

Project Closure

04012 - EDI for Blood Stocks Management Scheme

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Document History

Version	Date	Review	Name	Page(s)	Description
0.1	28-07-2007		04012_PCR_20070728	11	Draft version for discussion and approval by Project Board
1.0	02-08-2007		04012_PCR_20070802	11	Final Version of report following discussion and agreement by Project Board

References

- 1) PID – 04012_PID_20070523
- 2) Project Plan – 04012_PPL_20070601
- 3) Project Plan – 04012_PPL_20060721

1 End Project Report

1.1 Project Description (including the development and implementation etc)

See section 1.5 Performance against Objectives for detailed project description.

1.2 Performance Against Plan

This analysis of performance against plan considers the project plan produced after the trial format was amended in April and May 2007.

The Project started with amended planning on May 7th and was completed on Tuesday 31st July before the final Project Board meeting to approve the Project closure report on Thursday 2nd August due to other work commitments.

Overall the Project performed closely to the amended plan, but well beyond the original planned completion date of January 2007. This delay was accepted by the Project Board for the amended PID, which is dated 23rd May 2007.

1.3 Deviations From Plan (and their effect on the Business Case)

- Data quality test at RLUH was conducted by Peter Baker after the closure of the Project following the absence of Peter and Rob Hick during the allotted trial period.
- Due to the delay with the RLUH test the Project trial report was submitted to the Project Board on Wednesday 18th July rather than Friday 6th July as planned but thankfully the Project Board read the report quickly and there was no significant problem or delay to the Project Board meeting to consider the report.
- An extra Project Board meeting was scheduled to close the Project on August 2nd. This has no effect on the project duration and was to approve the project closure report.

1.4 Cost Analysis

The Project was not allocated a budget as all of the software development work formed part of the BSMS departmental plan and was supported by IT software development resource allocated to BSMS work. There was also no budget for project expenses or procurements, as none were required by the Project.

1.5 Performance Against Objectives

The primary objectives of the project are -

1. The selection of NHS software systems and user hospitals as directed by the identified needs of the pilots by the project team.
2. To develop the necessary software and hardware solutions to allow electronic transfer of data between participating hospitals and the BSMS.
3. To pilot the electronic transfer of data information between participating hospitals and the BSMS.
4. Monitor the efficiency, accuracy and quality of data transferred throughout the project and the potential impact for BSMS, software suppliers and hospitals of new system.

5. To report on the effectiveness of the pilots, making recommendations for the use of the system with other BSMS participating hospitals.
6. To determine a process to be used when integrating other software systems and hospitals into the system.

Objective 1 - The selection of LIMS and user hospitals as directed by the requirements of the project.

The Project Board determined that the project should encompass three LIMS suppliers: Technidata (TDLims), iSoft (Telepath) and CliniSys (LabCentre). Each LIMS supplier would nominate two user hospitals and then, subject to Project Team approval, the hospitals would be approached to participate in the pilot. It was felt that two hospitals per LIMS would provide sufficient activity to highlight any issues, whilst maintaining a manageable workload for the Project Team.

In the early stages of the project, two hospitals were successfully recruited to participate in the pilot. These were Royal Liverpool Hospital (RLUH), which uses Telepath, and Hull Royal Infirmary (HRI), which uses the LabCentre system. Unfortunately, despite regular contact with LIMS suppliers and their best attempts to nominate appropriate hospitals, no new hospitals were recruited for about 4 months. The Project Team suspect that the reasons for the slow uptake included:

- The requirement for a hospital to upgrade to the latest version of the LIMS software to include the FOD functionality. This has both cost and workload implications.
- The unsuitability of many hospitals due to local management procedures and insufficient personnel.
- The lack of any perceived benefits of participation.
- A lack of enthusiasm for the pilot caused by the perception that it would cause a significant increase in workload.

As a result of this situation, the Project Board agreed to change the approach and continue with a pilot using only the two recruited hospitals. The pilot would be used to formulate a process by which new hospitals and LIMS could be recruited to FOD in the future. The new format pilot would have two stages:

- Ensure that the FOD files could be transferred to the NHSBT and processed successfully.
- A two-week data checking process that involved a comparison of the data returned via FOD with data collected manually by the hospital

Shortly after this decision, the John Radcliffe Hospital (JR) was recruited as a second Telepath user. Unfortunately CliniSys were unable to nominate another hospital within the timeframe of the pilot and so only HRI were able to participate. However the Board decided that CliniSys could be exempt from piloting a second hospital given that the HRI had been sending FOD data successfully for over 4 months.

Objective 2 - To develop the necessary software and hardware solutions to allow electronic transfer of data between participating hospitals and the BSMS.

The software and hardware solution was specified by the Project Team, led by Rob Hick, and was codified in the User Requirements Specification (URS). The development work was led by Richard Cook. The solution is described in the URS Response (doc ref). The acceptance testing was led by Rob Hick. It was agreed that a beta test of the software by external users was not required as this would form part of the pilot.

One potential problem for hospitals seeking to use FOD is the set up of the FTP transfers between the hospital server and the NHSBT FTP Server. Experience has shown that many hospitals are not able to easily set up FTP transfers due to a number of technical reasons, most notably hospital firewall restrictions. It was therefore decided to provide a backup file transfer mechanism that did not rely on FTP (the preferred transfer method). This system was provided as part of the software solution. In order to test the backup transfer mechanism, the JR undertook the pilot using this system.

The software solution received an acceptance certificate from Angille Heintzman on 15 June 2007.

There were no issues associated with the transfer of files during the pilot.

The software solution specified and developed was done so with a view to ensuring a successful pilot. From the operation of the pilot, it is clear that a number of modifications to the software are required before FOD can be made widely available. These include:

- Rewrite the software into .net to give the solution a longer operational life and to make it compatible with VANESA.
- Move the system for managing the transfer and processing of files onto a live server. Also develop the system further to allow for more regular transfers and ad-hoc runs.
- The ability for the software to send emails to specified users when the file processing fails and to include details of the failures.
- Other developments to improve the user interface for BSMS staff and hospitals

Objective 3 - To pilot the electronic transfer of data between participating hospitals and the BSMS.

During the pilot, FOD data was available from all three participating hospitals on most days. The major reason for missing data was missing files; caused by forgetting to run the FOD process at the hospital in the morning. Another, more intermittent reason was that the FOD file did not process because it failed the validation checks.

A discussion of the causes of the data issues and their impact on the project is contained in sections 5.4 and 5.5 of the report below.

Objective 4 - Monitor the efficiency and accuracy of data transferred throughout the project and assess the potential impact for BSMS, LIMS suppliers, and hospitals of the FOD system.

The transfer of files was found to be efficient and effective. The only notable problem was in the files received from the JR which were occasionally corrupted and therefore

failed to process. This was identified as local issue caused by the transfer of files from Telepath and it would be possible to rectify the problem for a live system.

The data check part of the pilot was not conducted with RLUH due to absence of Rob Hick and Peter Baker. It is noted though that files have been received and processed from RLUH since 13 March 2006.

The data checks at HRI and JR were conducted and revealed a number of issues. These were generally around the quality of the wastage data. The issues at HRI were resolved during the pilot and all differences were accounted for; thus HRI are deemed to have had a successful pilot. At the time of writing, the wastage data at the JR is still presenting a number of unresolved issues and as such the JR cannot be considered as a successful pilot.

There were two reasons that the data returned by FOD was incorrect; these were:

- Incorrect identification of products – LIMS maintain their own product tables in which it is possible to allocate multiple barcodes to a single product. There was therefore some initial misidentification of products which was rectified by comparing the local product table to the NBS Product Portfolio.
- Unable to use appropriate wastage classification – LIMS systems are not able to code wastage according to the FOD definition. Particularly, they aren't able to reclassify time expiry wastage (required for MORNU/SORNU/STEX in platelet wastage). They are also unable to define specific sets of wastage classifications for particular product groups.

The board decided that product and wastage tables should be the same on the LIMS systems as the NHSBT tables – which was specified in the original specification for additional functionality for the LIMS software suppliers and checking the accuracy of the tables would form part of the pre-data transfer checks.

Objective 5 - To report on the outcome of the pilot, making recommendations for the use of the system with other BSMS hospitals.

In general, the pilot was a success but revealed some potential barriers to wider rollout. The issue of data quality, i.e. ensuring that FOD is sending correct data, needs to be addressed for each hospital, either by rigorous implementation procedures or data checking periods.

In order to establish the veracity of the FOD data, the actual unit information needs to be made available via VANESA to the hospital. This will allow them to chase up any unusual information.

The pilot was very labour intensive, both in data entry and data checking. At most it would only be possible to concurrently pilot about 10 hospitals in a similar way. This would also require the development of a software solution that facilitated the comparison of manual data and FOD data and the recording of any reasons for differences.

The process for managing files that have failed to process needs to be streamlined so that the hospital is able to resend or rerun the FOD process quickly.

Objective 6 - To determine a process to be used when integrating other LIMS and hospitals into the FOD system.

The pilot has only allowed the project team to highlight areas which may cause a hindrance to a rollout of the FOD system. At the beginning of any rollout phase, it is therefore recommended that a document be produced that defines the exact process by which a hospital implements the FOD system. A similar process is required to approve each LIMS supplier that wants to implement a FOD solution.

Following consultation with the Quality function at NHSBT, it is advised that data quality checks are performed for each hospital every time there are changes to either the LIMS system or the VANESA database and associated software. This should take the form of a three day data check using the same method as when hospitals and software systems are initially certified.

1.6 Quality Review

See section 1.5 Performance against Objectives above and particularly Objective 4 for details of the Quality performance of the Project.

1.7 Business Case (Benefits) Analysis

A business case for this project was not available so this analysis is not possible and with the project having no budget the analysis comparing objectives against achievements above (section 1.5) is all that is possible.

1.8 Post Project Review (date/arrangements/plan)

The Project Board decided that a post project review was not necessary as on-going development of the software solution will soon be made part of an on-going project to increase functionality of the solution and widen its roll-out.

2 Follow On Action Recommendations

The recommendations for follow-on actions from the project team are:

- The FOD software and hardware solution is redeveloped to support a wider rollout of a live system
- VANESA is developed to allow reconciliation of units. This would allow hospitals to trace units from the point of dispatch from the NBS to their eventual fate (wasted or transfused) in the hospital. Any unreconciled units could be flagged for attention.
- VANESA is developed to support other operational aspects of inventory management in hospitals.
- The FOD protocol is revised to include clinical information about transfusions

It was also decided by the Project Board that use of the software solution developed will be suspended shortly whilst further development work is carried out. Hospitals will continue to send data files to NHSBT as before, but those files will be parked and not processed. This falls outside the scope of this project and will be led by Judith Chapman on behalf of BSMS and Richard Cook for NHSBT IT. They will liaise with the relevant external software suppliers and hospitals.

2.1 Operational Support Structure

The on-going tasks will be undertaken by the responsible people listed below and will be supported within their operational departments i.e. NHSBT BSMS team or NHSBT software development team.

2.2 Unfinished Work and Responsibilities

Task	Person Responsible	Deadline
Data quality check performed by RLUH	Peter Baker	31-08-07
Liase with participating hospitals to inform them of trial closure	Judith Chapman	31-08-07
Liase with participating software suppliers to inform them of trial closure and request that they make the necessary changes to software solution to stop FTP or manual file transfer	Judith Chapman	31-08-07
Take forward project team recommendations to relevant body for discussion and authorisation for further development of software solution	Gerry Gogarty	31-10-07
Produce plan and estimate of resource and budget requirements for various options to improve software solution functionality as recommended by project team	Steve Carroll / Richard Cook / Judith Chapman	30-09-07
Make changes to software solution to stop FTP or manual file transfer	Richard Cook	31-08-07
Inform necessary internal and external parties – not detailed above – of project closure	Sam Bolton	31-08-07

2.3 Risks and Issues

There are two outstanding risks:

- To the credibility of the BSMS and their commitment to EDI if the planned further development of the software solution is delayed but this will be mitigated by close and regular contact between software suppliers and hospitals and the BSMS team to keep them informed of developments and future plans to demonstrate NHSBT commitment to EDI.
- To the NHSBT and hospital IT infrastructure during de-commissioning of the trial software solution. This will be mitigated by close and regular contact between NHSBT IT and BSMS teams and then onto software suppliers and hospitals.

2.4 Training Requirements

There is no requirement for on-going training with the software solution but for any further phases of this trial outward training will need to be considered as part of any software solution.

3 User Acceptance Certification

3.1 Senior User Signature

See section for Approval of document

4 Operational Acceptance Certification

4.1 Senior Maintenance/Operational Signature

As the software solution developed for the trial is being discontinued there is no requirement for a maintenance / operational signature and the arrangements in place for the trial will continue until 31st August 2007 when the software will be de-commissioned.

5 Confirmation of Project Closure

5.1 Closure Statement

Project 04012 EDI for the Blood Stocks Management Scheme will be closed on Tuesday 31st July with follow-on actions transferred to the responsibility of the operational departments detailed and all project documentation will be posted on SharePoint.

5.2 Closure Notification Arrangements

Notification of closure of the Project within NHSBT will be conducted by Sam Bolton following receipt of the closure authorisation signatures.

5.3 Project Board Signatures

See section for Approval of document