

**PROJECT INITIATION DOCUMENT  
ePRESCRIBING  
IMPLEMENTATION**

**CHANGE CONTROL RECORD**

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## Glossary of Abbreviations

The following table contains a glossary of terms and abbreviations used in this report:

ADR	Adverse Drug Reaction
BNF	British National Formulary
CMH	Countess Mountbatten Hospital
COWS	Computer on Wheels
ED	Emergency Department (A&E)
EDS	Electronic Discharge System
EPMA	Electronic Prescribing and Medicines Administration
eRx	Electronic Prescribing
HICSS	Hospital Information Clinical Support Systems
HSCL	HealthSystems Consultants Limited
IM&T	Information Management & Technology
IMPAC	Impac Oncology System
JAC	JAC Pharmacy Computer System supplied by JAC Computer Services
PAH	Princess Anne Hospital
PRINCE	Projects in a Controlled Environment
RSH	Royal South Hampshire Hospital
SGH	Southampton General Hospital
SUHT	Southampton University Hospital Trust
TEC	Trust Executive Committee
TORs	Terms of Reference
TTO	Drugs To Take Out

## 1. Introduction

Southampton University Hospital Trust (SUHT) is a major teaching hospital on the south coast of England providing local hospital services to some 500,000 people living in Southampton and South West Hampshire. As well as the normal range of acute hospital services SUHT also provides a range of specialist services such as neurosciences, cardiac services and children's intensive care to more than 3 million people in central southern England and the Channel Islands.

SUHT is incrementally building a comprehensive electronic patient record (EPR). A key element of this is electronic prescribing, which has been nationally highlighted as one of the five clinical IT components mandated in the NHS Operating Framework.

The main drivers for ePrescribing include;

- Medication safety – reduction in errors, SUIs (Serious Untoward Incidents), and clinical negligence claims
- Modernisation
- Improved efficiency
- Improved patient experience
- Hospital of Choice

This dovetails in with the Trusts 2020 Vision, which aims to:

- Give patients the best possible care;
- Work with our partners to provide the right services, in the right place and at the right time;
- Support and invest in research and education.

At present all four hospitals within the Trust namely: Southampton General (SGH), the Princess Anne Hospital (PAH), the Royal South Hampshire (RSH) and the Countess Mountbatten Hospital (CMH) are provided with a pharmacy service that is managed centrally from SGH. The pharmacy service uses the JAC pharmacy computer system that provides four main functions:

- stock management
- electronic ordering and purchasing
- manufacturing
- dispensing.

In order to build a complete electronic pharmacy solution, two major additional components are required which are:

- electronic prescribing
- electronic medicines administration.

Alongside the current pharmacy computerisation the Trust also has a specialist pharmacy system for cancer patients based in the oncology pharmacy at SGH. At present the specialist nature of the oncology system means that the two systems operate independently.

## 2. Background to the Project

The Trust Executive Committee (TEC) approved the recommendations of a feasibility study, carried out in early 2008, for the procurement and implementation of an ePrescribing System. This report included the following areas:

- the requirements for an electronic prescribing solution identified by both clinical and business staff at the Trust;
- areas where the functionality and technology required by both Pharmacy and Blood Transfusion systems overlap;
- the necessary technology and systems interoperability required to deliver the requirements ;
- an analysis of the UK supplier market place for pharmacy electronic prescribing;
- an overview of electronic prescribing in other countries;
- conclusions and recommendations.

These recommendations were used to inform the development of a functional and technical specification and a full procurement process for an electronic prescribing and medication administration system, with full integration with the existing Pharmacy Stock Control system.

The business case was approved by the Trust Board in November 2010, and a contract was signed on 1 April 2011 with JAC Computer Services for the implementation of their ePrescribing and Medicines Administration modules.

## 3. Scope of the Project

The scope of the ePrescribing project implementation includes both inpatient (including discharge medication) and outpatient prescribing across the whole of SUHT, which incorporates SGH, PAH, RSH and CMH. This functionality includes:

- adult and paediatric prescribing;
- medication administration;
- decision support (allergies; drug interactions, duplicate checking);
- pharmacy verification.

The plan is to carry out a pilot initially on two wards and in an outpatient clinic, followed by a roll-out of the ePrescribing and Medicines Administration across all SUHT wards and outpatient clinics within the following 12 months.

Areas of functionality that are currently being developed by JAC and are to be included in this project plan:

- Continuous infusions and complex IV prescriptions (including sliding scale regimen).

Areas that will require investigation and potential development:

- Access to JAC data to support development of decisions support with existing SUHT clinical systems and electronic discharge summary
- Provision of prescribing data to Trust rules engines, order communication systems and other workflow to provide decision support

- Interfacing and work processes (including developing decision support) with Drs Worklist and clinical viewer;
- Development of tools to support the management of infection and infection control (e.g. Hospital Antibiotic Prudent Prescribing Indicator [HAPPI] audit
- Support of the management of PbR excluded drugs, e.g. biologicals, which require clinical governance pathways depending on diagnosis
- Support in the financial management of care episodes for Private patients and top-up care for NHS patients, also facilitating the prescribing for administration via 'Home Care' facilities
- Complex IV prescribing (review of the development being delivered in version 5.1 – November 2011)
- Automated dispensing of controlled drugs with full electronic records within a critical care and theatre areas

Areas out of scope for full prescribing (i.e. dose, rate etc) for the current project:

- Chemotherapy prescribing;
- Radiopharmaceutical prescribing ;
- Renal Replacement Fluids;
- Anaesthetic vapours and medical gases;
- Total Parenteral Nutrition prescribing;
- Critical Care Unit (depending on the Critical Care IT solution chosen).

#### 4. Risks

A risk log will be managed for this project, ensuring that all risks are identified and managed throughout the project.

Some specific risks that have been identified for this project include:

- Funding for the implementation resources, and post go live support
- Resourcing the project for complete project timeline
- Sufficient funding for the necessary ward based infrastructure
- The commitment to redesign and change process
- The total buy in of the Trust & Stakeholders

See Appendix A for a detailed list of generic implementation risks and mitigation.

#### 5. Benefits

There are a number of clear benefits around the introduction of ePrescribing and Medicines Administration which are outlined in Appendix B. The areas considered include:

- Prescribing and Administration Medication Errors
- Legibility and Completeness of Prescriptions
- electronic Prescription Data
- Drug History
- Decision Support
- Specific financial benefits
- Clinical governance and cost effectiveness

The Business Case for the implementation of ePrescribing and Medicines Administration identified the potential cash releasing and non-cash releasing benefits to the Trust. A benefits profile has been calculated for the five years post implementation. These are shown in Appendix C.

The benefits realisation aspects of the implementation will be managed by the Process Change workstream. These benefits will either be realised by the Pharmacy Department or each Division. In order that the Trust achieves maximal realisation of these benefits, full adoption of the functionality will be needed across the Trust and on-going management of the benefits realisation.

## 6. Dependencies/Assumptions

There are a number of dependencies and / or assumptions that the success of this project relies on. These have been considered under the Business, User and Technical headings:

### Business

- That Trust management adopt and positively support the project
- That other trust-wide projects affecting the same groups of stakeholders will run to time (e.g. Blood Tracking)
- That other Trust service changes are managed to minimise impact on the project (e.g. ward changes impacting the deployment plan)

### User

- That the appropriate Trust Staff are released to take part in project activities and training
- That we have the commitment of clinical and nursing staff to use the system as required and hence maximise the opportunities of achieving the potential benefits of the project

### Technical

- That the new Virtual Servers will be in place
- That any required IT developments can be achieved within the required timescales
- That the required support can be resourced to support the 24/7 use of the system
- That sufficient devices are available on the wards for both prescribing and medicines administration activities
- That the JAC Pharmacy Stock Control system is upgraded to V5

## 7. System and Project Interfaces

For the successful implementation of the JAC ePrescribing and Medicines Administration modules, as well as ensuring that maximal benefit is achieved through this project, a number of system interfaces are required:

- Patient Administration System: PMI and ADT data (including Inpatients, Outpatients and the Emergency Department)
- Electronic Discharge Summary
- Drs Worklist providing access to JAC information within these systems

There is an additional Clinical Workstation interface being provided, which will potentially enable ePrescribing to be opened from within other Trust clinical systems (e.g. eQuest; Clinical Viewer). The approach for this requires further investigation to ensure maximum benefits are achieved.

The key projects interfaces include engagement with:

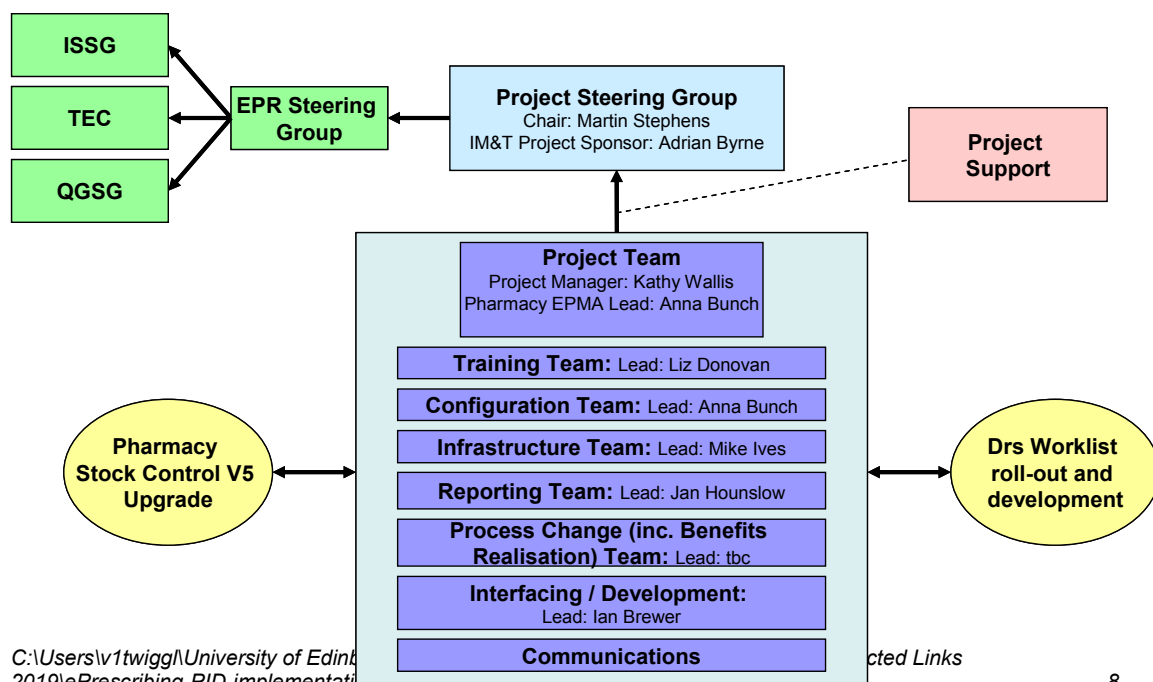
- clinicians and nurses
- Porters
- Pharmacy staff
- AHPs impacted by the project
- DCDs & DDOs for all divisions

## 8. Project Structure

The Project will be guided and managed by a Project Steering Group which will be chaired by Martin Stephens, Associate Director of Clinical Effectiveness and Medicines Management. The Project Steering Group will report through the EPR Steering Group to the Information Strategy Steering Group (ISSG) and Quality Governance Steering Group, and inform the Trust Executive Committee (TEC) and Trust Board. The Project Steering Group will consist of senior managers from the Trust who will represent the users of the system (e.g. operational; medical; nursing).

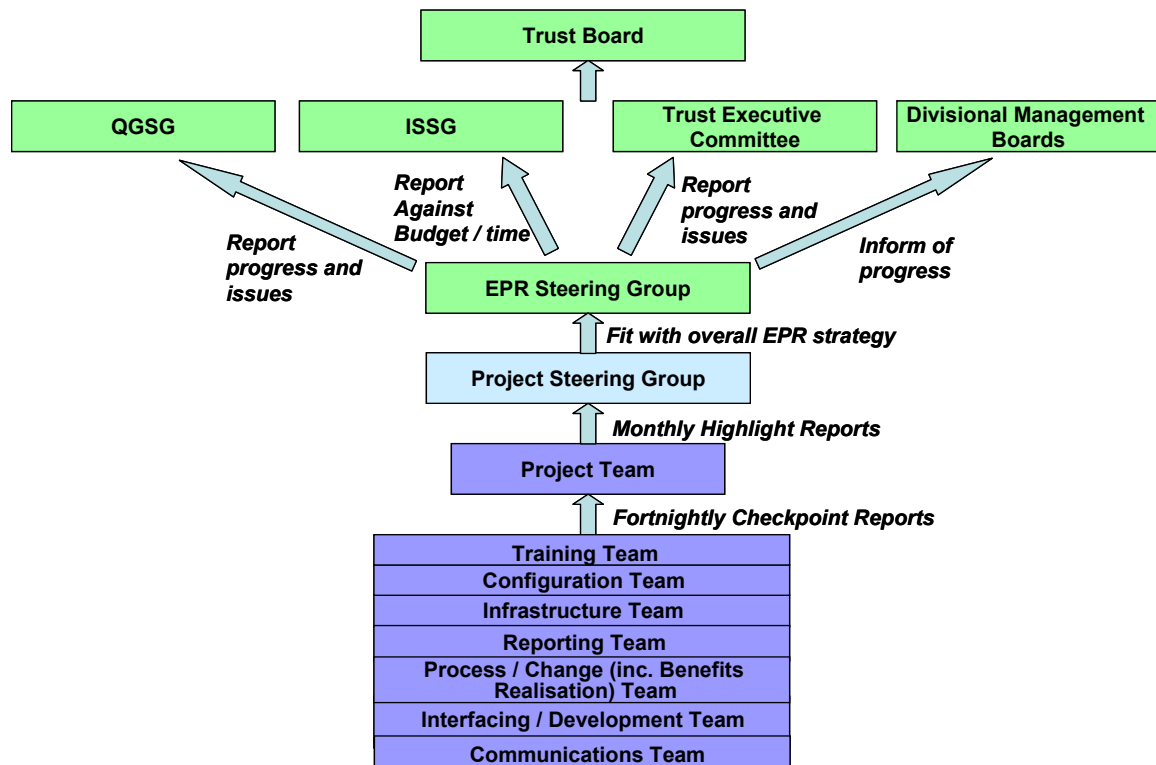
The day to day work of the project will be managed by the Project Team. The Project Team will consist of both full time project staff and co-opted workstream leads and workstream members from throughout the Trust to provide the required expertise to the project. The project team members consist of technical experts and representative users of the system, of sufficient seniority and experience to take responsibility for decisions on the content and use of the system as well as on the required process changes needed to achieve the benefits that the new functionality can support. They will also be expected to act as ambassadors of the project to their peers, as well as be members of the expert teams (Training, Configuration, Interfacing, Reporting, process Change and Infrastructure – as below).

Proposed Project Structure:





Proposed Project Governance:



## 9. Project Management - Roles/Responsibilities

The identification of group and individual's roles and responsibilities for this project will help to promote more effective communication and ensure each member of the team understands what is expected of them at each stage of the project.

The roles and Responsibilities of key project teams and individuals are outlined below:

Group / Role	Who	Roles and Responsibilities
Trust Steering Group	Membership is listed in following table	<ul style="list-style-type: none"> <li>Overall strategic direction and management of the project</li> <li>Accountable for the overall success of the project, with the responsibility and authority to achieve the success of the project within agreed project tolerances</li> <li>Agree and own the business case including the Benefits Realisation Plan, and bring the project in within budget</li> <li>Approve the project (and stage) plans, review project progress against the plans, and provide direction to project teams for meeting the timescales</li> <li>Approve the Project Initiation Document (PID)</li> <li>Ensure the quality of the project product(s)</li> <li>Authorise actions required to improve the</li> </ul>

		<p>communication with and engagement of relevant staff and suppliers</p> <ul style="list-style-type: none"> <li>• Support the management of risks and issues associated with the projects</li> <li>• Approve any change control elements</li> <li>• Escalate areas of concern to the Trust Information Strategy Steering Group (ISSG)</li> <li>• Ensure that project assurance takes place</li> <li>• Meet regularly, as required, to agreed timescales</li> <li>• Respond to requests for advice from the Project Manager</li> </ul>
Project Executive / Project Steering Group Chair	Chair: Associate Director of Clinical Effectiveness and Medicines Management	The role of the Project Executive is to guide and manage the project, representing the business needs; chair the Project Steering Group.
IM&T Project Sponsor	Director of IM&T	The role of the Project Sponsor is to ensure that matters, which might prevent the success of the project, are addressed swiftly. The Project Sponsor has delegated powers from the Steering Group to have the 'Go' 'No Go' final say on Go Live
Project Team	Membership is listed in following table	<ul style="list-style-type: none"> <li>• Providing expertise and guidance for user requirement definition, configuration decisions, user testing, process change</li> <li>• Acting as ambassadors of the project and champions of change within the organisation</li> <li>• Identify, and manage as appropriate, any risks and issues associated with a work package</li> <li>• Ensure the involvement of the business with the project - to provide the required ownership, decision making and input</li> <li>• To help with the communication with the business regarding the planned changes and required involvement</li> <li>• Ensure the appropriate quality activities take place to produce products of the expected quality</li> <li>• Liaise with any project assurance and project support roles</li> </ul>
Trust Project Manager		The role of the Trust Project Manager for the duration of the ePrescribing Project is to work in partnership with the Trust and JAC project teams and to be responsible for the project management aspects of the project, e.g. Co-ordinate the delivery of the relevant work packages, owning and working to the Stage Plan; Produce regular Highlight reports for the Project

		Steering Group, using the Checkpoint reports from the expert workstreams.
Pharmacy IM&T and EPMA Manager		<p>The role of the Trust Pharmacy IM&amp;T and EPMA Manager is to take the professional and expert lead for the implementation of the system</p> <p>This role needs to have an intimate local knowledge of system requirement and to be in the position to be able to 'make things happen' and make day to day decisions.</p>
<p>Project workstreams / Expert Teams</p> <p>Configuration Workstream</p> <p>Interfacing and Development Workstream</p> <p>Infrastructure Workstream</p> <p>Training Workstream</p> <p>Reporting Workstream</p> <p>Process Change (including Benefits Realisation)</p> <p>Communications</p>		<p>The Project workstreams will, through their expert knowledge and skills, deliver the project activities.</p> <p>Each of these workstreams will own and deliver the relevant work packages for their area of expertise, working with the Project Team to ensure that the quality expectations of the Trust are met. Together these make up the activities required to deliver the overall project:</p> <ul style="list-style-type: none"> <li>• Deliver the relevant work packages, providing the required specialist knowledge and expertise</li> <li>• Endeavour to carry out the required activities within agreed timescales so that the project plans can be met</li> <li>• Provide regular Checkpoint reports to the project managers</li> <li>• Identify, and manage as appropriate, any risks and issues associated with a work package</li> <li>• Ensure the appropriate quality activities take place to produce products of the expected quality</li> <li>• Liaise with any project assurance and project support roles</li> </ul>
JAC National Sales Manager		Responsible for all contractual matters based around the project.
JAC Project Manager		Responsible for the overall control and management of the Project.
JAC Customer Services Manager:		Main contact for all project / system issues
JAC Product Manager		Responsible for all developments within the scope of the project.
JAC Technical Lead		Responsible for the technical aspects of the project
JAC Executive Sponsor		Monitor project progress from a strategic level providing support and advice to the JAC project team

**Membership of the ePrescribing Steering Group**

Name	Division
Chair	Associate Director of Clinical Effectiveness and Medicines Management
	Director of organisational Development
	Division C – Chief Pharmacist
	Deputy Medical Director
	Division D- Clinician
	Division B – Clinician Representative
	Division C - Clinician Representative
	Division A – Clinician Representative
	IDEAL – Clinical Tutor Clinical Skills
	Associate Director of Nursing, Education & Practice Development
	Matron – Emergency Medicine
	Strategic Nurse Leads
	Director of IM&T
	Project Manager
	Pharmacy IM&T Manager
	Junior Doctor representative
	Junior Doctor representative
	Patient Representatives
Clinical specialist leads: - Emergency Medicine; Cancer Care; Critical Care)	<i>Ad Hoc attendance</i>
JAC	<i>Ad Hoc attendance</i>

**Membership of the ePrescribing Project Team:**

	IM&T Project Manager (full time)
	Pharmacist Leads (full time equivalent)
	Other senior pharmacists as required
	Strategic Nurse Lead (0.4 full time equivalent)
	Nurses x 2 (training & support) (full time)
	Pharmacy Technicians x 3 (full time)
	Medical Registrars (input as required)
	Infrastructure Workstream Lead (co-opted)
	Interfacing and Developments Workstream Lead (co-opted)
	Reporting Workstream Lead (co-opted)
	Training Workstream Lead (co-opted)
	Process Change / Benefits Realisation Workstream Lead
	Communications Input

**Project Assurance:**

Pharmacists, Clinicians, Nurses and IM&T will join the team at appropriate times to carry out reviews and testing throughout the project lifecycle.

### Key JAC personnel

	Managing Director
	Customer Services Manager
	Helpdesk Manager
	Project Manager
	Technical Services Manager
	Product Manager
	National Sales Manager

## 10. Project Controls to be Applied

There are many structured approaches to project management in the market. The one selected by the NHS is PRINCE.

PRINCE, or **PR**ojects **IN** a **C**ontrolled **E**nvironment, offers a framework within which projects can be correctly specified, designed and implemented. In this context a project is defined as:

"a management environment set up to deliver a business product to a specified business case."

or

"a temporary organisation that is needed to produce a unique and pre defined outcome or result at a pre specified time using pre determined resources"

The PRINCE has a number of components, which are applied to a project:

- Organisation
- Planning
- Control
- Stages
- Management of Risk
- Quality in a Project Environment
- Configuration Management
- Change Control
- Closure

## 11. Overall Timescales

A detailed project plan is being worked up with JAC. Then main dependency is the initial upgrade of the pharmacy JAC Stock Control system to V5.0, prior to the commencement of the ePrescribing implementation.

A high level view of the proposed timescales in shown below:

	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	On-going to Dec2012
Contract signed	◆												
Project set-up	■												
V5 Upgrade		■	■										
EPMA initial process design for system build		■	■										
EPMA build (basic) and testing				■	■	■	■						
Ward process review and design				■	■	■	■	■					
Benefits Realisation activities										■	■	■	■
Infrastructure identification and deployment				■	■	■	■	■					
Reporting requirements review and implementation				■	■	■	■	■					
Interfacing specification and implementation				■	■	■	■	■					
Training design, prep and rollout				■	■	■	■	■					
Prep for go live / training				■	■	■	■	■					
Communications				■	■	■	■	■					
Go Live / Pilot (basic) - ward and OP clinic								◆	◆				
EPMA build (IV Infusion) and testing										■	■	■	■
EPMA build (Paediatrics) and testing											■	■	■
Deployment roll-out												■	■

## Appendices

**Appendix A:** detailed list of implementation risks and mitigation



Implementation Risks.xls

**Appendix B:** Detailed benefits information



ePrescribing Benefits from final business ca

**Appendix C:** Potential Trust savings on full implementation of ePrescribing