ITEM: 5

MEETING:
Trust Board
20 September 2006

TITLE:
Pathology Laboratory Information Management System (LIMS) Business Case

SUMMARY:

ACTION:

REPORT FROM: ***Glenn Winteringham, IM&T Consultant***

SPONSORED BY: ***David Sloman, Chief Executive***

Financial details supplied/checked by:
(Name of finance officer)

Recommendations contained within this paper have been checked for compliance with relevant statute and regulations/directions/policy as follows:

(Relevant law/direction etc.)
(Name)

The Whittington Hospital NHS
NHS Trust

Pathology Laboratory Information Management System (LIMS) Business Case

September 2006

Amendment History

Version	Date	Amendment History
1.0	13 September 06	First draft for Trust Board approval

Reviewers

This document has been reviewed by the following :-

Name	Title	Date of Issue	Version
David Sloman, CEO Trish Donovan, Director of Finance Adam Smith, Divisional Manager Nick James, Pathology IT Lead Stephen Martin, IT Project Manager	Pathology LIMS Business Case	13 September 06	1.0

Approvals

This document requires the following approvals :-

Name	Title	Date of Issue	Version
Trust Board	Pathology LIMS Business Case	13 September 06	1.0

Document Location

This document is located at I:\Pathology\Winpath\Pathology Business Case v1.0.doc

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1. Executive Summary

1.1. What is a Laboratory Information Management System (LIMS) ?

1.1.1. A Laboratory Information Management System (LIMS), more commonly known as a Pathology system, enables the processing of large volumes of samples for diagnostic testing and reporting.

1.1.2. A LIMS provides comprehensive functionality to service all main Pathology disciplines :-

Workgroup	Supported disciplines
BHI (Biochemistry, Haematology and Immunology)	– Biochemistry – Haematology – Immunology
Cellular Pathology	– Histopathology – Cytology(Gynae & Non- Gynae) – Mortuary
Microbiology	– Bacteriology – Virology – Mycology – Parisitology
Blood Transfusion	– Transfusion

1.2. Why do we need to replace our legacy LIMS in 2006/07 ?

1.2.1. It is essential that the Trust replaces its legacy LIMS in order to :-

– **Replace obsolete software**

The Trust is the only hospital in the NHS using the legacy LIMS. The supplier, Stratus, stopped supporting the product in 2002. Since then, one ex-Stratus employee, based in Scotland, has supported the system on a best endeavours basis. They have indicated they will withdraw this support from April 2007. The Trust needs to implement a commercially supported solution.

– **Replace obsolete hardware**

The current hardware is 9 years old. Whilst it is still under contract with the supplier for 24 x 7 support and has proven to be a very reliable solution, it is well beyond its life expectancy and the supplier is no longer able to supply components. The Trust needs to run such a critical service on a fast, modern, secure and reliable IT hardware platform.

– **Implement a Disaster Recovery plan**

There is currently no disaster recovery plan in place to recover the legacy LIMS in the event of a catastrophic failure. Options to implement a disaster recovery plan were reviewed two years ago, but due to the age of the legacy hardware and the unsupported software, estimates were prohibitively expensive. Therefore, we may not be able to restore access to the application in the event of a system failure. The Trust needs to develop a disaster recovery plan that is tested annually.

– **Support Pathology Modernisation**

The Trust is reviewing options to modernise Pathology services with the Royal Free, who already have the Winpath solution implemented. The Trust needs to implement the Winpath solution to enable electronic referrals and results sharing between both Trusts.

– **Meet changing user requirements**

The LIMS software is no longer being developed and therefore it cannot meet a number of changing user requirements e.g. sending Microbiology and Histopathology results to GPs, processing electronic test requests from GPs and hospital clinicians. The Trust needs to implement a modern solution to meet its future service needs.

– **Comply with the NHS Connecting for Health (CfH) programme**

There is a requirement for all Acute Trusts to send Pathology test results, along with other patient data, to the NHS Spine as part of the NHS Care Record Service (CRS). The CRS will enable clinicians across the NHS to view a comprehensive patient record on-line, irrespective of geographical or organisational boundaries. The legacy LIMS is not a CfH compliant product and cannot send data to the NHS Spine. The Trust needs to implement a modern solution to meet its CfH requirements.

1.3. How was the replacement LIMS selected ?

1.3.1. In 2002, the Trust began a project to replace its legacy LIMS following NHS best procurement guidelines, and was on the verge of going out to tender to select a preferred supplier during the summer of 2003.

1.3.2. However, the procurement was suspended by NCLSHA following the announcement of the National Programme for IT (NPfIT), now known as Connecting for Health (CfH).

1.3.3. The CfH programme set out a national vision to procure and implement common solutions across the NHS over 10 years to support the modernisation of the NHS to improve the quality of care provided to patients.

1.3.4. CfH appointed Capital Care Alliance (CCA) as the Local Service Provider (LSP) For the London Cluster responsible for implementing the new services. CCA have subcontracted the delivery of the LIMS for London to CliniSys Solutions.

1.3.5. Therefore, the only new Pathology solution available to London Trusts has been the WinPath product provided by CliniSys. The local project team have spent several months undertaking due diligence to ensure that the product meets the functional requirements of the Trust and working with CfH to ensure it represents good value for money.

1.3.6. Please note that individual Trusts have very limited scope to negotiate on the cost of the replacement LIMS, and no scope to vary the terms and conditions or the method of deployment, because they are subject to overarching contracts already signed between CCA and CfH. There is no direct contract between the Trust and the supplier.

1.4. How much will it cost to implement the new LIMS ?

1.4.1 The total cost for the deployment of the new LIMS between 2007-15 is **£2.8 million**.

1.4.2 The table below summarises the total costs and available funding for both capital and revenue costs, which shows an affordability shortfall of **£445K** over the 8 year life of the contract, which equates to @£56K per annum :-

	Costs (£'000)	Funding (£'000)	Difference (£'000)
Capital	930	937	7
Revenue	1,830	1,378	-452
Total	**2,760**	**2,315**	**-445**

1.4.3 A detailed breakdown of the costs and funding is available in section 6, the Financial Case.

1.5. Conclusion

1.5.1. The Trust must replace its legacy LIMS as soon as possible. The two key drivers for change are the need to

- move away from an unsupported solution and thus avoid a potential catastrophic loss of service
- move to a modern commercially supported solution that will meet our future local and national needs

1.5.2. The only LIMS solution being offered by the London LSP is the Winpath product from CliniSys. Clinisys have over 40% of the market share of installed LIMS in London and @33% of the NHS nationally.

1.5.3. The Pathology Project team (see Project Structure 7.2) have undertaken a rigorous review of the WinPath functionality e.g. site visits to see the software being used in a live environment, and all disciplines are signed up to use the Winpath solution.

1.5.4. The deployment of a new LIMS is essential if the Trust is to modernise its Pathology services and meet its future local and CfH requirements.

1.5.5. It is recognised that the business case is currently showing an affordability gap of £445K over the 8 year life of the project, which equates to @£56K per annum.

1.5.6. However, given the urgent need to move away from the legacy system it is proposed that the shortfall is either met as a priority cost pressure next year and/or from further detailed analysis of the cash releasing benefits, which have been calculated on a very conservative basis for the purpose of this business case.

1.5.7. **The Trust Board are recommended to approve the business case to implement the CliniSys Winpath LIMS.**

2. Overview

2.1. Introduction

2.1.1 This document has been prepared using the NHS standard five Case Model format, which comprises of the following components :-

- The **Strategic Case** section, which sets out the Strategic Context and the Case for Change, together with the investment objectives for the Project
- The **Economic Case** section, which demonstrates that the Trust has, through the CfH, selected the choice of investment, which best meets the existing and future needs of the NHS locally, demonstrates selection of the best option and demonstrates optimum value for money (VFM)
- The **Financial Case** section, which confirms overall affordability
- The **Commercial Case** section, which outlines the content of the preferred and proposed arrangements with Capital Care Alliance (CCA)
- The **Management Case** section, which demonstrates that the implementation arrangements for the proposed investment are achievable

2.2. Development of this Business Case

2.2.1 The Pathology Project team have led the development of the Business Case, with further detailed input from Operational Management, Finance and IM&T.

2.3. Purpose

2.3.1 This Business Case seeks approval from the Whittington Hospital NHS Trust Board for investment in a replacement Pathology system.

2.3.2 The Business Case recommends investing in the Winpath LIMS from ClinSys as the CfH compliant solution for London.

3. Strategic Case

3.1. Introduction

3.1.1 The strategic case for investment in a new Pathology system has been made at a national level as part of the CfH programme to support front-line modernisation of healthcare delivery.

3.1.2 However, it is important to note the distinction between "core" and "additional" services being provided by the LSP for each cluster :-

- **core** services have been centrally procured and funded e.g. Choose and Book, Care Record Service (CRS), N3 network links
- **additional** services have been centrally procured, but need to be funded locally e.g. PACS, Pharmacy

3.1.3 Pathology is classified as an additional service, and therefore a business case is required to justify the investment of local funds and to prove its affordability.

3.2. National Context

3.2.1 The implementation of a replacement Pathology system supports the following national drivers :-

- NHS Plan
  - Development of Services
  - Quality Improvement and reduction in errors
  - Improvement in Efficiency
  - Development of Staff
- NHS Information Strategy
  - Information for Health
  - Building the Information Core, Delivering the NHS Plan
  - Delivering 21st Century IT Support for the NHS
  - Connecting for Health
- National Service Frameworks
- Clinical Service Networks
- Pathology Modernisation
- Royal College of Pathologists Guidance
- 18 week waiting target

3.2.2 The implementation of a replacement Pathology system will also support a number of external accreditation bodies, all of which have identified IT issues during their reviews :-

- Clinical Pathology Accreditation (UK) Ltd *(All disciplines)*
- Cervical Screening Quality Assurance *(Histocytopathology)*
- National Cancer Peer Review *(Histocytopathology)*
- Medicines & Healthcare products Regulatory Agency *(Blood Bank)*
- Regional Microbiologist *(Microbiology)*
- Inspector of Microbiology *(Microbiology)*
- DoH Infection Rate Reports *(Microbiology)*

3.3. Local Strategic Context

The current Pathology Service

3.3.1 The Pathology service comprises of 4 main disciplines :-

Discipline	wte	consultants
Haematology	37	3
Microbiology	28.5	2
Biochemistry	26.5	1
Histocyto-pathology	26	5
Total	**118**	**11**

3.3.2 The Trust provides Pathology services to @300 GPs in 83 practices and 12 health centres, which equates to @35-40% of the total workload.

3.3.3 The Pathology services are located on the 5th floor of K block, and operate Monday to Friday with variable cover arrangements depending on the service demands.

3.3.4 The table below show the 2005-06 outturn workload for requests and tests undertaken by each discipline. Based on recent activity, there is @4% growth per annum, though it's worth noting this is nearer 6% for Microbiology :-

Discipline	Requests	Tests
Haematology	179,573	3,679,456
Biochemistry	291,301	2,416,437
Microbiology	173,532	1,404,633
Blood Bank	37,515	193,640
Total	**681,921**	**7,694,166**

Pathology modernisation in North Central London

3.3.5 The issue of Pathology modernisation in North Central London has been in discussion for a number of years.

3.3.6 Preliminary work has recently begun with the Royal Free to explore opportunities for re-configuring the two services to improve patient care and reduce costs.

3.3.7 The only technical solution to enable the electronic exchange of referrals and test results between the two services is to implement the CliniSys Winpath solution which is already live at the Royal Free.

3.4. The Case for Change

The need to replace the legacy Pathology System

3.4.1 The current Pathology system was implemented in 1989 and has served the Trust's Pathology needs very effectively for the majority of the last 17 years.

3.4.2 However, the original supplier of the software, CHC UK Ltd ceased trading in 1995, and the succeeding supplier, Stratus Computer Limited withdrew commercial support arrangements in 2002. For the last 4 years an ex-employee of CHC Stratus has provided support on a best endeavours basis. The support is via remote dial up from their office based in Scotland.

3.4.3 Consequently, there is no disaster recovery testing procedure in place. In the event of a catastrophic failure, it is highly unlikely that the system could be restored to normal functionality.

3.4.4 A risk assessment has been conducted by each discipline identifying the risks associated with losing the Pathology system. They demonstrate that the service simply cannot operate without a functioning LIMS, due to the sheer volume of requests requested for processing on a daily basis. There would also be a huge clinical risk regarding transcribing and missing data errors associated with running a manual system.

3.4.5 As the software is no longer commercially supported, there has also been no development of the system functionality for several years which has exposed the Trust to a number of risks :-

- failed Computer Pathology Accreditation (CPA) reviews as some analysers are unable to be interfaced to the Pathology system, which represents a considerable clinical risk as results have to manually transferred

- unable to implement new working processes in Pathology to improve efficiency by linking to other IT systems e.g. voice recognition for reporting, using electronic order sets linked to presenting problems, interfacing to infection control surveillance software

- unable to support Pathology Modernisation links with the Royal Free as they use a different system which cannot be interfaced to share referral requests and results

- unable to send histocyto-pathology or microbiology results electronically to GPs

- unable to support point of care testing instrumentation as this form of testing expands across the Trust

3.4.6 The Pathology hardware is proprietary from Straus Computer Limited, who continue to provide support, and has provided a fully fault tolerant platform. However, it is 10 years older than the normal lifecycle for computer hardware and it is proving increasingly more difficult for the supplier to source components.

3.4.7 In the last 18 months the Trust has also experienced hardware problems with a number of PCs, which are required to manage the interfaces to some of the analysers. Because the system software is so old, it will not work with modern PC software. Therefore, we have to use very low specification 286 and 386 processor PCs running DOS. Where these have failed, it has proved very difficult to source new components to fix them.

<u>The need to implement the CliniSys Winpath Pathology System</u>

3.4.8 All Acute Trusts are required to submit diagnostic test data to the NHS Spine for the Care Record Service (CRS) as part of the wider Connecting for Health (CfH) programme.

3.4.9 The only approved Pathology solution being offered by the Local Service provider (LSP) for London is Winpath from CliniSys. This product is being developed to ensure it will be able to send results to the NHS Spine and CRS.

3.4.10 As mentioned in 3.3 above, another major factor behind taking the CliniSys Winpath solution is to facilitate the electronic exchange of referral and results information resulting from the Pathology modernisation project between the Whittington and the Royal Free.

3.4.11 During the procurement process, the Trust has received confirmation that the CliniSys Winpath Pathology system will meet a number of new functional requirements to :-

- receive electronic test requests for individual and grouped order sets from GPs and internal clinicians

- report the status of test requests through the laboratory and the test results back to requesting clinicians

- enable more efficient processes and reporting e.g. use of voice recognition, to support achievement of the 18 week target

- send encrypted Microbiology and Histocyto-pathology results back to GPs

- send test results to a third party Infection Control Surveillance System

- ensure compliance with CPA regulations

- facilitate point of care testing

3.5. Local Investment Objectives

3.5.1 This section describes the local investment objectives for the project, which will enable the Trust to realise the expected benefits. These objectives are the Critical Success Factors (CSFs), which will be used to evaluate whether the project has been successfully delivered.

3.5.2 The introduction of a new Pathology system provides the opportunity to deliver significant operational and management benefits.

3.5.3 A new LIMS will improve the quality of day-to-day management of the Pathology departments and lead to improved patient care whilst ensuring that the best use is made of hospital resources through better control of workload.

3.5.4 Furthermore, it will assist the Trust in retaining its market share of Primary Care referrals by enabling and improving electronic communications with GPs.

Expected Benefits

Description	Expected Benefit
Support the diagnostic process by improving the	– quality of patient's data – information storage – information retrieval – quality of result data
Improve quality	– improving work in progress system – supporting quality working practices e.g. CPA, ISO 9002
Improve the management information process for	– pathology modernisation – 18 week target – business planning – statistical returns – ad hoc reporting – better resource utilisation – manpower planning
Improve clinical and medical audits through	– facilitating the audit of work in Cross Infection Control and Epidemiology – assessment of test diagnostic value – review of blood order schedules
Improve financial information systems for	– budget planning/setting – providing invoicing information – assessing cost per test – assessing user activity
Improving information transfer of	– reference laboratory work – blood stock utilisation – QA schemes – patients reports

3.5.5 The requirements and expected benefits will be significantly different depending on the type of user :-

Description	Expected Benefit
Laboratory Staff	– automated test requesting – fast and efficient sample handling – automated result transmission – integrated access to patient, sample and result information – efficient generation of reports – sample tracking – automatic production of statistical information – integrated support for pathology management processes – transfer of data from current LIMS
Laboratory Users (Clinical)	– integration with Results Reporting and Order Communication System – information on the progress of Pathology requests – enquiry facilities for authorised results – rapid reporting and local printing
Pathology Management	– information for monitoring pathology activity – information for planning and monitoring contracts – information for planning patient care – information for resource planning
General Practitioners	– timely transfer of completed results – automatic patient record update – fully coded results to facilitate searches – highlighted abnormal results – Order Communications preferably via a common interface for all diagnostic procedures (pathology, imaging etc)
Finance and Contracting	– information to price and cost services across Pathology – information to enable costing of patient episodes on a test or request basis – information for billing of referred services and Private Patient workload – information for contracted service level agreements details and data returns for purchasers – integrated data analysis with Trust financial systems to support pathology management – information to determine clinical user activity and costs
Information Technology	– to enable widespread access to Pathology information across the Trust's IT infrastructure – to enable data sharing/integration with existing Trust information systems

	– to ensure compliance with National and Local strategies and standards – to secure suitable data structures throughout the Trust and enable standardised systems query applications – to secure existing links and initiatives to external organisations such as Health Authorities and GP surgeries using standardised communication protocols – to ensure appropriate security of systems information

3.6. Main Risks

3.6.1 Risks have been divided into the seven high level categories contained within the DoH IM&T Business Case Guidance standard risk register :-

- Design (this will not apply as it is a proven product)
- Implementation
- Change management
- Training/user
- Operational
- Termination
- Technology and obsolescence

3.6.2 The following risks have been highlighted as the main project risks :-

Risks Reference	Risk Category	Countermeasure
Implementation	**Planning**	
IR4	Insufficient or inadequately specified workstations	Regular assessment of user and project requirements
IR5	Implementation costs exceed budget	Finances prepared by management accountant/countersigned by supplier Regular assessment of user and project requirements
Implementation	**Timing**	
IR7	Data take-on takes longer than planned (delay in transferring between systems, delay in implementation, longer parallel running)	Liaison arrangements with supplier set-up and ensuring adequate resourcing
IR8	New system's failure to interface/integrate with legacy systems will delay implementation	Liaison between IM&T interface team, PAS and Pathology suppliers. Current version of PAS and interface engine are CfH approved
IR9	System or system interfaces fail acceptance test, delaying implementation	Testing environment set up on training database
Implementation	**System Configuration**	
IR16	Network failure/problems delay implementation or make system unavailable or unreliable	Major network upgrade in Pathology and across the Trust Local Area Network has significantly improved resilience, but in the event of a failure downtime procedures to be implemented

Change Management	**Organisation**	
CM7	Delay in gaining access to clinical areas for implementation	Robust project plan agreed by Pathology System manager and Project Manager
CM12	Loss of key staff e.g. project manager, project champions, IT specialists	The project team has been in place for several years and have a good working relationship with IM&T and the supplier
Training/User		
TU1	Training costs increase	Training will be delivered in house via a 'train the trainer' approach using training facilities provided by the IT Training Department
Operational	**Costs**	
OR1	Costs underestimated, e.g. funding for key staff, training etc, hidden costs	Work with supplier and internal staff to identify all possible costs
Operational	**Affordability**	
OR5	Ongoing running costs (revenue and capital) of upgraded system unaffordable	Identify cash releasing savings through changes in work practices, manpower review and joint working with the Royal Free to minimise the affordability gap
OR6	Implementation costs (capital and revenue) unaffordable, e.g. training, tailoring, interfaces, staff	Manage implementation costs through regular review
Operational	**Benefits**	
OR9	Cash releasing benefits not achieved	Targets will be owned and monitored by the Pathology project team sponsored by the Clinical Director for Pathology to ensure they are achieved
Operational	**Performance**	
OR15	Theft of or damage to hardware	Security issues e.g. use of cages, locks, door lock etc will be agreed by the project team. The server will be housed in a dedicated computer room

3.7. Constraints and Dependencies

3.7.1 There are a number of constraints and dependencies that will affect the successful delivery of the replacement Pathology project :-

- clinical ownership and leadership to champion the new Pathology system with other clinicians
- affordability of deployment charges
- affordability of capital charges
- affordability of annual maintenance and revenue costs
- Pathology wide upgrade of Local Area Network
- Migration from dumb terminal access to PCs access within Pathology
- configure analyser interfaces with the new system

- survey and complete enabling works within Pathology e.g. replace current data cabling and power

- survey and complete building works for the Pathology project e.g. establish a new computer room in Thoroughgood, establish a new network hub room, review reporting facilities

- survey and complete security works e.g. PC cages and locks, door locks, CCTV

4. Economic Case

4.1. Introduction

4.1.1 The preferred solution for Pathology has been determined nationally through the award of contracts to Local Service Providers (LSPs) in each cluster.

4.1.2 The LSPs are responsible for delivering a complete end to end managed service for Pathology which will ensure high levels of performance and enable national integration between each clusters Care Record Service.

4.1.3 Please note that the LSP for London is currently unable to a complete end to end managed service because they are technically unable to offer a centrally hosted solution from their data centres.

4.1.4 Consequently, the implementation of the Pathology additional service in London is only being offered as a locally hosted solution i.e. the hardware is purchased and supported by each site. The LSP does provide a 24 x 7 managed service to support the software.

4.1.5 The economic case is usually intended to confirm the preferred option, to establish the preferred scope of the local option and to demonstrate Value for Money in terms of costs, risks and benefits.

4.1.6 This economic case appraises the relative costs and key quantifiable benefits of local investment for a locally hosted Pathology system against a 'Do Minimum' scenario.

4.1.7 The aim is to provide a comparison of the quantified cash releasing and non-cash releasing benefits for the affordability analysis in the Financial Case, and the Benefits Realisation Plan and Risk Register within the Management Case.

4.2. Options

4.2.1 The business case assesses only one option which is to implement the CfH approved additional Pathology service offered by the London LSP.

4.2.2 The implementation of non-CfH approved Pathology system has not been considered because :

- our original procurement was suspended by NCLSHA in 2003 to ensure compliance with the wider CfH programme
- £300K of the capital funding has been provided by NCLSHA, who would not sanction the implementation of a non-CfH approved solution
- after waiting 3 years, the legacy Pathology system urgently needs to be replaced to minimise the risk of losing the entire service in the event of a catastrophic loss of the system. It would take at least 6 months to undertake an OJEU procurement followed by 6-9 months for implementation.

4.3. Economic Appraisal Assumptions

4.3.1 Costs

4.3.2 The following assumptions have been made when developing the costs :-

- the contract period for the investment appraisal will be for 8 years through to 2014/15, which is the NHS guideline for depreciating IT assets
- all revenue, and the majority of capital payments for the replacement Pathology system will be begin in 2007/08, following a projected go-live in March/April 2007
- there is no technology re-fresh during the 8 year period

4.4. Economic Appraisals

4.4.1 The table below summarises the the economic appraisal for the replacement Pathology system. The detailed appraisal is presented in section 6 : Financial Case.

Description	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	Total
	£000	£000	£000	£000	£000	£000	£000	£000	£000
Revenue Funding Surplus /Deficit (-)	-90	-60	-56	-52	-48	-44	-40	-65	**-424**
Capital Funding Surplus/Deficit (-)	7	0	0	0	0	0	0	0	**7**
Total Funding Surplus(-)/Deficit	**-83**	**-60**	**-56**	**-52**	**-48**	**-44**	**-40**	**-65**	**-445**

4.4.2 There is currently a **£445K** shortfall on the affordability of the replacement Pathology system implementation.

4.4.3 The affordability gap is all revenue, and is comprised of a :-

- net increase in the annual maintenance and support charges of @40K
- capital charges of between £145K-£120K per annum
- offset against cash releasing savings of between £65K-£120K per annum

5. Commercial Case

5.1. Introduction

5.1.1 The purpose of the Commercial Case is to outline the arrangements for the delivery of the replacement Pathology System.

5.1.2 Pathology is defined as an “additional” service under the CfH contract with the Cluster LSPs i.e. it is not centrally funded and requires local investment.

5.1.3 The LSP is contracted to the Secretary of State for the Department of Health, as the Contracting Authority. The CfH programme contract with the LSP is managed centrally by CfH who are the Authority’s representative and is supported at Cluster level by the Regional Implementation Director (RID).

5.1.4 For each “additional” service procured, there will be a separate contract between the local Trust, the LSP and application supplier, which for Pathology is CliniSys.

5.1.5 The centrally negotiated CfH/LSP contract has been negotiated to provide a high level of functional specification and service availability so that it will meet the overall vision for the NHS wide Care Record Service. The contract should also enable economies of scale to be accrued by purchasing a single cluster wide solution and thus ensure each Trust’s local investment delivers best value for money.

5.2. Specification of Requirements

5.2.1 The core software and annual maintenance must be acquired through the LSP. There is no option to procure direct from the supplier CliniSys. As the LSP cannot provide a centrally hosted solution form their data centre, Trusts have the option to procure the hardware through the LSP, the supplier or direct from the approved hardware supplier Dell.

5.2.2 On the advice of the LSP and the supplier to minimise costs, the hardware was purchased directly from Dell where a significant cost reduction was negotiated.

5.2.3 In addition, there are a number of optional software modules the Trust can purchase in addition the core software to enhance the functionality.

5.2.4 To develop this business case, the following actions have been completed to ensure the proposed solution meets the Trust’s specific requirements :-

- the detailed Output Based Specification (OBS) developed 3 years ago, as part of our original procurement project, was used a baseline to assess the system’s functionality
- the project team visited a number of NHS sites to assess the software functionality being used in a live working hospital
- the project team had a number of on-site demonstrations to work through issues in detail with the supplier
- the project team visited the suppliers headquarters to review the company set up in terms of size, installed NHS market share, annual turnover, support and

maintenance arrangements, project planning and implementation methodology, user groups, future development plans etc

- meetings with the Royal Free, as part of the Pathology modernisation review, who have used the system for a number of years to understand their experiences with the software and the supplier. The meeting also allowed the project team to understand the potential for changing their current working processes to improve the service quality and generate cash releasing savings

- a large number of meetings with the LSP to negotiate a £60K reduction for the cost of implementation and £16K per annum for annual support and maintenance. In addition, by reducing the number of optional software modules to be taken, a further £87K reduction has been achieved

5.3. Approval Process

5.3.1 The business case needs to be approved by the Whittington Trust Board to comply with the Trust's Standing Financial Instructions.

5.3.2 It has been reviewed and approved by the Pathology project team.

5.3.3 Once the business case has been approved, a contract between the LSP, the supplier CliniSys and the Trust will need to be signed and purchase orders raised to engage LSP resources.

5.4. Deployment Timetable

5.4.1 The proposed deployment slot for Pathology has been scheduled for March/April 2007.

5.5. Pathology Supplier & Solution

5.5.1 The LSP has contracted with CliniSys for the provision of their Winpath product as the Pathology additional service for London.

5.5.2 The LSP proposal is for a locally hosted solution and not a centrally hosted solution.

5.6. Payment Mechanism

5.6.1 The LSP contract is based on a fixed price dependent on the size of Trust and volumes of concurrent users.

5.6.2 The Whittington has been classified as a medium sized acute based on number of concurrent users (70) and analyser interfaces (20). This category has a fixed price of £368K for the core software.

5.6.3 The Trust will make payments to the LSP for Pathology Services as follows :-

Item	Proposed Supporting Payment
Deployment Charge	Fixed contractual cost – one off capital payment Optional one off capital payment for any optional modules purchased from the LSP
Service Charges	Fixed annual contract service charge paid in quarterly amounts Fixed annual contract service charge paid in quarterly amounts for any optional modules purchased from the LSP

5.7. Commercial Risk

5.7.1 This section provides a high level assessment of how the associated risks areas will be apportioned between the Trust and the LSP, in accordance with the general principle that risks should be passed to "the party best able to manage them", subject to Value for Money.

5.7.2 The table below outlines the placement of risk under the managed service contract structure for Pathology :-

Risk Category			
	Trust	LSP	Shared
1. Design Risk [may not apply]		✓	
2. Development & Implementation Risk			✓
3. Change Management Risk	✓		
4. Training/User Risk			✓
5. Operational Risk			✓
6.Termination Risk			✓
7. Technology & Obsolescence Risks			✓

5.8. Performance Options

5.8.1 This Service Agreement between CfH and the LSP sets out the standards to which the Contractor must deliver the Services, comprising three key areas :-

- Service Level Specification – which details the services to be provided and the levels of performance to be attained
- Service Failures – setting out the definitions, levels of failure and compensatory payments
- Performance Monitoring System – describing the procedures to be followed in gathering and reporting the performance achieved in the delivery of the contract

6. Financial Case

6.1. Introduction

6.1.1 The purpose of the Financial Case is to demonstrate affordability for the preferred option established in the Economic Case over the life of the contract.

6.1.2 It also sets out the anticipated payment stream for the investment over the life expectancy of the project and the Balance Sheet treatment of any assets underpinning the service provision.

6.2. Overall Affordability

6.2.1. The financial analysis below shows that the business case for the deployment of the replacement Pathology system is currently unaffordable with an affordability gap of **£445K** over the contract period April 2007 through to March 2015. This equates to @56K per annum.

6.2.1 This affordability gap all revenue, and is comprised of a :-

- net increase in the annual maintenance and support charges of @40K
- capital charges between £145K-£120K per annum
- offset against cash releasing savings of between £65K-£120K per annum

6.3. Overall Costs

6.3.1 The total costs for the deployment of the replacement Pathology service over the 8 year life of the project are **£2.8 million** :-

Cost Type	Description	Description	Cost (£000)
Capital	Core LIMS Application	Fixed cost from LSP	433
	Optional Modules	Additional to “core” application	48
	Implementation Charge	Negotiated cost from LSP	168
	Hardware	Negotiated cost from Dell	181
	IT infrastructure	Negotiated cost from Dell	100
	Total		**930**
Revenue	Annual Support	Fixed cost from CfH/BT	792
	Capital Charges	Fixed NHS calculation for IT over 8 years	1,038
	Total		**1,830**
Total			**2,760**

IT hardware and infrastructure and Capital Charges assume no technology refresh during the contract period 2007-15.

Pathology software support is a fully managed service, so VAT is excluded where it is re-claimable.

6.4. Overall Funding

6.4.1 The total funding available for the deployment of the replacement Pathology service over the 8 year life of the project is **£2.3 million** :-

Funding Type	Funding Source	Description	Funding (£000)
Capital	Whittington	Block Allocation	637
	NCLSHA	CfH Additional Allocation	300
		Total	**937**
Revenue	Whittington	Cash Releasing Benefits	905
	Whittington	Current Support Funding	473
		Total	**1,378**
Total			**2,315**

6.5. Annual Affordability, Costs and Funding

6.5.1 The tables below set out the detailed financial analysis for each year of the contract between 2007-15, split between capital and revenue, and costs and funding.

Capital Costs

Description	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	Total
	£000	£000	£000	£000	£000	£000	£000	£000	£000	£000
Software										
Core LIMS software	0	433	0	0	0	0	0	0	0	**433**
Optional Modules	0	48	0	0	0	0	0	0	0	**48**
Hardware										
EMC San storage	68	0	0	0	0	0	0	0	0	**68**
Dell Servers	54	0	0	0	0	0	0	0	0	**54**
Back Up device	39	0	0	0	0	0	0	0	0	**39**
Implementation										
BT Implementation	0	133	0	0	0	0	0	0	0	**133**
CliniSys Implementation	35	0	0	0	0	0	0	0	0	**35**
EMC and Dell Implementation	20	0	0	0	0	0	0	0	0	**20**
IT Infrastructure										
Network Upgrade	47	0	0	0	0	0	0	0	0	**47**
PCs	35	0	0	0	0	0	0	0	0	**35**
Printers/Bar Code readers	18	0	0	0	0	0	0	0	0	**18**
Total Capital Costs	**316**	**614**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**930**

Capital Funding

Description	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	Total
	£000	£000	£000	£000	£000	£000	£000	£000	£000	£000
Whittington Block	637	0	0	0	0	0	0	0	0	**637**
NCLSHA Additional allocation	300	0	0	0	0	0	0	0	0	**300**
Total Capital Funding	**937**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**937**

Revenue Costs

Description	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	Total
	£000	£000	£000	£000	£000	£000	£000	£000	£000
Annual Support and Maintenance	99	99	99	99	99	99	99	99	**792**
Capital Charges	115	140	135	131	128	124	120	145	**1,038**
Total Revenue Costs	**214**	**239**	**234**	**230**	**227**	**223**	**219**	**244**	**1,830**

Revenue Funding and Cash Releasing Benefits

Description	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	Total
	£000	£000	£000	£000	£000	£000	£000	£000	£000
Current support and maintenance	59	59	59	59	59	59	59	59	**473**
Voice recognition reporting/reduce admin staff	30	30	30	30	30	30	30	30	**240**
Electronic order sets/reduce MLA	0	30	30	30	30	30	30	30	**210**
Single reception for samples	25	25	25	25	25	25	25	25	**200**
Demand management of requests	0	25	25	25	25	25	25	25	**175**
Stop printing paper results	10	10	10	10	10	10	10	10	**80**
Total Revenue/Cash Releasing	**124**	**179**	**179**	**179**	**179**	**179**	**179**	**179**	**1,378**

Affordability Summary

Description	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	Total
	£000	£000	£000	£000	£000	£000	£000	£000	£000
Revenue Funding Surplus /Deficit (-)	-90	-60	-56	-52	-48	-44	-40	-65	**-424**
Capital Funding Surplus/Deficit (-)	7	0	0	0	0	0	0	0	**7**
Total Funding Surplus(-)/Deficit	**-83**	**-60**	**-56**	**-52**	**-48**	**-44**	**-40**	**-65**	**-445**

7. Management Case

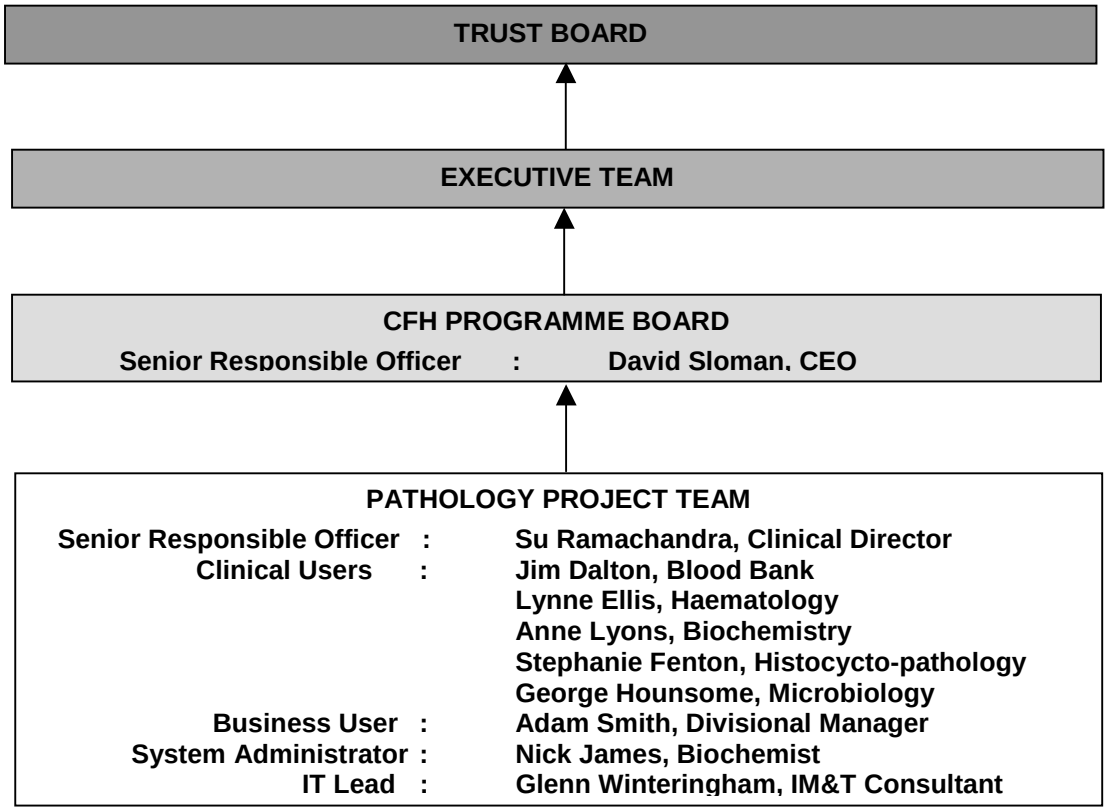
7.1.1 The purpose of the Management Case is to demonstrate that the project is well managed and can be successful.

7.2. Project Management Structure and Methodology

7.2.1 With an investment of the size and complexity of that proposed under this business case, sound project management is recognised as being of paramount importance.

7.2.2 The project will be managed using the PRINCE2 project management methodology, the NHS and Trust standard for all major IT projects.

7.2.3 The proposed project management structure is :-



7.2.4 It is proposed that the Clinical Director for Pathology will be the Senior Responsible Owner (SRO) for the replacement Pathology project.

7.2.5 The Divisional Manager for Diagnostic will be the executive lead on the replacement Pathology supported by the IM&T Consultant. Clinical ownership and leadership will be provided by the leads shown above for each discipline.

7.2.6 It is proposed that the replacement Pathology Project Team will meet weekly and report to the CfH Programme Board\Executive Team on a quarterly basis.

7.2.7 The project has the support of Trust senior executives and clinicians within the Trust.