

4. Whiteboard to support real-time bed management

5. Deploy Maternity, TTO and IPPMA Prescribing Modules
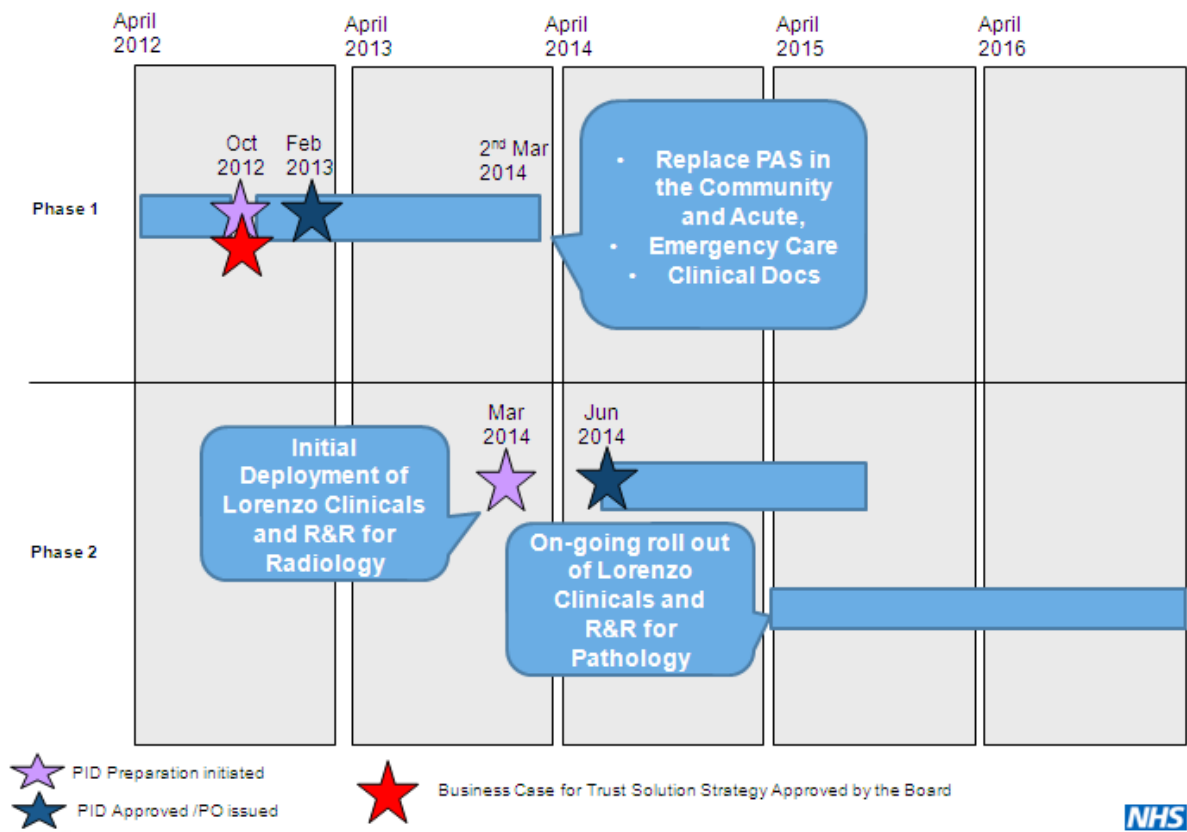
## Priority Projects and Associated Benefits

This section describes each of the priority projects and how this links to the Integrated Business Plan.

| Project Initiative | First Class Patient Experience | Safe, High Quality Services | Integrated Care | An Engaged & Empowered Workforce | Good Use of Resources | An Effective NHS FT | Business As Usual |
|---|---|---|---|---|---|---|---|
| Patient Administration System | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Business Intelligence System | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Order Communications | ☐ | ☐ | ☐ | | | | |
| Clinical Letters with Coding; GP Correspondence | ☐ | ☐ | ☐ | | ☐ | | |
| Theatres & Scheduling | ☐ | ☐ | ☐ | | ☐ | | |
| ePrescribing | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| PACS post 2014 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Maternity | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Medical Record Scanning | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| Pathology System Review | ☐ | | ☐ | | | | ☐ |
| Electronic Patient Record Review | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| Pioneer Pathways & Integration | ☐ | ☐ | ☐ | ☐ | ☐ | | |

## 1a) Patient Administration System

**Description:**

Lorenzo - The PAS is the IT engine room of Walsall Healthcare. Currently uses two PAS products to manage the patient administration functions, PMS in the acute Trust and iPM in the community The current functions include:

*Administration;* Registration, Referrals, Inpatient, Outpatient/Clinic Management, Contact Activity, Pathway Management

*Clinical;* Assessments, Caseload Management, Coding ICD10/OPC4/SNOMED

**Benefits:**

*First Class Patient Experience*; Clinical and clerical staff to be trained to track patient movements around the department ensuring that patients can be located immediately by looking on the system

*Safe, High Quality Services*; (a) opportunity to consolidate processes and harness LEAN work carried out; (b) improve security and audit facilities

*Integrated Care*; Provides trust with an improved strategic platform for building integrated electronic patient records as a unified provider

*An Engaged & Empowered Workforce;* provide clinician's ability to record and report on activity using a modern system

*Good Use of Resources;* (a) reducing time spent on non productive, repetitive paperwork allowing more time spent on direct patient care; (b) Enable logging, tracking and monitoring of referrals

*An Effective NHS FT*; (a) Providing electronic activity and workload information to meet the needs of the management; (b) enhance Referral to Treatment across a common system.

## 1b) Business Intelligence System

**Description:** Creating an information and decision making hub for us.

Enhancing access to appropriate, timely information and ensuring that information is used to help patients receive the best possible care is a core principle in the NHS. Part of that aim is to ensure that the corporate arrangements also utilise information to best effect as well as moving towards a more holistic approach to information usage – deriving management information from various sources collected across the trust. This will include the development of a corporate, divisional, data quality dashboards available at all levels. This would include the CQUIN requirements for the Trust.

**Benefits:**

The implementation of the BIS in conjunction with other information and knowledge sharing initiatives is aimed to develop the service to:

*First Class Patient Experience*; improving communication and integration of management information across services

*Safe, High Quality Services*; ensuring information is available to support best practice clinical care and evidence based medicine

*Integrated Care*; improving availability and access of information to Health staff (especially in outlying areas) and the community

**An Engaged & Empowered Workforce**; empower staff to use information to improve services

*Good Use of Resources;* improving the availability of information to be shared

across Walsall Healthcare, supporting seamless care and effective management decisions

*An Effective NHS FT*; improving the availability, accuracy, timeliness, relevance and effective use in decision making and service development, and performance management.

## 2) Order Communications

**Description:**

Once basic standards and processes have been adopted within the health environment an opportunity exists to exploit the technology further and enhance the returns health professionals gain by use of electronic discharge summaries, clinical data capture, use of checklists, electronic orders and results reporting. This will have been implemented across the GPs and all departments across Walsall Healthcare by the end of 2011. As a provider of choice, this will enable some marketing and commercial opportunities to generator potential income.

**Benefits:**

*First Class Patient Experience*; when an order is made for a service the request is almost instantaneously placed with the respective service, reducing the inefficiencies and potential losses associated with paper pathways.

*Safe, High Quality Services*; Confirmation of the order being received electronically against the patient record provides confidence that the request will take place.

*Integrated Care*; Electronic ordering is possibly one of the most visible benefits to those working at ward level, particularly when combined with the associated results that come from pathology / radiology tests, or other ordered services such as pharmacy.

*Good Use of Resources;* (a) tracking possible across all settings; (b) reduces wastages

*An Effective NHS FT*; improved communications with GPs and other organisations.

## 3) Clinical Letters with Coding; GP Correspondence

**Description:** Electronic Discharge Summaries and A&E letters are available through FUSION to primary care and GPs immediately after discharge. This will need to be enhanced to ensure all clinic letters are available in the same way. This will be a combination of using digital and voice recognition with solutions being pilot for total integration of any document from Secondary to Primary Care.

**Benefits:**

*First Class Patient Experience*; The provision of electronic information regarding patient discharge or visit will help with complaints management, clinical audit and accurate management information reporting.

*Safe, High Quality Services*; Reducing any delays in the production of the typed correspondence will lead to reduced clinical risks. It will also be possible for clinical staff to clearly see where there is outstanding action to take before discharging or immediate after seeing the patient.

*Integrated Care*; Electronic information regarding the patient's discharge or visit will be generated and shared in a more timely manner, potentially enhancing the clinical

care of the patients once they leave our care.

*An Engaged & Empowered Workforce;*

*Good Use of Resources;* Better correspondence will lead to better coding and therefore an increase in potential income for us.

*An Effective NHS FT*; improved services to GPs and information available in a timely manner.

## 4) Theatres & Scheduling

**Description:** A project to implement the Connecting for Health solution for Theatres or source a new offering if Lorenzo national application does not transpire. The current systems have highlighted the need for greater integration of clinical systems and services, particularly with existing ward based monitoring and orders / communications.  This forms part of the future integration plan.

**Benefits:**

*First Class Patient Experience*; shorter waiting and utilisation times.

*Safe, High Quality Services*; Better integration of existing processes supported through IT.

*Integrated Care*; The aim is to support complete workflow through waiting list, pre-assessment, ward, theatres and subsequently back to ward.

*An Engaged & Empowered Workforce;*

*Good Use of Resources;* It will also support resource utilisation and clinical requirement in terms of direct coding and theatre notes.

*An Effective NHS FT*; enhance the data capture of information through technology to improve efficiencies in theatres.

## 5) ePrescribing

**Description:**  A project to implement e-prescribing across the trust through Lorenzo and is required to support future integration of prescribing into Integrated Care Pathways whilst improving prescribing processes and safety.

**Benefits:**

*First Class Patient Experience*; - Less waiting times for dispensing of medications. Improved prescribing appropriateness, which will lead to improved prescribing efficacy. Less uncertainty in interpretation of hand written scripts this and the use of IT per se improves patient perceptions that  a robust system exists

*Safe, High Quality Services*; Improved safety and support for Medicines Management and Administration.  "Right drugs at the right time" philosophy is supported by e-prescribing which is a basic tenet of "Spoonful of Sugar." Seamless links would also be available to prescribing formulary etc to support  the prescribing process and effectiveness.

*Integrated Care*; Allow effective prescribing integration with electronic care pathways.

*An Engaged & Empowered Workforce;* Allow clinicians to review prescribed medication and regimes easily via electronic viewing across care settings. This is difficult to achieve with existing paper based prescribing.

*Good Use of Resources;* Reduce time spent in ascertaining a patient's current and

historic medications. Additional more appropriate drug usage via formulary base prescribing could support effective prescribing and reductions in potential wastage.

*An Effective NHS FT*; Will support admission and discharge processing. Often bottle necks occur within the discharge process whilst waiting for TTOs to be dispensed. Speeding up the requesting to dispensing process will help speed up discharge and improve bed turn, availability and length of stay. Although these benefits may be individually small, cumulatively they would be significant. Provides improved audit of the prescribing process and this will help manage patient safety issues.

## 6) PACS post 2014

Description: Replacement of the existing RIS and PACs systems. This is required as the existing CfH contract expires in 2013.

**Benefits:**

*First Class Patient Experience*; Shortened process times during clinical contacts as all images and reports are available. This supports earlier clinical decision making and instigation of treatment.

*Safe, High Quality Services*; Improve diagnostic and clinical decision making by making Images and reports readily available. Tools available with PACS improve the diagnostic process.

*Integrated Care*; Images and reports can be viewed from a variety of care settings. This can be across care settings and will allow integration of reports and images into electronic care pathways. PACs also supports image sharing across organisations as part of the external referral that would be more difficult.

*An Engaged & Empowered Workforce;* Ease of access to image has encouraged staff to become more engaged with other IT projects as the benefits have been demonstrable staff see the benefits of new technology in their day to day activities and realise the possibilities.

*Good Use of Resources;* Previous manual systems of transporting images were laboured intensive and inefficient. Using digital images speed up the process whilst reducing the resource required to manage the process.

*An Effective NHS FT*; May also reduce the need for follow-up appointments as images are more readily available and can support the use of one stop shop clinic contacts.

## 7) Maternity

**Description:** Implementation of a web based Maternity IT system. The Badgernet system will be used to support the end to end processes of the maternal pathway and the wider immediate and longer term strategy objectives as outlined in the clinical strategy.

**Benefits:**

*First Class Patient Experience*; The majority of data will be available to clinicians one single system and can be reviewed irrespective of the clinical contact takes place.

*Safe, High Quality Services*; The system is built around best practice and NICE/ RCOG guidelines. This ensures that the pathway is fit for purpose. This also introduces consistency as all patients are managed using the same basic pathway.

*Integrated Care*; Maternity care can be delivered both in primary and secondary care and data can be easily shared. The system will allow clinicians to view the maternal record anywhere across the LHE, should they have the correct role-based access rights. The system will also integrate with Imaging and Pathology Order Comms and Results reporting to provide easy access to relevant external data.

*An Engaged & Empowered Workforce; Staff* provided with local and remote access to system will improve communication between staff groups in clinical terms. Operationally, will have greater access to standard Office and desktop applications whilst providing knowledge support via links to external knowledge bases – this especially pertinent in a community setting.

*Good Use of Resources;* Staff will have a single point of management from which to deliver the e-service. Community staff may not have to return to base as frequently and can focus on collection of clinical data during consultations.

*An Effective NHS FT*; Recording systematic auditable data, coupled with improved and consistent processes would improve service delivery, monitoring and development. It would be an adjunct to support CNST reviews and improve patient safety generally.

## 8) Medical Record Scanning

**Description:** Following a review carried out by CIMTECH in respect to the Electronic Patient Record in Walsall, it was acknowledged that a next stage of the journey would be Medical Records Scanning at existing records. This would be a five year "invest to save" programme to improve records management within Walsall Healthcare.

**Benefits:**

*First Class Patient Experience*;

- supports the provision of the best possible care and treatment of the patient
- reduces the number of patients with cancelled appointments due to records being missing
- improves clinical information support
- ensures information is available to support best practice clinical care and evidence based medicine
- enhanced confidence in the patients' clinical care by awareness that background information concerning their condition, as well as information relating to the care throughout their clinical episode is available to the correct person at the correct time, in the correct location
- enables better initial assessment via quicker access to background information

enables better ongoing decision making by having fuller information available

- enables better information availability as care continues.

*Safe, High Quality Services*;

- reduces clinical risk associated with health records
- assists with securing the highest possible level of Clinical Negligence Scheme for Trusts (CNST)
- supports the process of continual improvement, ensuring that improvements are made within short timescales

- improves the availability, accuracy, timeliness, relevance and effective use in decision making and service development and performance management
- the data digitised remains as entered by people who understand it and have a vested interest in getting it right.  It has not been adjusted and therefore will retain its context.

*Integrated Care*;
- delivers an effective web-based application that brings together all elements of the patient record so that clinician and all associated professions can have all relevant information at their fingertips
- allows multiple access to records
- improves access to information

*An Engaged & Empowered Workforce;*
- allows better standardisation of existing practices
- removes duplication of effort
- enhances reporting and communication between professionals.

*Good Use of Resources;*
- reduces the financial costs associated with storage of records
- provides information both within the departments, across organisation, and external stakeholders, quickly with the minimum use of resources
- minimises the time spent by medical, nursing and other clinical staff on clerical duties, whilst working towards the national electronic patient records strategy
- supports more accurate and timely clinical coding.

## 9) Pathology System Review

**Description:** The current supplier contract is due to expire in 2012 and is to be extended in light of the impending pathology network review. We need to review the market for a Pathology system to ensure that it fits with the requirements of the modern pathology services. It will as a minimum need to be tested against the open market to fulfil business as usual activities. This is coupled with the wider Pathology Network Review of how these services will be provided in the future that maximises existing equipment whilst delivering financial savings.

**Benefits:**

*First Class Patient Experience*; provide interactive patient base interface for improve client services

*Integrated Care*; ensure that new or existing offering can integrate into application landscape.

## 10) Electronic Patient Record  Review & Refresh

**Description:** This project has five distinct objectives:
1.) Maximise the utilisation of the current Electronic Patient Record. The scope includes Fusion and VISION
2.) Ensure that all systems are integrated and the organisation is maximising it's

investment in IT systems

3.) Implement the next generation of EPR Portal Technology for Fusion to enhance the user experience and effectiveness in using technologies. This includes a developing a Fusion Mobile Application

4.) Enable the Electronic Patient Record to be open to all customers including patients in accessing and adding information about them.

5.) Continually enhanced Electronic Patient Record Programme that fits in with Walsall Healthcare and clinical objectives to stay ahead of the pack.

**Benefits:**

*First Class Patient Experience*; Opening electronic patient record to patients who use our services

*Safe, High Quality Services*; improved decision support and maximise the use of appropriate notifications/alerts in the provision of care

*Integrated Care*; through integrating systems further improve working practices to be more streamlined

*An Engaged & Empowered Workforce;* engaged workforce through the Informatics Clinical Development Group to take control of the future in the development of IT systems to clinician practice

*Good Use of Resources;* Maximise the 1.5m in IT systems to provide better clinician decision making and support.

## 11) Pioneer Pathways & Integration

**Description:**

Linked the IBP, QIPP and Service Improvement Strategy provide technically and information support to pathways development through existing systems and integrating new technologies such as Telehealth and Telecare.

*Pioneer Pathways*

Cohort 1:
- COPD
- Frail Elderly
- Diabetes
- Musculo-skeletal
- Cardiovascular

Cohort 2:
- End of Life Care
- Paediatric asthma

Incorporates a comprehensive set of applications, workflow, and rule engines, together with integration tools that fully address the needs of all participants in the delivery of care including the implementation of Map Of Medicine.

Other clinical areas are under review. These include urgent care, long term conditions, frail elderly, fractured neck of femur and stroke by the Black Country Senate. Close attention will need to be made as this will need collaboration with other trusts.

**Benefits:**

*First Class Patient Experience*; (a) Improve clinician-patient communication and patient satisfaction (b) the information required for self assessment to monitor and

manage performance

*Safe, High Quality Services*; (a) Facilitate introduction of guidelines and systematic and continuing audit into clinical practice (b) Reach or exceed existing quality standards (c) evidence-based advice and guidance (d) the right information, in the right format, at the right time to support quality and safety of patient care

*Integrated Care*; (a) Improve multidisciplinary communication and care planning, including primary care and social care (b) Decrease unwanted practice variation (c) embedding element from the QIPP strategy

*An Engaged & Empowered Workforce;* better informed clinicians

*Good Use of Resources;* (a) Information to ensure that health planners and managers use NHS resources effectively (b) reduce transaction costs (c) accurate and timely information on care provided to secure income and meet contractual obligations.

## Other activities:

Other areas where significant activities and programmes of work will be delivered are outlined below:

1) Digital Dictation and Voice Recognition after the current pilot project
2) Continued development of Electronic Single Assessment Process across health and social care
3) Emerging patient portals and information sources (e-health) and e-learning.

## IT INFRASTRUCTURE

## Technology Vision

"To provide a technical Infrastructure which underpins the Informatics Strategy and deployment of systems/products ensuring a high speed, resilient, dependable service which is easy to access in all environments with range of devices that enables the maximum utilisation of Walsall Healthcare systems in a secure manner."

It is recognised that the benefits expected of modern information technology demand increasing reliance on the systems used to deliver these. This reliance on IT has raised expectations in Walsall Healthcare around the reliability and performance of systems, and this requires a high quality infrastructure. We have invested in appropriate modern technologies to ensure the systems are reliable; per formant and supported in line with the healthcare services they support. The confidence in this infrastructure by the clinicians is paramount to enabling this strategy to be delivered. It is critical that IT is dependable and able to adapt to an ever changing market. i.e. mobile devices, tablets, telehealth.

Walsall Healthcare sees the following key elements as fundamental to the ongoing development of the ICT infrastructure. Not only to fulfil business as usual requirements, but continually make best use of resources and new technologies.

An acknowledgement in the move to paper-lite environment means that the underlying infrastructure and access to devices are imperative. The initiatives below help with the step change of this impact and underpin the dependency on IT.

1) Secure and Available Network – ensure the network is fit for purpose.
2) Data Centre Management – this ensures that we have reliable, resilience servers with fail-over and disaster recovery services. This should improve performance and reduce the total cost of ownership of IT:
   a) Virtualisation
   b) Cloud Computing
   c) Fail-over & Disaster Recovery
3) Single Sign-on – clinician having to sign in once for applications and services
4) Desktops  (PCs and Thin Client) – reduce the cost of ownership with delivering IT as a central Cloud Service
5) Access Anywhere – ability to access services with no boundaries. This is whether they are on a conventional PC, using a PACS cart, tablet or mobile device on a ward. In the community using a mobile phone, tablet or laptop in the community
6) File/Email and Print Services – review to reduce cost of ownership and improve efficiencies in respect to these back office facilities.

A sound infrastructure platform is key to providing a stable and reliable IT service and allowing future ICT programmes succeed. The IT infrastructure is set upon a number of layers as illustrated below.

## Figure 7 – IT Infrastructure
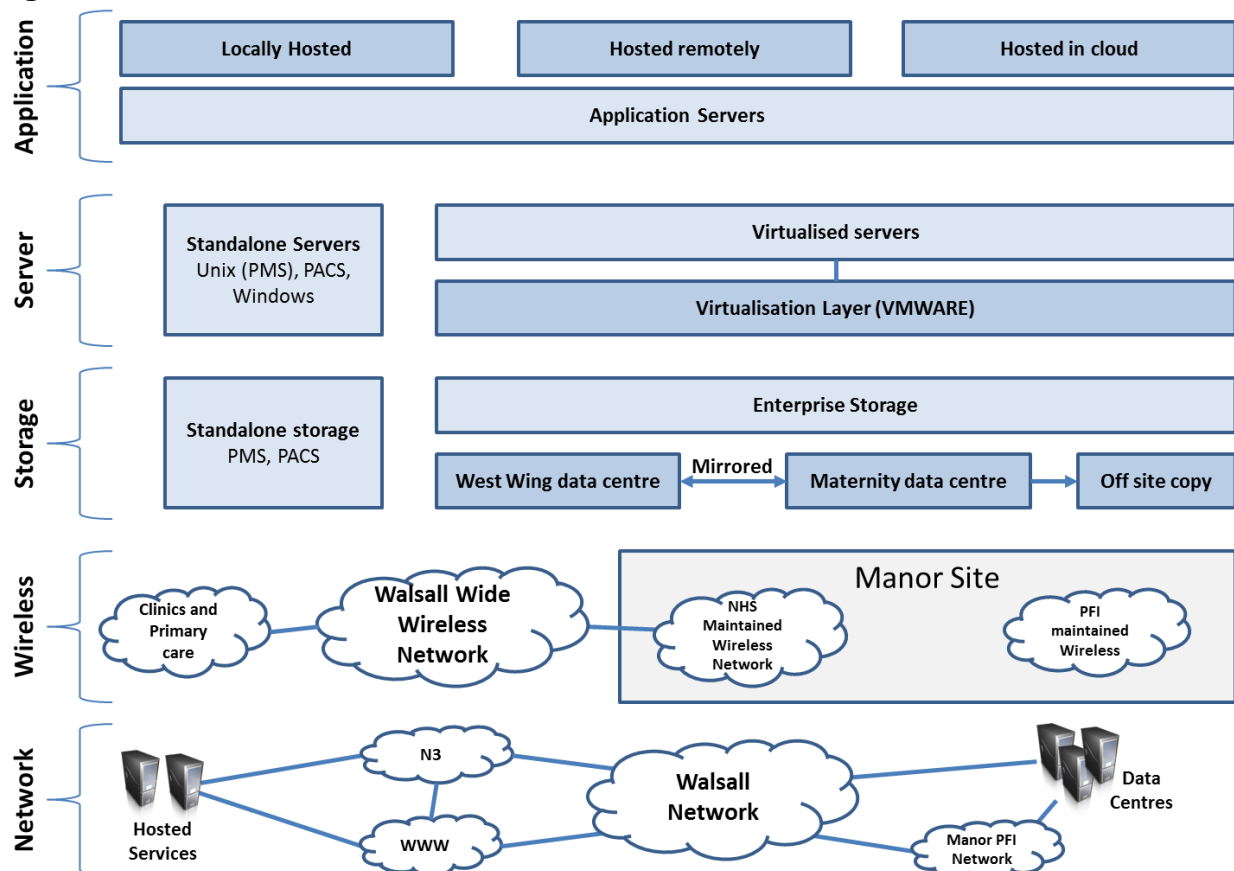
Business cases for new products must demonstrate how they fit into this model and more importantly how they will complement and not destabilise the model.

**Secure and Available Network**

**Wide Area Network**

The technical Infrastructure within Walsall is now accepted as being stable and resilient in the main. This is widely attributed to the new environments created by the N3 COIN (Community of Interest Network) and associated technology.

The N3 COIN replaced the existing Wide Area Network and replaced this with a network that has a resilient connection to each NHS site in Walsall. Additional benefits are the ability to ensure patient administration systems have a higher priority on the network. The outcome of this is during high network utilisation system, for example PMS, Fusion & iPM are still available for clinicians and operating in a real time basis with no lag. Secondly, the health economy now has a high speed backbone which will enable high network usage applications to be used at Community settings, for example PACS.

Additionally a wireless network is available at a majority of sites across the Health Economy. This has added benefits in enabling roaming by clinicians with mobile devices and providing the ability for our partners to utilise the network in a secure manner access systems within Social Services, local housing group & Education.

The future landscape is less clear and the current N3 contract starts to expire in 2013 and there is a need to review the overall network strategy in line with the organisational changes (i.e. clusters) and the estates strategy.

**Local Area Network – Hospital Site**

The current arrangement for network provision on the hospital site is under the control of SKANSKA as part of the PFI provision and whilst we are able to influence development there are cost implications associated with any change requests. We are engaged in discussion to revise this arrangement with a potential to bring this provision in-house.

**Data Centre Management**

Walsall Healthcare has two main data centres; Primary Centre is held within the Maternity Communications room and the secondary site is within the West Wing Communications room, with the two sites connected via a fibre optic link providing real time mirroring of all data held on the central storage area network. There is a third centre at Jubilee House that acts as a Disaster Recovery facility.

**Virtualisation and Cloud Computing**

Having considered the journey ahead of us, a more proactive and less reactive approach is to be adopted to ensure that we have a reliable server architecture that will complement our COIN, and deliver for Walsall Healthcare a truly scalable infrastructure to underpin our systems and services.

*Virtualisation* provides many features, which when used effectively provide a high availability solution; these include the ability to move, in real time, virtual servers from one physical server to another which can be located in another data centre. If the application in question is compatible with this technology, transfer can be achieved without loss of service to the end user, thus providing the ability to close down a physical server for maintenance with no downtime experienced.

*Cloud computing* is defined as a network based processing, whereby shared resources, software, and information are provided to computers and other devices (such as smart-phones) on demand over the local network or internet and thus provides a resilience to network or server failure.

The virtualisation and storage solutions employed allow for cloud computing and any service hosted on the virtualisation layer can be deemed as a cloud service. We propose that we embrace the philosophy of cloud computing to drive the benefits of shared hardware and services. We are in the final phase of moving to centralised servers that reduce the total cost of ownership of the applications.

## Active Directory

The Active Directory is a central component of the Windows platform and provides the means to manage the identities and relationships that make up network environments. We have acknowledged that we need to improve the accuracy of the 'User Data' held and will be introducing software that will force users to review and amend, where appropriate, their personal information.

By taking this simple step we will very quickly develop a full and accurate directory of every user. Active directory provides the ability to group users by job role, by utilising these groups it is possible to authenticate users based on a job role. This method of authentication is called Role Based Access (RBAC). In 2013, we seek to review implementation of Active Directory across all applications with a view to integrate where possible via a Smart Card mechanism.

## Thin Client Technology

Thin Client provides a consistent desktop in a virtualised environment. For the clinician this project will deliver major advances in using Trust ICT equipment in support of real time clinician use of systems.

Staff will be able to login to a PC using their smartcard, and utilising enabling technology allows seamless access to all the systems quickly and smartly. If the staff member removes their smartcard, their session is paused and remains active. When that member of staff moves to another PC their session is automatically transferred and instantly the staff member has the systems active at the point that they left them on the previous PC.

As part of this project new infrastructure will be installed to deliver a fast reliable service to the clinicians using it and all staff will require an NHS smartcard. This is still a challenge for mobile and tablet devices and we will continue to monitor the advancement of this type of technology. The present plan is to implement (dependent on a successful pilot) in 2013/2014.

Thin Client, enables the reduction in costs for replacement desktops and provides a more efficient process for supporting end devices and initial costs have been included in this year's capital plan.

**PC Desktops**

As PCs age and the hardware reaches the end of its life the costs for management and technical repair of the hardware increases. To gain the best value from our PCs and laptops the TCO (Total Cost of Ownership) model dictates a 3-4 year replacement programme. A seven year refresh is possible however this is dependent on the move to Thin Client whose findings will be available in 2013 which may change this programme.

**Thin Client desktops**

Thin desktops will be replaced by a seven year refresh programme to meet the changing needs of the business and to keep up to date with system developments and performance requirements. This ensures that we can meet the technical specifications, and work successfully across the wider community by having technology that works when required.

**Access Anywhere 'Wireless and 3G'**

Wireless network and mobile technology equipment has been rolled out across all wards and throughout the community. It is important that as new technologies emerge that Access Anywhere project provides our clinicians and staff access to systems and services regardless of geography. There are obviously some technological barriers to this but it is the purpose of this project to provide:

1.) User's secure access to systems and services at the usual places of work but also from home and in people's homes.

2.) Ability to use different devices in different settings. This may be a mobile phone in the community, a tablet on the ward or access through a TV.

The purpose of this is to empower staff and patients with information. There have been initially pilots of differing success in identifying suitable and fit for purpose devices that achieve the two main objectives. A large piece of work will be carried out to review and understand how Access Anywhere can be implemented within Walsall Healthcare.

**File Print and Email Services**

In respect to conventional *file services* that has historically been implemented as repositories. The intention is to roll-out SharePoint for collaboration which will assist in empowering staff.

"The NHS Next Stage Review highlights the need to support NHS staff in delivering first class quality of care through education and training and through access to knowledge and information. Currently, NHS staff access many different internal information and IT systems to do their job. This wastes time searching between systems for relevant information."

The intention is to roll this out during the summer of 2012. It is intended that by implementing SharePoint, we will support improvements in this area.

SharePoint will provide functionality to:
- Improve internal communications
- Deliver reliable information and business intelligence
- Improve the ability of staff to collaborate more effectively
- Deliver productivity benefits.

*Email Services* have historically been provided by locally using Microsoft Exchange products. A review of this provision will take place and an assessment against the new NHS mail offering which is due to be available in Q1/Q2 2014.

*Print Services* will also be reviewed which introduce multi-functional devices to reduce the cost of printing, scanning across the organisation. Other schemes elsewhere have realised 50% decrease in expenditure.

**Summary**

Summary of IT Infrastructure projects contribution each makes against Walsall Healthcare's objectives and benefits.

| Initiative | First Class Patient Experience | Safe, High Quality Services | Integrated Care | An Engaged & Empowered Workforce | Good Use of Resources | An Effective NHS FT | Business As Usual |
|---|---|---|---|---|---|---|---|
| Secure/Available Network | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Data Centre Consolidation (Virtualisation/Cloud Computing) | | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Single Sign on | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Desktops (PC/Thin Client) | | | | ☐ | | | ☐ |
| Access Anywhere 'Wireless and 3G | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| File/Print/Email Services | | | | ☐ | ☐ | | ☐ |

**HOW DO WE MAKE IT HAPPEN?**

We have developed a governance structure to ensure implementation aligns and fits with the strategy and key deliverables of Walsall Healthcare. In doing this a number of groups have been established to develop, prioritise, monitor, implement and deliver this strategy.

The Information Executive Group (IEG) will be accountable to the Trust Management Board (TMB).

An IT related High-level Portfolio Report will be submitted to TMB on a monthly basis, along with a summary of key discussions and any key issues that require particular

attention or action. IEG will meet with Trust Management Board bi-annually to present progress against the Portfolio.
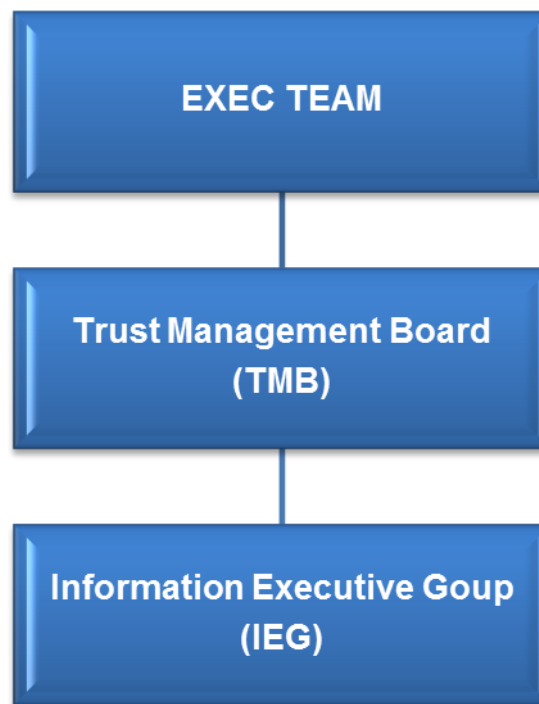


## Information Executive Group ([IEG]

The Information Executive Group is chaired by the Director of Strategy and contains Senior Clinician and Executive Director Representation. It is the focus for determining priorities relating to IM&T within Walsall Healthcare. It will issue requests for work proposals, receive bids for IM&T projects and monitor progress of implementations. It will also identify and monitor benefits realisation of projects, recommending corrective action when required. The Group will make recommendations to the TMB or the Trust Board dependant on the nature of the Project or the severity of the issue.

The group is multi-professional and will include PCT representation to ensure the Health Economy partnership continues.

## Programme / Project Boards

All projects will have a project board and will adhere to the PRINCE2 project management methodology. Each project, as previously mentioned, will include a designated Director Lead (Sponsor), Project Leads (Project Manager from Informatics, Change Manager from Service Area), and Clinical Lead to champion and provide Quality Assurance.

It will approve all major plans and authorise any major deviation from agreed Stage Plans and is responsible for assurance that the project remains on course to deliver products of the required quality to meet the Business Case. It ensures that required resources are committed and arbitrates on any conflicts within the project or negotiates a solution to any problems between the project and external bodies. In

addition, it approves the appointment and responsibility of the Project Manager and any delegation of its Project Assurance responsibilities.

## Clinical Reference Group

Clinical ownership and engagement is important and fundamental to the successful implementation of projects and IM&T programme of work. Clinical representation will be part of all projects. With large impact projects as explained above, Clinical Reference Group will be set-up. The role and responsibilities will be:

- Champion the deployment of the project, ensuring new processes introduced are clinically owned and supported
- Ensure that the views and professional interests of clinicians are fully represented
- Support the cascade of local messages and champion future developments to all staff
- Provide a regular forum for discussion regarding clinical engagement and benefits realisation within Walsall Healthcare.

## Projects will only be undertaken if:

- The application process has been adhered to and fits our strategic objectives;
- is subject to the Business Case being approved;
- and is signed off by the IEG.

## CLOSING STATEMENT

This strategy gives the direction of travel for Walsall Healthcare over the next three years and will be revisited year-on-year in the form of an annual IT business plan accompanied by the Informatics Capital Programme and revenue requirements. This document should be read in conjunction with the IT Roadmap and Informatics Programme of Work (Monthly BRAG report).