



Health Informatics Strategy



	Health Informatics Strategy		
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1. Executive Summary

Brighton and Sussex University Hospitals NHS Trust (The Trust) strategic objectives are to become a leading UK teaching hospital, to be the provider of choice for local patients and the provider of specialist and tertiary services for the wider population of Sussex. The Trust will continuously improve secondary care services, develop trauma services, further develop tertiary services and enhance teaching and research - **The 3Ts Strategy**. To achieve its vision the Trust plans to become a Foundation Trust, enabling it to invest in innovative local patient services, and to improve the financial and information capacity of the Trust.

The Trust recognises that modern clinical and business IM&T is a vital and integral part of its overall healthcare activities and not just a support service. The Trust therefore intends to be at the forefront, both locally and nationally in this respect.

The Health Informatics Strategy sets out a clear direction for investment and supports the strategic direction of the Trust. Over 40 strategic steps, outlined below, address current weaknesses and take innovative opportunities to improve the Trust's Health Informatics Service.

2. Introduction

2.3a The Trust will adopt the term Health Informatics to describe the Trust's information, information technology and telecommunications activities.

4. Applications

4.1a The Trust will put in place robust system management arrangements for all Trust health informatics applications.

4.2a The Trust will progress with the roll out of Ardentia business intelligence system by the Trust's Central Information Unit to strengthen Service Line Reporting and enable Patient Level Information and Costing.

4.2b The Trust will roll out Rosterpro staff rostering system to all staff groups that would benefit from electronic rostering.

4.3a The Trust will carry out an options appraisal for the replacement of its current Microsoft Exchange 5.5 mail service.

4.4a The Trust will develop an Outline Business Case for an electronic patient record for the Board to consider.

4.4b If the case is made then the Trust will proceed to procure an electronic patient record through the Additional Supply Capability and Capacity procedure and to engage clinicians in the specification and selection of the system.

4.5a The Trust will seek to re-patriate and directly manage the Patient Administration System Managers (currently employed by Sussex Health Informatics Service) as employees of the Trust

4.6a The Trust will implement "in-hospital" Results Reporting and Order Communications in every phase of the electronic patient record programme.

4.7a The Trust will develop an image storage strategy to be implemented with the re-provision of the data centre to manage the storage, archiving and disposal of locally-stored diagnostic images. The storage strategy will take account of the needs of tertiary services and the current Mawell pilot.

4.7b The Trust will implement GP Radiology Results Reporting and Order Communications, probably through an extension of the Sunquest Anglia Ice solution being deployed in Pathology.

4.9a The Trust will implement the Theatre Scheduling module of the OMS Patient Administration System at the earliest opportunity.

4.10a The Trust will undertake a risk assessment of the current Maternity systems and produce an interim plan to secure any shortcomings.

4.10b The Trust will plan to include Maternity at an early phase of the electronic patient record after assuring that the system accommodates all statutory data collection and CNST.

4.11a The Trust will undertake a risk assessment of the current A&E system and produce an interim plan to secure any shortcomings.

4.11b The Trust will plan to include A&E at an early phase of the electronic patient record after assuring that the system accommodates all statutory data collection.

- 4.12a The Trust will upgrade to CCL Clinical Vision 5 to support the care of renal patients in Brighton and the Local Health Community and investigate the system's potential for managing patients with other long term conditions.
- 4.13a The Trust will work in partnership with the Local Health Community to provide modern health informatics solutions in support of patients whose care is delivered by a clinical network. The cornerstone of this solution will be the electronic patient record, interfaced initially to external partner pathology and imaging systems and eventually to their local electronic patient record system(s), with additional links to the Summary Care Record and Mawell virtual image store as appropriate.
- 4.14a The Trust will work in partnership with the Local Health Community to identify appropriate health informatics solutions to support the extension of high volume secondary care services into community care settings.
- 4.15a The Trust is committed to implementing an interim electronic discharge summary to enable GPs to receive summaries within 24 hours of discharge. The Trust will then implement a long term solution that includes TTO prescriptions with the electronic patient record.

5. Infrastructure

- 5.1a The Trust will review its requirements of the Sussex Health Informatics Service to include support for telecommunications and the electronic patient records.
- 5.2a The Trust, with the Sussex Health Informatics Service, will draw up options to secure health informatics services in the Trust during and following the planned 3Ts building programme.

6. Telecommunications

- 6a The Trust will commission a strategic review of telecommunications which will provide options to secure, modernise and exploit voice services.
- 6b The Trust will plan to minimise any interruption in voice services, beeps, pagers and alarms throughout all phases of 3T construction work.

7. Information Services

- 7.1a The Trust will enhance health informatics training to include the importance of data quality and data processes in delivering patient care.
- 7.1b Data quality monitoring will be further developed to ensure the efficacy of health informatics systems and processes.
- 7.1c Divisions will be held to account for data quality.
- 7.2a The Trust will instigate a review of the how the Patient Administration System is being used throughout the Trust in relation to standard operating procedures for the system.

- 7.3a The Trust's Information Services Department will evaluate its data validation procedures and seek to modernise and rationalise its data management processes.
- 7.3b Information Services will provide timely and appropriate feedback to system managers and users as soon as data discrepancies are identified.
- 7.3c The Trust will fully exploit the capabilities of the Ardentia business intelligence system.
- 7.4a The Trust will review requirements for information reporting and take steps to provide sufficient professional expertise to provide information interpretation and business intelligence tools that enable data mining.
- 7.5a The Trust will carry out a review of health informatics' policies
- 7.5b The Trust will review the need for a Trust-wide registration authority

8. Programme Management

- 8.1a The Trust will manage significant health informatics programmes using OGC's *Managing Successful Programmes*.
- 8.2a The Trust will develop a benefits management strategy for major change programmes involving health informatics.

9. Governance

- 9.1a The Trust will create the role of Director of Health Informatics and appoint a NHS health informatics professional with appropriate and senior experience and capability.
- 9.2a The Trust will create the role of Clinical Chief of Health Informatics and appoint an appropriate senior clinician to lead on the development of health informatics in support of patient care and clinical practice.
- 9.3a The Trust will create the role of Assistant Director of Information Technology to lead on the development and management of information and tele-communications infrastructure and to manage all contracts, service level agreements and licences from third parties including the Sussex Health Informatics Service.
- 9.3b The Trust will work with the Sussex Health Informatics Service to review and subsequently re-launch the provision of their services to the Trust.
- 9.4a The Trust will create the role of Assistant Director of Health Informatics Programmes to coordinate and programme manage all health informatics projects.
- 9.5a The Trust will create the role of Assistant Director of Information Services to develop and provide professional leadership for the Trust's Information Services Department.



2. Introduction

2.1 Background and Requirement

Brighton and Sussex University Hospitals NHS Trust (the Trust) is the teaching Trust in the South East Coast region and a large provider of specialised and acute hospital care services. The Trust operates from 2 main hospital sites, the Royal Sussex County Hospital (including the Sussex Eye Hospital and the Royal Alexandra Children's Hospital) in Brighton, and the Princess Royal Hospital (including Hurstwood Park Neurosciences Centre) in Haywards Heath.

The Trust is currently pursuing Foundation Trust status and expects to achieve authorisation by the end of 2010.

The Trust is seeking to reinforce its arrangements for IT to support its overall corporate business strategy, to contribute to continuously modernising and improving healthcare for the benefit of its patients and staff, to facilitate its teaching and research responsibilities and to provide a firm foundation for its statutory and mandatory reporting requirements, both locally and nationally.

Modern and appropriate IM&T is recognised by the Trust as being a vital and integral part of its overall healthcare activities – not just a support service - and the Trust intends to be at the forefront, both locally and nationally in this respect.

In 2001, the Trust Board agreed a comprehensive strategy for IM&T which built upon the extant NHS IM&T Strategy, *Information for Health*, and also acknowledged the potential opportunities in the emergent “National Programme for Information Technology” (NPfIT) which commenced in October 2002. The strategy was later updated to commit the Trust to the National Programme and specifically to the Care Records Service (CRS), which aimed to provide an Electronic Patient Record (EPR) by 2004.

While parts of the National Programme have been successfully implemented such as Picture Archiving and Communications Systems (PACS), the New NHS Network, and Choose and Book, other parts including the Care Records Service have been significantly delayed.

Trusts in the Southern Cluster – including the Trust – have been further disadvantaged as a result of the withdrawal of Fujitsu as the Local Service Provider (LSP) in the South. Connecting for Health (CfH) has not appointed an alternative Local Service Provider for the South. The NHS South East Coast is currently exploring alternative routes to deliver limited elements of Care Records Service through a number of “Additional Supply Capability and Capacity” (ASCC) framework contracts.

The configuration of the solution being considered by the NHS South East Coast through the Additional Supply Capability and Capacity framework is unclear. As it is unlikely to result in a single domain solution across the Southern SHAs, or even as an Application Service Provision - where the application server is on the contractor’s site - then the strategy of using a domain-wide IT services provider such as Sussex Health Informatics Service (Sussex HIS) is also brought into question.

Sussex HIS was established in July 2004 to “provide effective IM&T services ...and to meet the challenges of the National Programme for IT...”. In particular, the single Local Service Provider model for Care Records Service was expected to enable resources and learning to be shared, and economies of scale to be achieved by the use of a centralised help-desk, single registration authority activity, shared project management, and single point of communication and relationships with the Local Service Provider, as well as standardisation of technology including hardware and networking.

This “one size fits all” IM&T Service may not be appropriate if the Trust procures an Electronic Patient Record through Additional Supply Capability and Capacity or any other competitive route.

2.2 Requirements

As a consequence, the Trust wishes to review its current and future strategic and operational arrangements for IM&T to include:

- to link future IM&T developments to the strategic direction of the Trust, including the Trust’s “3Ts Strategy”
- to ensure the strategy identifies the implications of national policy e.g. NHS 2010-2015 / National Operating Framework etc.
- to assess the risks and dependencies associated with the strategy

- to identify proposals for governance and reporting arrangements
- to identify enabling strategies / work streams e.g. training, knowledge-management, flexible and mobile working etc.
- to support the Trust's core business functions including provision of secondary, tertiary and regional speciality care as well as service transformation
- to support the development and delivery of acute services to the commissioners who contract with the Trust, including commissioners' requirements for the provision of timely, accurate, and meaningful information to justify financial transactions between them
- to review and recommend a 5-year strategic investment plan for IT, to enable the Trust to prioritise and ensure best value for money IM&T investments that meet its business and clinical needs
- to provide the Trust with a clear understanding of its requirements from the National Programme for IT, including proposals for any revised arrangements in the light of continuing unavailability of suitable national strategic solutions, and which will enable the Trust to secure e.g., an Electronic Patient Record system or service which will satisfy and, preferably, exceed the national strategic requirements in relation to the Care Records Service

The review and recommendations should include consideration of:

- information technology
 - infrastructure
 - patient and business systems
- information services
 - collection, processing, reporting and interpretation of activity data
- information governance
- staffing – current and future requirements
- change management

The review should also

- evaluate the investment and development route necessary to migrate the Trust's current IM&T arrangements and environment safely and seamlessly from the current state to the future (recommended) state as part of which should include the options available for the Trust's future strategic and operational management of IM&T

2.3 Terminology

The use of the term IM&T is diminishing within the NHS. National guidance refers to the more modern terminology Health Informatics. Health Informatics is defined as: *the knowledge, skills and tools that enable information to be collected, processed, managed and shared to support the delivery of healthcare*. For the sake of this review, Health Informatics encompasses information technology infrastructure and applications, information services, telecommunications and associated programme, benefit and change management.

2.3a **The Trust will adopt the term Health Informatics to describe the Trust's information, information technology and telecommunications activities.**



3. Strategic Context

3.1 National 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 2010/11* 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 3 years. Towards this, Payment by Results has been amended to encourage commissioners to negotiate on tariff prices and activity volumes.

The response to meeting the national strategic objectives is set out in the Trust's Strategic Vision and Integrated Business Plan.

3.2 The National Programme for IT

The national direction with regard to Health Informatics is less clear. *Informatics Planning 2010/11* encourages health organisations to ‘connect all’ and to make best use of the services that are currently available from the National Programme. The lack of progress with the key provider solution, the Care Records Service, brings continued uncertainty to the future of the National Programme in its current form.

3.3 Local Context

The Trust’s vision is to become a leading UK teaching hospital. To achieve this, the Trust plans to become the provider of choice for local patients and the provider of specialist and tertiary services for the wider population of Sussex.

The vision is defined by the Trust’s strategic objectives; to continuously improve secondary care services, to develop trauma services, to further develop tertiary services and to enhance teaching and research at the Trust – encapsulated as the **3Ts Strategy**, all of which will be underpinned by improvements in the financial and information capacity of the Trust.

To achieve its vision the Trust will maintain its position of being “tough on performance and decent with people”. The Trust also believes that the vision and the benefits that it will derive for patients is best delivered as a Foundation Trust enabling it to invest in innovative local patient services.

The Trust is clear on how it will support the national direction of moving care closer to the patient and will introduce new models of care, in partnership with commissioners and the local health community.

The Trust has a track record of good performance against key targets. Over the past three years the Trust has delivered £57m of savings. It has a clinically-led approach to delivering performance against key national indicators with the executive team providing direction and strong leadership.

The planned shift of services away from secondary care and the economic downturn provide the perfect storm through which the Trust must navigate by:

- working closely with neighbouring Trusts and the local health community
- partnering with the Brighton and Sussex Medical School
- innovating services
- making best effective use of resources
- providing the best patient experience by focusing on quality and patient safety
- reducing length of stay and bed occupancy
- becoming a Foundation Trust
- developing tertiary and trauma services
- providing clinicians with the best information on which to make decisions

The Trust also recognises that currently, Health informatics is not as strong as it could be for a Trust of this size. The aim of this strategy is to fix that weakness and to enable the Trust to fully utilise health informatics in support of its vision and ambition.



4. Applications

4.1 Background

The Trust has not been well served by the National Programme for IT. As a timetabled early adopter of R1 Cerner Millennium, the Trust spent considerable time and effort preparing for the Care Record Service. It also held back on some key application procurements, assuming that the Care Record Service would provide the required capability. At the same time the Trust outsourced its health informatics staff to the Sussex Health Informatics Service and for a time the Trust did not have any internal expertise to advise and guide them on health informatics. As a consequence departments and individual staff have since filled the vacuum left by NPfIT with a range of, mostly standalone, applications to meet their specific needs. The Trust needs to ensure that every business and patient application is properly managed in line with NHS health informatics guidance.

Working with the Sussex Health Informatics Service the Trust will ensure that its legal obligations and reputation for integrity are maintained by:

- implementing and operating robust software licence management
- ensuring that all commercial applications have a current licence
- ensuring that all current applications are within the Terms and Conditions against which they were procured, and are not unlawfully being “rolled over” as the contract term expires
- ensuring that all applications are supported to include;
 - a Trust-employed system manager responsible for information governance, database integrity, user training, reporting, contingency, business continuity and licences
 - Sussex Health Informatics Service first-line help-desk
 - local or third-party second-line application and database support.
- the use of all applications must be risk-assessed with an impact analysis based on 1 hour, 1 day and 1 week downtime
- system managers must ensure that contingency plans are developed and where possible tested as appropriate to the risk assessment
- locally developed applications must be maintained and kept up to date by the appropriate development team including, where appropriate, the Sussex Health Informatics Service
- use of applications must be evaluated with the NHS information governance toolkit
- the Trust will develop a model systems manager job description

4.1a The Trust will put in place robust system management arrangements for all Trust health informatics applications.

The following section describes the position with regard to a number of key Trust applications. It also provides a clear strategic direction in response to the Trust’s ongoing demand for modern health informatics solutions.

4.2 Business Systems

The Trust uses a range of business applications that are common to NHS acute Trusts:

- Oracle Financials
- NHS Electronic Staff Record (ESR) HR/payroll system
- NHS Shared Business Services IPROC procurement management
- HMT Rosterpro staff rostering and bank system
- FSI Computer Aided Facilities Management Software
- Microsoft Exchange eMail

The ledger, HR / payroll and procurement systems are capable products with national support and user-groups. Support for the Oracle Financials is provided by Paytech. Sussex Health Informatics Service provides infrastructure support including backups.

Although Oracle Financials and ESR are common NHS applications (the latter being provided as a remotely-managed service) the systems do not easily integrate with each other or with PAS and other patient systems – a pre-requisite for further developing Service Line Reporting (SLR) and Patient-Level Information and Costing (PLICs). Also, users are not able easily to produce ad-hoc reports. This is partly overcome by using third-party business

intelligence systems such as PureApps Hyperion and CACI Synergy and also by having expert users for both systems able to extract, reconcile and process data.

Elsewhere the Trust's Central Information Unit has invested in the Ardentia business intelligence system which reports to have both SLR and PLICs capability and is being carefully brought online for Referral to Treatment (RTT) and performance reporting. The Trust would benefit from utilising the capabilities of the Ardentia business intelligence system to further develop Service Line Reporting (SLR) and to introduce Patient-Level Information and Costing.

The Trust is currently implementing Rosterpro staff rostering system, firstly in the wards and then in Theatres and Maternity. A key strength of the system is its ability to interface with Bank Nursing and ESR. Rosterpro is therefore the rostering solution of choice for all Trust staff groups.

4.2a The Trust will progress with the roll out of Ardentia business intelligence system by the Trust's Central Information Unit to strengthen Service Line Reporting and enable Patient Level Information and Costing.

4.2b The Trust will roll out Rosterpro staff rostering to all staff groups that will benefit from electronic rostering.

4.3 Email

In common with many large providers the Trust runs a local email service based on Microsoft Exchange. However, the Trust runs an obsolescent version of Microsoft Exchange (5.5) which has not been supported by Microsoft since 2006.

The Trust has two options; to migrate to NHSMail which is a free service from Connecting for Health or to fund a local upgrade to Microsoft Exchange 2007. The Trust needs to understand the advantages, disadvantages and costs associated with each option before making a decision. NHSMail will be free to the Trust for at least the next three years and has superior security for messages sent within government departments. However NHSMail currently has limited mailbox sizes and cannot integrate with IP telephony, workflow, and collaboration (videoconferencing) tools. Many large NHS Trusts are delaying migration to NHSMail until these limitations are dealt with.

The Trust will upgrade its email service. However, the choice is finely balanced between cost and capability. A more detailed cost benefit analysis needs to be undertaken setting out the options for the Trust so that an early decision can be taken.

4.3a The Trust will carry out an options appraisal for the replacement of its current Microsoft Exchange 5.5 email service.

4.4 The Electronic Patient Record

The Case for the Electronic Patient Record

The NHS IM&T strategy, *Information for Health*, noted that the NHS needed accurate and instantly-accessible information to improve care for patients and performance. The focal point of the strategy was the electronic patient record, supporting patient care and clinical practice. The National Programme for IT was then set up to progress electronic patient records through ruthless standardisation and national procurements. The Trust recognised the value and need for an electronic patient record and was an early candidate for the NPfIT Care Record Service. The case for the electronic patient record was strong then. It is much stronger now.

For the purpose of this strategy an electronic patient record is defined as ***the health informatics information and applications that support clinicians in providing safe, effective, efficient and quality patient care.*** The electronic patient record is a tightly-integrated suite of health informatics functions that provide all clinicians involved in the care of a patient with up to the minute information on the condition and care being received by the patient plus a suite of applications designed to support clinical decision making and the delivery of that care.

The recognised suite of functions includes:

- results reporting
- orders processing (order communications)
- electronic prescribing (including medication administration recording)
- clinical documentation (including correspondence and observations)
- complex scheduling
- clinical decision support
- integrated care pathways

The electronic patient record will be the single source of information about the patient and the care being provided by the Trust, replacing the majority of paper notes and introducing a single structured electronic record. The electronic patient record will be implemented in all specialties and support service departments. It will be configured to meet the Trust's clinicians' needs taking account of Trust practices and policies. It will be continuously supported and configured to reflect ongoing changes in clinical practice and patient services at the Trust. The electronic patient record will therefore be a powerful tool for enabling, supporting and sustaining change.

Integrated Care Pathways

At the heart of the electronic patient record is the integrated care pathway.

“An integrated care pathway determines locally agreed multidisciplinary practice, based on guidelines and evidence where available for a specific patient / client group. It forms all or part of the clinical record, documents the care given and facilitates the evaluation of outcomes for continuous quality improvement” (National Pathways Association 1998).

A second definition helps to further explain a pathway:

“Integrated care pathways are structured multidisciplinary care plans which detail essential steps in the care of patients with a specific clinical problem and describe the expected progress of the patient” (Campbell H, Hotchkiss R, Bradshaw N, Porteous M (1998) *Integrated care pathways* British Medical Journal 316, 133 - 137).

Pathways can be developed to support planned changes in a patient care process including the *High Impact Care Bundles*. The Trust is progressing care pathways through a number of development initiatives including the 3Ts and the PWC efficiency programmes.

Integrated care pathways are notoriously difficult to implement on paper. A ubiquitous electronic patient record, collecting all information into one single record and providing advice and guidance for individual healthcare professionals is the single most effective approach.

Benefits

The electronic patient record is a health informatics system that supports the Trust’s core business; as such it can be expected to deliver significant benefits for patients, clinicians and the Trust itself:

- greater patient safety
 - safer medications and transfusions
 - a unified patient record across all health professions
 - better informed clinicians
 - evidence-based advice and guidance
- higher quality of care
 - care resources are scheduled around the patient’s needs
 - all clinicians ‘know’ the patient, condition and care being provided
 - junior clinical staff have instant access to embedded locally determined advice and guidance
- more professional working environment
 - better access to information
 - simplified transactions (orders)
 - reduced paper-work
 - greater clinical team working (less working in isolation)
 - shared record and pathways
- reduce transaction costs
 - reduced drug usage and costs
 - reduced diagnostic costs
 - reduced length of stay
 - reduced bed occupancy
 - better theatre utilisation
- reduced (eradicated) outliers
- real time bed state
- discharge planning
- effective tracking and follow up of patients

The electronic patient record will underpin the Trust's strategic direction of becoming a leading UK teaching hospital by providing;

- the right information, in the right format, at the right time to support quality and safety of patient care
- the information necessary to make informed decision making
- the information required for self assessment to monitor and manage performance
- accurate and timely information on care provided to secure income and meet contractual obligations

Approach to Electronic Patient Record

Recent LSP "contract re-sets" by Connecting for Health has already reduced the original specification of the Care Record Service to 'the Clinical 5' which excludes integrated care pathways. *Informatics Planning 2010/11* requires organisations to set out when the Clinical 5 will be used, whether procured via a Local Service Provider, the Additional Supply Capability and Capacity procedure or 'local'.

Without a Local Service Provider in the South, the Trust can no longer expect to be supplied with an electronic patient record via the NPfIT Care Records Service. The NHS South East Coast is proceeding to procure Framework Agreements for the Clinical 5 in a piecemeal fashion starting with electronic prescribing and order communications. The Trust recognises these applications may have value in themselves but also realises that they are only part of the required solution. The Trust wishes to have comprehensive integrated electronic patient records and notes that these systems have been implemented successfully in similar-sized acute teaching hospitals. Indeed, by taking the putative NHS South East Coast offering, the Trust would introduce further delay, cost and complexity as they would need to be replaced by a fully-integrated electronic patient record system.

The Trust will however retain its legacy NHS-compliant Patient Administration System (PAS), Pharmacy, Laboratory and Radiology information systems. These systems protect the Trust's income and, via their third-party contracts, will accommodate future changes in the NHS compliance and remuneration framework. With PAS, Pharmacy, Laboratory and Radiology information systems as a foundation (fig 1) the Trust can also consider electronic patient record systems developed and used outside of the NHS, whilst still available through the Additional Supply Capability and Capacity framework.

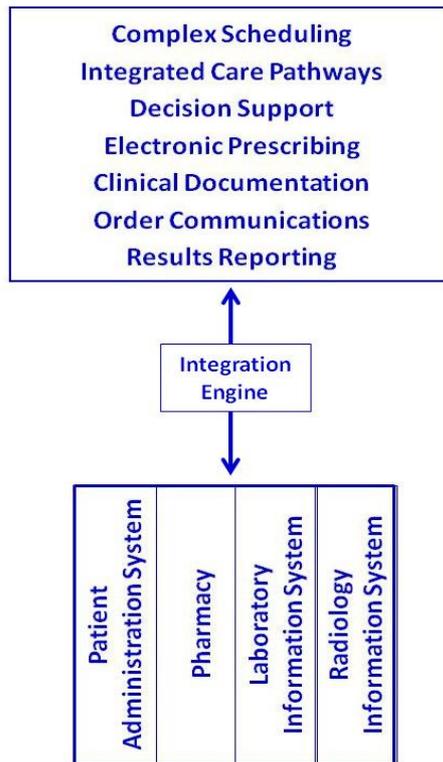


Fig 1. Electronic Patient Record

The Trust will consider the business case for the electronic patient record and if found appropriate and affordable will plan to procure the best, most suitable electronic patient record for the Trust. The Trust will ensure that clinicians lead on the specification, selection, configuration and implementation of the electronic patient record.

A model procurement and deployment timetable is shown below. The Trust recognises that the timetable will depend upon effective clinical engagement, programme management and procurement expertise.

Outline Business Case	2 months
Board approval to procure	
Output Base Specification	2 months
ASCC procurement	4 months
Further competition procedure notice	
Site visit and demonstrations	
Evaluation of responses / recommendation	
Full Business Case	1 month
Board approval to proceed	
Due diligence	1 month
1st specialty go-live	9 months
Remaining Trust go live	24 months

4.4a The Trust will develop an Outline Business Case for an electronic patient record for the Board to consider.

4.4b If the case is made then the Trust will proceed to procure an electronic patient record through the Additional Supply Capability and Capacity procedure and to engage clinicians in the specification and selection of the system.

4.5 Patient Administration System

The Trust has recently re-procured the Oasis Medical Solutions (OMS) Patient Administration System. The system will be implemented and supported directly by OMS and includes options for Theatre Scheduling and e-Discharge Summaries. OMS is a UK Patient Administration System compliant with Payment by Results, Practice Based Commissioning and the Connecting for Health Spine. The new contract starts in June 2010 and is for an initial period of three years with an option to extend for four further years. The OMS Patient Administration System is a sound foundation for an electronic patient record.

The system managers for the Patient Administration System are currently on the payroll of the Sussex Health Informatics Service. They are the only managers of Trust systems not employed directly by the Trust and yet the Patient Administration System is the mission-critical system and the basis for the majority of activity returns and Trust income. The Trust will address this inconsistency and re-patriate the Patient Administration System Managers, retaining and making best use of their expertise for the Trust's advantage.

4.5a The Trust will seek to re-patriate and directly manage the Patient Administration System Managers (currently employed by the Sussex Health Informatics Service) as employees of the Trust

4.6 Pathology

The Trust runs the Clinisys Winpath laboratory information management system (LIMS). The contract is in its final year and therefore the Trust is procuring a new contract for a laboratory information management system through the Additional Supply Capability and Capacity procedure. The new contract is planned to be in place on 1st September 2010.

The Trust is implementing Pathology order communications and results reporting for Primary Care and wishes to implement "in-hospital" order communications for the Trust itself. Primary Care results reporting (and eventually Order Communications) uses Sunquest Anglia ICE. In-hospital order communications and results reporting must be fully integrated core functions of the electronic patient record. This enables Trust clinicians to have a single clinical information system minimising errors. The Trust will deploy "in-hospital" order communications throughout the electronic patient record programme.

4.6a The Trust will implement "in-hospital" Results Reporting and Order Communications in each phase of the electronic patient record programme.

4.7 Imaging / PACS

The Trust uses the HSS CRIS Radiology Information System. This is an NPfIT Local Service Provider system delivered as an Application Service Provider remote solution. It provides a further element of the foundation for electronic patient records. The Trust also runs the Local Service Provider GE PACS system which is also an Application Service Provider solution. Images are stored on the Local Service Provider's remote and backup image stores. The Trust also has a local 12tb image store capable of storing 4 years of images and with 1 year's storage capacity left. The Trust will develop an image storage strategy with the re-provision of the data centre to manage the storage, archiving and disposal of locally stored diagnostic images. PACS runs on leased standalone workstations which cannot be used to access Trust applications. The Trust will address this restriction.

The Trust is piloting the Mawell (Sweden) virtual patient document. Mawell aims to provide transparent communication across local systems enabling remote access via a virtual private network (VPN) for clinicians working in tertiary services and clinical networks to diagnostic images.

The Trust is committed to provide Radiology results reporting and order communications for GPs and has a specification in readiness. The Trust will investigate the opportunity to extend the Sunquest Anglia Ice solution for radiology results reporting and order communications.

4.7a The Trust will develop an image storage strategy to be implemented with the re-provision of the data centre to manage the storage, archiving and disposal of locally stored diagnostic images. The storage strategy will take account of the needs of tertiary services and the current Mawell pilot.

4.7b The Trust will implement GP Radiology Results Reporting and Order Communications, possibly through an extension of the Sunquest Anglia Ice solution being deployed in Pathology.

4.8 Pharmacy

The Trust uses JAC Pharmacy, one of two pharmacy information systems in common use in the NHS. The JAC Pharmacy system provides a further element of the foundation for electronic patient record.

4.9 Theatres

The Trust does not use a commercial Theatre Information System. In house applications have been developed for Theatre List, Trauma and CEPOD. Theatre scheduling, utilisation and planning will be available within an electronic patient record; until then an interim solution is required to support Trust plans to improve Theatre utilisation and capacity management. The new Patient Administration System has a basic Theatre Scheduling module which can be used in the interim.

4.9a The Trust will implement the Theatre Scheduling module of the OMS Patient Administration System at the earliest opportunity.

4.10 Maternity

The Trust uses two Maternity systems; Terranova, is used in the Royal Sussex County Hospital and iSoft's Protos maternity system is used in the Princess Royal Hospital. These systems have been in use since before the Trust came into being in 2002 without contract renewal, indicating that they are well past their original contract dates and in need of market-testing. However a future electronic patient record will provide the majority of maternity information requirements. Therefore to impose a 9-month procurement and system change on this busy department and then again shortly afterward carries significant risks and will be difficult to justify in terms of value for money.

The Trust will evaluate the risks associated with maintaining the two current Maternity systems and where possible mitigate through local information processing. The Trust will plan for the electronic patient record to be implemented in Maternity at an early phase.

4.10a The Trust will undertake a risk assessment of the current Maternity systems and produce an interim plan to secure any shortcomings.

4.10b The Trust will plan to include Maternity at an early phase of the electronic patient record after assuring that the system accommodates all statutory data collection and CNST.

4.11 Accident & Emergency

A&E is an important health informatics system for the Trust. Many patients are registered and admitted through A&E. The system must also produce data for re-imburement and quality returns.

The Trust has consolidated from two A&E systems onto the Ascribe Symphony A&E system. The system is supported by an A&E system manager and data quality manager. Symphony provides most of the requirements of the Department however the consolidation has left database problems which need to be resolved before moving to the currently-available version. The Trust will seek clarification as to who is responsible and has the skills to resolve the database issues. Standard upgrades are available free of charge within the support contract. However some desirable enhancements may incur an additional charge. Ascribe is reported as not being as responsive as the predecessor company, Footman-Walker, in supporting the product and no out-of-hours support is provided by the Sussex Health Informatics Service.

The consolidation was undertaken without a re-procurement and therefore the A&E system is overdue for a market test. However the system will be replaced at an early phase of the electronic patient record.

4.11a The Trust will undertake a risk assessment of the current A&E system and produce an interim plan to secure any shortcomings.

4.11b The Trust will plan to include A&E at an early phase of the electronic patient record after assuring that the system accommodates all statutory data collection.

4.12 Renal

The Renal Specialty uses Clinical Computing Ltd's Clinical Vision 4 renal system. The Department is developing new ways of working across the local health community and is planning to introduce the latest web-based version of the system, Clinical Vision 5 (CV5). The Division of Specialised Services will also look at the opportunity to use CV5 for the management of other long-term conditions. These services will eventually be supported by the electronic patient record which will also provide an effective clinical information infrastructure on which to base tertiary services and, potentially, the extension of secondary care services into the local health community.

4.12a The Trust will upgrade to Clinical Vision 5 to support the care of renal patients in Brighton and the Local Health Community and investigate the system's potential to managing patients with other long term conditions.

4.13 Tertiary / Specialist Services

The delivery of high quality and efficient healthcare will need increasing integration of patient-centred care across healthcare sectors. To deliver this, clinicians need to have access to all relevant clinical data on the patients under their care. As a result, there is an urgent need to move from the current total separation of primary care and secondary care patient records, to a situation where at the very least clinicians, wherever they are, can access clinical data on their patients regardless of their location or the location of their medical record. The current consequences of distinct records include medication and allergy errors, inadequate or inaccurate knowledge of the patient's clinical history, significant duplication and delays to the optimisation of care.

Ultimately, primary and secondary care clinicians should share the same patient record. Although this is being introduced across the UK by the National Programme for IT as a Summary Care Record, this remains some way off. The Trust and the local health economy should be ambitious in seeking ways to maximise the electronic sharing of clinical information by improving access by primary and secondary care clinicians to each other's electronic patient records.

The Trust's preferred approach therefore is to implement a comprehensive electronic patient record and, as a second step, to interface this into neighbouring organisation pathology and radiology systems, potentially through existing Sunquest Anglia Ice systems. The next step will be to interface to neighbouring organisation's electronic patient record systems as they are implemented. Finally, if appropriate, the Trust will link with the national Summary Care Record to widen access to basic summary clinical data.

This approach builds on what is commercially available and supported now. The Trust does not support building an intermediate Sussex summary care record, the Sussex Clinical Information Portal as proposed by Sussex Health Informatics Service,.

4.13a The Trust will work in partnership with the Local Health Community to provide modern health informatics solutions in support of patients whose care is delivered by a clinical network. The cornerstone of this solution will be the electronic patient record, interfaced initially to partner pathology and imaging systems and eventually to their local electronic patient record system, with additional links to the Summary Care Record and Mawell virtual image store as appropriate.

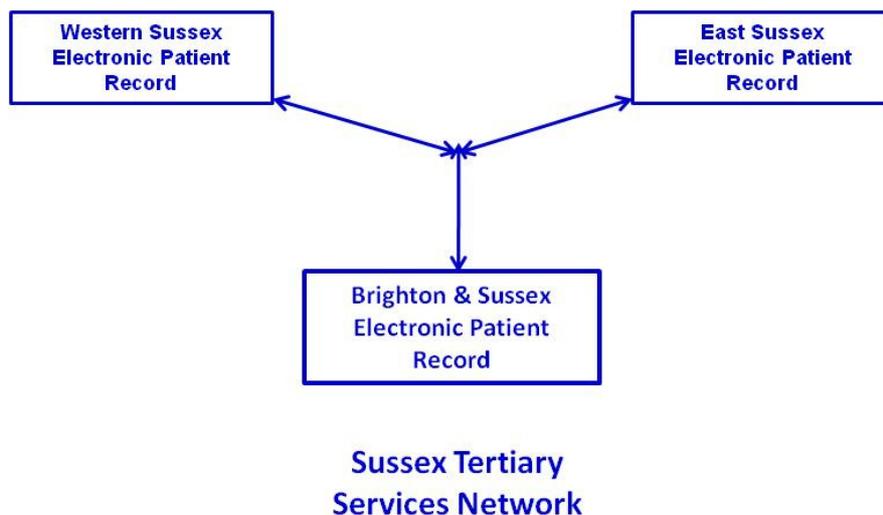


Fig 2. Outline schematic of a tertiary services health informatics network

4.14 Extended Services

The Trust is working in partnership with the Local Health Community to provide an extension of some high volume services in a community or primary care setting. Health informatics support for clinicians delivering these services will depend upon the actual setting in which the services are delivered. The options include community clinical information systems such as SystemOne from TPP or an extension of the Trust's electronic patient record. For clinicians to operate across both settings the clinical information system may need to be interfaced or at the very least, access provided across the local health community. Once the service models have been agreed the Trust will work in collaboration to identify a suitable, secure and effective solution.

4.14a The Trust will work in partnership with the Local Health Community to identify appropriate health informatics solutions to support the extension of high volume secondary care services into community care settings.

4.15 e-Discharge

The Trust is committed to provide GPs with a discharge summary within 24 hours of the discharge of their patients. A pilot using just the OMS patient administration system proved too cumbersome and unsafe to implement. The Trust will now evaluate using the OMS patient administration with embedded JAC Pharmacy TTO prescribing as an interim solution until the electronic patient record is implemented when discharge summaries will be generated and electronically transmitted to GP practice systems.

4.15a The Trust is committed to implementing an interim electronic discharge summary to enable GPs to receive summaries within 24 hours of discharge. The Trust will then implement a long term solution that includes TTO prescriptions with the electronic patient record.



5. Infrastructure

5.1 Sussex Health Informatics Service

The Trust's health informatics technology infrastructure has been managed by the Sussex Health Informatics Service for the past 6 years. Sussex Health Informatics Service has reported that the Trust's technology infrastructure is sound and well supported. The Sussex Health Informatics Service use the NHS Informatics Maturity Model (NIMM) to evaluate and plan hardware upgrades. Most servers have been virtualised and once the obsolescent servers are decommissioned there will sufficient rack space for the electronic patient record. There is sufficient power and battery backup and plans are in place to upgrade the air-conditioning to provide sufficient cooling for the summer months and any additional servers or storage arrays. Backups are carried out at agreed frequencies and down times whether scheduled or unscheduled are within agreed limits.

The Sussex Health Informatics Service is aware that the Trust's LAN requires attention and has plans in place to carry this out. The recently-installed wireless LAN is fully operational. The Trust is on the Sussex COIN WAN with a Point of Presence housed in the Royal Sussex County Hospital Data Centre. Desktop PCs are subject to an annual rolling replacement

programme as they come out of warranty. Printers are leased on a separate contract. The Sussex Health Informatics Service report that response times for corporate applications are within those agreed in the Service Level Agreement and that help desk response and fault repair times are within agreed service level targets.

The Trust will review with The Sussex Health Informatics Service how priorities are assigned to user calls and the operating hours of the help desk to ensure that the service meets Trust user expectations now and in the future.

5.1a The Trust will review its requirements of the Sussex Health Informatics Service to include support for telecommunications and the electronic patient records.

5.2 3Ts

The planned major capital development of clinical services on the Royal Sussex County site will have a significant impact on the health informatics service. There will be a prolonged period of building work with the risk of power and network outages and of dust damage. Both the data centre and the telephone switch are scheduled for demolition during phase two of the programme.

Working with the Sussex Health Informatics Service the Trust will develop plans to mitigate each risk. New fibre data and voice trunk circuits are planned to be installed away from the construction areas to secure services during phase one of the programme. The Trust is reviewing options to relocate the data centre and telephone switch ahead of phase two of the programme. The COIN point of presence will also be relocated, probably to a local BT exchange.

5.2a The Trust, with the Sussex Health Informatics Service, will draw up options to secure health informatics services in the Trust during and following the planned 3Ts building programme



6. Telecommunications

Voice and data communication technologies are becoming increasingly integrated and inter-dependent. The Trust recognises that supporting patient services with modern health informatics includes the effective use of merged voice and data technologies.

The Trust has two 2-year old IP enabled PABX switches, one at the Royal Sussex County Hospital, the other at the Princess Royal Hospital, interconnected by an IP trunk. The switches have a combined 6,000 extensions and adequate capacity for the future including for the planned 3Ts. Seventy Voice Over IP (VOIP) installations have been implemented at the Park Centre and the Trust is also implementing Interactive Voice Response.

The 3T programme is considering a number of modern voice and data services to support new ways of working including IP telephony which enables the convergence of computer services, email, work-flow, telephony, paging and video-conferencing. The Trust will need to consider this case carefully including the write-down of a two year old PABX switch.

However the Trust also recognises that the telephone switch room at Royal Sussex County Hospital is planned to be demolished in phase two of the 3T development requiring the PABX switch to be either re-housed or replaced at that time. The Trust will also plan to

minimise any interruption in voice services, bleeps, pagers and alarms throughout all phases of 3T building work.

The Trust will carry out a Telecommunication Strategic Review as a matter of urgency and consider the options for the pre-provision of telecommunications services in readiness for the start of the 3T development.

At present Sussex HIS are not contracted to provide support for voice services in the Trust and yet they have been leading in many respects on the planning for voice services within the 3T programme. The Trust will evaluate the support arrangements for telecommunications as modern IP telephony services are introduced.

6a The Trust will commission a strategic review of telecommunications which will provide options to modernise and exploit voice services.

6b The Trust will plan to minimise any interruption in voice services, bleeps, pagers and alarms throughout all phases of 3T construction work.



7. Information Services

The Trust's Information Services Department manages the flow of performance and commissioning data from operational services and systems to the regulators and commissioners. It also provides feedback of this data to operational services, the Divisions and the Trust Board.

The Trust has placed significant focus on meeting its regulatory and performance obligations over the past few years. This has required effective information management to provide the Trust with accurate, timely and relevant information reporting that provides a true picture of the performance of the Trust services across a range of parameters. The demand for information is growing at an unprecedented rate as a result of more complex commissioning rules, greater regulatory requirements and the drive for quality and efficiency.

Information Services are the conduit for information flows in support of the business. As the focus turns to implementing clinical information systems, the Trust will see an order of change in the volume, complexity and quality of the data it has available. This will result in further demands being placed on Information Services to support care and capacity planning.

The Trust will therefore require Information Services to change and modernise to meet these challenges.

7.1 Data Quality

The Trust is aware of the need to maintain and improve data quality. A Data Quality unit has recently been set up and is focusing on ensuring that all activity is collected not only to secure re-imburement but as a precursor to quality care. The deployment of the electronic patient record will require data quality to be everyone's responsibility. The Trust will enhance data entry and application training, emphasising the importance of each person's role in the care pathway. The Trust will monitor a broad range of data quality parameters as indicators of the efficacy of the Trust's health informatics systems and processes. The Trust will monitor and hold Divisions accountable for their data quality.

7.1a The Trust will enhance health informatics training to include the importance of data quality and data processes in delivering patient care.

7.1b Data quality monitoring will be further developed to ensure the efficacy of health informatics systems and processes.

7.1c Divisions will be held to account for data quality.

7.2 Data Collection

Information Services produces weekly, monthly and quarterly returns for the Department of Health, CQC, the SHA and PCTs plus a scorecard report for the Trust Board and a web-based performance report for the Divisions. The data sources for these reports are significant and diverse, many involving manual collection of data, spreadsheets and at least 21 standalone databases.

50% of the data collected for the Trust dashboard is collected manually using local databases, especially the qualitative data items. Where possible all data should be collected only once and primarily for patient care. This ensures that the data is relevant and that collection is not seen as an overhead.

Currently the Patient Administration System is the most significant data source for the Trust. How the Patient Administration System is used reflects directly on the Trust's re-imburement and performance. The Trust will undertake an audit of how the Patient Administration System is used throughout the Trust to ensure that the system is used to maximum benefit.

7.2a The Trust will instigate a review of the how the Patient Administration System is being used throughout the Trust compared against standard operating procedures for the system.

7.3 Data Processing

To ensure that the returns meet national guidance, Information Services validates and processes the data extracts. The Trust will review the validation processes and ensure that they are robust, appropriate, well-supported and make best use of modern data processing capabilities. Where data discrepancies are found, Information Services will provide timely and appropriate feedback and guidance to the appropriate system managers and end users.

The Trust has invested in the Ardentia business intelligence system to support 18 weeks Referral to Treatment (RTT) reporting. The Trust will exploit its investment in Ardentia further to automate data validation and processing.

- 7.3a The Information Services Department will evaluate its data validation procedures and seek to modernise and rationalise its data management processes.**
- 7.3b The Information Services Department will provide timely and relevant feedback to system managers and users when data discrepancies are identified.**
- 7.3c The Trust will fully exploit the capabilities of the Ardentia business intelligence system.**

7.4 Data Reporting

Information Services produces a Trust Board scorecard and a web based performance report. The reports do not allow for Trust staff to query or drill down to the source data. Information Services staff are almost wholly committed on producing these standard reports. They do not have the capacity to provide professional interpretation, advice and guidance. The Trust will evaluate the information services demand by Divisions and HQ and restructure and resource the department to provide both the professional leadership and appropriate tools and training to enable the Trust to fully exploit information for self-assessment, performance management, strategic planning and patient care.

- 7.4a The Trust will review requirements for information reporting and take steps to provide sufficient professional expertise to provide information interpretation and business intelligence tools to enable data mining.**

7.5 Information Governance

The Trust scores well on the Information Governance Toolkit with no red (critical) issues and all amber issues have action plans in place. The user policies such as email, web access and mobile devices are in need of refreshing, however the confidentiality policy is reviewed every 6 months. The Trust does not use a Registration Authority to manage user identification and access other than for Choose and Book. There is no formal link between Information and Clinical Governance.

The Trust will review all user policies to ensure they are fit for purpose and will support an electronic patient record. The Trust will review the need for single sign-on and registration completion of Active Directory.

- 7.5a The Trust will carry out a review of health informatics' policies**
- 7.5b The Trust will review the need for a Trust-wide registration authority**



8. Change Management

The Trust is planning and implementing a number of significant change programmes. It has put in place visible change management leadership including a Director of 3Ts, a Director of Transformation and a Programme Management Office. The Executive team works closely with the Chiefs of Clinical Divisions who are key focal points for driving clinical and operational changes.

The Trust needs to become more adept at using health informatics to support change and also to ensure that any investment in health informatics is associated with well-defined outcomes and benefits.

8.1 Programme Management

Implementing complex health informatics systems such as the electronic patient record together with any associated change in ways of working and skills is a high risk venture. Risk is mitigated through planning, monitoring progress, reporting divergences and taking remedial action within an appropriate governance arrangement – *Programme Management*. The Trust will adopt a formal programme management approach for all major health informatics and associated change programmes.

The methodology of choice is ***Managing Successful Programmes***, the OGC methodology that is widely accepted and practiced in the NHS. Individual and component projects will continue to use PRINCE2 project management methodology.

Care will be taken to ensure that health informatics programmes and especially the electronic patient record programme are coordinated with other major change programmes in the Trust. Towards this, the Director of Transformation will lead on change management associated with health informatics programmes.

8.1a The Trust will manage the implementation of significant health informatics programmes using OGC's *Managing Successful Programmes*.

8.2 Benefits Management

The Trust will adopt a structured approach to benefits management to define the benefits that are required to meet the Trust's strategic objectives, to identify the changes in ways of working (processes), the skills (people) and the health informatics (information and applications) that are needed to realise each benefit. Each benefit will be described, assigned a value and a responsible owner who will 'ensure' the achievement of the benefit. Any interdependencies with other programmes will be identified and managed.

8.2a The Trust will develop a benefits management strategy for major change programmes involving health informatics.



9. Governance

Health informatics is a key function for all NHS Trusts. Currently all re-imburement information, the majority of performance information and all patient flows are processed by health informatics. With the implementation of the electronic patient record all patient care will be delivered through Health informatics and all clinical staff will be users of health informatics services. health informatics is a complex and challenging service. In addition the Trust has one of the more complex and demanding health informatics landscapes. Taking the right decisions in health informatics will be a major contributor to achieving the Trust's vision.

9.1 Director of Health Informatics

A common theme throughout this strategic review was the requirement for senior strategic leadership and direction; someone who can take control of the health informatics agenda and make the service work for the Trust. The NHS recommends that health informatics is represented at Board level to ensure that health informatics is clearly focused on and

sensitive to the business needs of the Trust and that the Trust recognises the strategic importance of health informatics

The Trust will therefore appoint a Director of Health Informatics to provide leadership of the health informatics agenda, to make appropriate investments in and to implement solutions that add significant value to patient care and clinical practice, engaging and motivating staff to exploit the wealth of capabilities and to realise the benefits that health informatics can deliver.

The Director of Health Informatics will report directly to the Chief Executive and will work closely with Trust Executive Directors and Divisional Chiefs. Given the size and complexity of this agenda the Trust will seek someone with previous board experience, who has successfully delivered clinical health informatics programmes across complex or multiple health organisations and who will quickly have the confidence of the Trust's clinical staff and partners in the local health community.

9.1a The Trust will create the role of Director of Health Informatics and appoint a NHS health informatics professional with appropriate and senior experience and capability.

9.2 Clinical Chief of Health Informatics

The electronic patient record will become a key resource for clinicians in developing their practice and delivering patient care. Health informatics must therefore support best professional practice and be a safe and efficient clinical tool. Towards this the Trust will ensure that health informatics has appropriate clinical leadership to give direction and guidance on investment and implementation, to ensure patient safety and to lead on clinical engagement.

9.2a The Trust will create the role of Clinical Chief of Health Informatics and appoint an appropriate senior clinician to lead on the development of health informatics in support of patient care and clinical practice.

9.3 Assistant Director of Information Technology

The relationship with the Sussex Health Informatics Service requires attention. From one perspective the Sussex Health Informatics Service has provided advice and guidance in the absence of such from the Trust. The Sussex Health Informatics Service also aims to provide a common set of services across Sussex in line with their original remit. The fragmentation of the National Programme for IT in the South requires this 'one-size-fits-all' approach to be re-visited.

The Trust intends to provide leadership in health informatics setting out its strategic direction and clear requirements for the foreseeable future. The Trust will therefore set technology standards and procure services and systems that meet its strategic objectives and operational needs. The Trust will require the Sussex Health Informatics Service to install, operate and support the technology infrastructure for health informatics, to work with the Trust to set appropriate operating conditions and standards and to continuously improve the experience of staff and patients who use the Trust's Health Informatics Service.

The Trust will appoint an Assistant Director of Information Technology to manage the Trust's information and telecommunication technologies infrastructure; to set technology standards appropriate to the Trust's needs, taking account of national standards and guidance; to manage the service level agreement with the Sussex Health Informatics Service, ensuring that the Trust gets maximum value from the service level agreement; and that Sussex Health Informatics Service is held to account for the services it provides.

The Trust will work with the Sussex Health Informatics Service to re-launch their service in the Trust, to help market their role as a valued strategic partner whilst ensuring that the Trust is seen as their most important customer and that they focus on delivering value for money and customer satisfaction.

9.3a The Trust will create the role of Assistant Director of Information Technology to lead on the development and management of information and tele-communications infrastructure and to manage all contracts, service level agreements and licences from third parties including Sussex Health Informatics Service.

9.3b The Trust will work with Sussex Health Informatics Service to re-launch their services to the Trust

9.4 Assistant Director of Health Informatics Programmes

The Trust will support each new deployment of health informatics, ensuring that benefits are realised and risks mitigated, through formal programme and project management. The Trust recognises that it needs a stable resource of programme skills to coordinate all health informatics projects and project staff whilst liaising with and managing the interdependencies with other Trust change programmes. The Trust will appoint an Assistant Director of Health Informatics Programmes to be the central source of programme management skills and knowledge, to run the Trust's Health Informatics Programme Office, to resource project staff as required from The Sussex Health Informatics Services or elsewhere as appropriate and to lead on change and benefits management for health informatics programmes.

The Assistant Director of Health Informatics Programmes will report to the Director of Transformation. The Transformation Directorate is the Trust's source of professional change management skills and capabilities.

9.4a The Trust will create the role of Assistant Director of Health Informatics Programmes to coordinate and programme manage all health informatics projects.

9.5 Assistant Director of Information Services

The Trust will strengthen Information Services through the appointment of a senior and experienced full time information services professional. The Assistant Director of Information Services will lead on the development of a customer facing Information Services including the development of Divisional self-assessment using modern self-enquiry tools and a professional information interpretation service for each Division and HQ. The role will provide professional leadership for Information Services staff.

9.5a The Trust will create the role of Assistant Director of Information Services to develop and provide professional leadership for the Trust's Information Services Department.

It is not proposed to reposition Information Services within the Directorate of Health Informatics. The Trust recognises that this is a common structure in the NHS. However the focus of the two services is sufficiently different to have them remain distinct for the short term. Health Informatics will be concentrating on securing and modernising the Trust's technology infrastructures and on implementing the electronic patient record. Whereas Information Services will be improving data quality, modernising data processing, enhancing reporting and supporting Clinical Divisions to become proficient at self-assessment.

Once the electronic patient record has been implemented then demand for Information Services support is predicted to change. The electronic patient record will provide a vast new source of new electronic data. Information Services will be required to use their skills to support clinical audit, benefits realisation and service planning.

The Trust will review the relationship of Information Services with Health Informatics at that time.



10. Summary

Health informatics is one of the Trust's key resources, together with money, staff and the estate. It supports every aspect of the Trust's business; patient care, clinical practice, teaching and research, remuneration and regulation, communications, staff payments and much more. The future quality, safety and effectiveness of patient services and the financial health of the Trust will be determined by how well the Trust invests in and exploits health informatics.

The Trust has not been well served by the National Programme for IT. Whilst waiting for the Care Record Service the Trust has continued to use applications past their contract renewal date, to use software after formal support has been withdrawn, to invest in 'interim' standalone clinical systems and to suffer from diminishing data quality.

The Trust's Health Informatics Strategy sets out a programme that will secure the current data and telecommunications infrastructure, enhance access to information, invest in an electronic patient record and strengthen health informatics governance. The strategy is designed to achieve the maximum benefits for patients, for staff and for the Trust.

10.1 Costs and Timetable

The Health Informatics Strategy contains a number of high cost programmes that the Trust considers to be priority investments. Each programme will require a fully worked up business case for further detailed consideration. The Trust also requires that a 7 year plan is developed to identify the annual and accumulated costs, risks, dependencies and benefits of the health informatics programme. The following table provides an indication of the priority and strategic fit of each element of the Health Informatics Strategy.

		Priority	Strategic		Operational
			National	Local	
2	Introduction				
2.3a	The Trust will adopt the term Health Informatics to describe the Trust's information, information technology and telecommunications activities.	3			X
4	Applications				
4.1a	The Trust will put in place robust system management arrangements for all Trust health informatics applications.	2	X		
4.2a	The Trust will progress with the roll out of Ardentia business intelligence system by the Trust's Central Information Unit to strengthen Service Line Reporting and enable Patient Level Information and Costing.	2	X	X	
4.2b	The Trust will roll out Rosterpro staff rostering to staff groups that would benefit from electronic rostering.	2		X	
4.3a	The Trust will carry out an options appraisal for the replacement of its current Microsoft Exchange 5.5 mail service.	1	X		X
4.4a	The Trust will develop an Outline Business Case for an EPR for the Board to consider.	1	X	X	
4.4b	If the case is made then the Trust will proceed to procure an electronic patient record through the Additional Supply Capability and Capacity procedure and to engage clinicians in the specification and selection of the system.	1	X	X	
4.5a	The Trust will seek to secure and directly manage the Patient Administration System Managers (currently employed by Sussex Health Informatics Service) as employees of the Trust	1			X
4.6a	The Trust will implement "in-hospital" Results Reporting and Order Communications in every phase of the EPR programme.	2		X	
4.7a	The Trust will develop an image storage strategy to be implemented with the re-provision of the data centre to manage the storage, archiving and disposal of locally stored diagnostic images. The storage strategy will take account of the needs of tertiary services and the current Mawell pilot.	2		X	X
4.7b	The Trust will implement GP Radiology Results Reporting and Order Communications probably through an extension of the Sunquest Anglia Ice solution being deployed in Pathology	2		X	X
4.9a	The Trust will implement the Theatre module of the OMS Patient Administration System at the earliest opportunity.	2		X	

		Priority	Strategic		Operational
			National	Local	
4.10a	The Trust will undertake a risk assessment of the current Maternity systems and produce an interim plan to secure any shortcomings.	1			X
4.10b	The Trust will plan to include Maternity at an early phase of the electronic patient record after assuring itself that all statutory data collection and CNST issues are accommodated by the system.	2			X
4.11a	The Trust will undertake a risk assessment of the current A&E system and produce a plan to secure any shortcomings.	1			X
4.11b	The Trust will plan to include A&E at an early phase of the electronic patient record after assuring itself that all statutory data collection is accommodated by the system.	2			X
4.12a	The Trust will upgrade to Clinical Vision 5 to support the care of renal patients in Brighton and the Local Health Community and investigate the system's potential to managing patients with other long term conditions.	2		X	
4.13a	The Trust will work in partnership with the Local Health Community to provide modern health informatics solutions in support of patients whose care is delivered by a clinical network. The cornerstone of this solution will be the electronic patient record, interfaced initially to partner pathology and imaging systems and eventually to their local electronic patient record system(s), with additional links to the Summary Care Record and Mawell virtual image store as appropriate.	2		X	
4.14a	The Trust will work in partnership with the Local Health Community to identify appropriate health informatics solutions to support the extension of high volume secondary care services into community care settings.	2		X	
4.15a	The Trust is committed to implementing an interim electronic discharge summary to enable GPs to receive summaries within 24 hours of discharge. The Trust will then implement a long term solution that includes TTO prescriptions with the electronic patient record.	1	X		

		Priority	Strategic		Operational
			National	Local	
5	Infrastructure				
5.1a	The Trust will review its requirements of the Sussex Health Informatics to include support for telecommunications and the electronic patient records.	3			X
5.2a	The Trust, with the Sussex Health Informatics Service, will draw up options to secure health informatics services in the Trust during and following the planned 3Ts building programme.	1		X	X
6	Telecommunications				
6a	The Trust will commission a strategic review of telecommunications which will provide options to secure, modernise and exploit voice services.	1		X	
6b	The Trust will plan to minimise any interruption in voice services, beeps, pagers and alarms throughout all phases of 3T building work.	1		X	X
7	Information Services				
7.1a	The Trust will enhance health informatics training to include the importance of data quality and data processes in delivering patient care.	2		X	
7.1b	Data quality monitoring will be further developed to ensure the efficacy of health informatics systems and processes.	2		X	X
7.1c	Divisions will be held to account for data quality.	2		X	
7.2a	The Trust will instigate a review of the how the Patient Administration System is being used throughout the Trust compared against standard operating procedures for the system.	2		X	
7.3a	The Information Services Department will evaluate its data validation procedures and seek to modernise and rationalise its data management processes.	2		X	
7.3b	The Information Services Department will provide feedback to system managers and users when data discrepancies are identified.	2			X
7.3c	The Trust will fully exploit the capabilities of the Ardentia business intelligence system.	2	X	X	

		Priority	Strategic		Operational
			National	Local	
7.4a	The Trust will review requirements for information reporting and take steps to provide sufficient professional expertise to provide information interpretation and business intelligence tools that enable data mining.	2		X	
7.5a	The Trust will carry out a review of health informatics' policies	2	X		
7.5b	The Trust will review the need for a Trust-wide registration authority	2			X
8	Programme Management				
8.1a	The Trust will manage significant health informatics programmes using OGC's <i>Managing Successful Programmes</i> .	2	X		
8.2a	The Trust will develop a benefits management strategy for major change programmes involving health informatics.	2	X		
9	Governance				
9.1a	The Trust will create the role of Director of Health Informatics and appoint a NHS health informatics professional with appropriate and senior experience and capability.	1		X	
9.2a	The Trust will create the role of Clinical Chief of Health Informatics and appoint an appropriate senior clinician to lead on the development of health informatics in support of patient care and clinical practice.	2		X	
9.3a	The Trust will create the role of Assistant Director of Information Technology to lead on the development and management of information and tele - communications infrastructure and to manage all contracts, service level agreements and licences from third parties including Sussex Health Informatics Service.	2		X	
9.3b	The Trust will work with Sussex Health Informatics Service to re-launch their services to the Trust	3			X
9.4a	The Trust will create the role of Assistant Director of Health Informatics Programmes to coordinate and programme manage all health informatics projects.	2		X	
9.5a	The Trust will create the role of Assistant Director of Information Services to develop and provide professional leadership for the Trust's Information Services Department.	2		X	



11. Acknowledgements

The Health Informatics Strategy was developed following 52 interviews with 56 key staff and stakeholders. The Strategy reflects the richness of experience and views that were recorded, making what could have been a complex task easy, as everyone volunteered their aspirations and requirements of the Strategy. I am grateful for everyone's contributions and for making time in their busy schedules.

I am also grateful to Bhavna Sapat and the Sussex Health Informatics team for the supporting documents they provided, some of which were bespoke to my requirements.

I would like to thank Chris Adcock for his guidance throughout the review especially where the review uncovered a dichotomy of views.

Finally and the biggest thanks goes to Nicole Ramsamy and Sian Finlay who organised the 52 meetings, got everyone to the right room at the right time and generally looked after me. This review could not have happened without their efforts.

The following people gave willingly of their knowledge, experience and views.

Abbe Whittaker, Information Manager (Performance)
Aidan Halligan, Chief of Patient Safety
Beverley Thorp, Associate Director – Operations, Women and Children
Bhavna Sapat, Health Informatics Manager
Caroline McGovern, Information Manager (Commissioning)
Chris Adcock, Chief Financial Officer
Dan Simon, Programme Manager, Sussex HIS
Darren Emilianus, GP
David Garrett, Associate Director of Operations – Surgery
Debbie Holden, Head of Midwifery and Gynaecology
Derrick McCabe-Daly, Information Governance Manager
Des Holden, Medical Director
Duane Passman, Director of 3Ts, Estates & Facilities
Duncan Selbie, Chief Executive
Gareth Hall, Associate Director – Business Support
Geoff Bryant, A&E, Consultant - Emergency Medicine
Graham Crawford, Lead Information Officer, Sussex HIS
Graham Dodge, Consultant Radiologist
Helen Weatherill, Associate Director of HR
Iain McFadyen, Chief of Trauma
James Weller, Foundation Trust Project Manager
Jan Nawrocki, Director of Medical Education
Janet Cheesman, Associate Director – Operations, Medicine
Jatinder Harchowal, Chief Pharmacist
Jo Andrews, Chief of Clinical Operations
Jonathan Hyde, Chief of Surgery
Julian Lee, Chairman
Julie Nerney, Non-Executive Director
Karen Geoghegan, Deputy Chief Financial Officer
Kate Parkin, Associate Director – Operations – Specialised Services
Kelvin Sutton, Senior Chief Medical Scientist
Kevin Davies, Chief of Medicine
Lawrence Goldberg, Chief of Specialised Services
Liz Derrick, Consultant Dermatologist
Liz Horkin, Director of Sussex HIS
Mark Gathergood, Information Services
Mark Renshaw, Deputy Chief of Safety & Head of Patient Safety
Nick Groves, Associate Director for 3Ts and Service Modernisation
Niki Porter, Head of Data Quality
Peter Klein, Head of Procurement
Peter Larsen-Disney, Chief of Women and Children
Phil Brown, Pathology Manager

Philip Thomas, Clinical Chief of Finance
Ramanan Ramaswami, Clinical Lead for Health Informatics
Ray Daguerre, Corporate Data Manager
Sally Howard, Director of Transformation
Sarah Danko, Head of Records Management
Sherree Fagge, Chief Nurse,
Simon Maurice, Director of Workforce
Steve Barden, Consultant in Acute Medicine
Steve Marshall, Assistant Director of Finance – Financial Services,
Tad Matus, Chief Information Officer, South East Coast SHA
Terece Walters, Associate Director of Clinical Operations
Terri Fitzgerald, Head of Telecommunications and Help Desk Services

