PHOENIX LINKS PROJECT

End Project Report

Reference: End Project Report

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Version: Version 1.0

Date: 8th January 2002

Document Control

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Issue Control:

Version	**Date**	**Description**
Draft 0.1	18th July 01	First Draft for review by Project Board and Project Team members
Draft 0.2	3rd August 01	Initial comments included from Courts Service
Draft 0.2b	17th August 01	Final comments from Courts Service
Draft 0.3	5th October 01	Inclusion of all respondents comments
Draft 1.0	21st October 01	Final draft, included Budget and Planning information
Draft 2.0	6th November 01	Inclusion of comments from J Ladley
Version 1.0	8th January 02	Inclusion of comments from IBIS

Controlling Documentation:

1. Issue 1.1 - Treasury's Invest to Save Budget – Joint Formal Bid. October 1998 (File ref. ISB_12)

2. Version 0.3 - Phoenix Links Project Initiation Document. 10th July 1999 (File ref. PD1)

1 Purpose

The purpose of this document is primarily to report to the Phoenix Links Project Board on how well the project has performed against the Project Initiation Document, including the original planned cost, schedule and tolerances (where applied), any revised Business case and the final project plan.

[The reader should note that the Project Support Office (PSO) role was aligned to supporting the PNCD (Operational Services) project work. Although the PSO provided some common support to the programme this was outside its stated remit. However, where practical, this report will collate available information in an attempt to provide as comprehensive report as is practical].

The report tries to address information specifically requested from Integrating Business and Information Systems (IBIS).

In addition the report will serve as the Project Close Down report for the Court Service sub project "to develop the link between the Jury Summoning System (JUROR) and the PNC developed in conjunction with their PFI supplier Electronic Data Systems (EDS)".

2 Introduction

14.1 The Phoenix Links project was a joint initiative between the Police Information Technology Organisation (PITO), the Court Service and the Probation Service which received funding from the Invest to Save Budget (ISB). The project scope was to develop:

(a) an interface architecture for the Police National Computer (PNC) which would provide a basis for all criminal justice organisations (CJOs) to gain electronic access to Phoenix (an application on the PNC which stores information on criminal records);

(b) an electronic link between the Probation Services' IT system (CRAMS) and Phoenix;

(c) an electronic link between the Court Service's IT system (CREDO / JUROR) and Phoenix;

14.1 This bid for funding from the ISB was jointly prepared by PITO, Probation Unit, Court Service and the IBIS unit. The bid was reviewed by all other organisations in the criminal justice system (CJS) and had their support. These were the Lord Chancellor's Department (Magistrates' Courts Division), Crown Prosecution Service (CPS) and Prison Service.

3 Project Aims and Objectives

With a few exceptions, practitioners in the CJS have to obtain previous conviction information via the police. This has significant penalties in terms of time delays and also imposes an administrative burden on the police service. The aim of this project was to facilitate direct access by these practitioners to Phoenix, the criminal records database held on the Police National Computer.

PITO also had the wider objective of meeting the specific Criminal Justice System's business objectives in a flexible manner to facilitate the re-use of the components developed in other business areas and to establish an architecture for further building upon them.

3.1 Objectives

The objectives of the project were to:

(a) develop a "Phoenix Links" architecture which will enable the new strategic IT systems that are being introduced in the CJS to download relevant information that is held on Phoenix.

The "Phoenix Links" architecture would consist of a set of standard, reusable application software components that could be accessed by any compatible CJO IT system. The software components would be produced by using current IT best practice methods for system design and development and meet principles of quality, data timeliness and standardisation.

Details of the "Phoenix Links" PNC Application Programming Interface (API) would be published for the benefit of all CJOs and their suppliers. The APIs could be incorporated in the basic design of new CJO IT systems.

(b) modify CRAMS to provide a facility that will use the new "Phoenix Links" architecture and allow Probation Services to download previous conviction and other relevant information on offenders from Phoenix;

(c) provide an electronic link between Phoenix and the Court Service's Jury Summoning and Management System (JUROR).

JUROR has been developed in partnership with Electronic Data Systems (EDS), the Court Service's PFI supplier. It constitutes the first part of the development of 'CREDO', the IT system which will assist in the delivery of the Lord Chancellor's administrative reforms in the Crown Court. JUROR automatically summon jurors for criminal and High Court Civil cases for all Crown Courts in England and Wales, and also jurors for coroners courts.

The Juries Act 1974 stipulates that Crown Court centres must carry out a random check on the eligibility of individuals to serve as jurors. This means that a sample of potential jurors must be vetted for criminal convictions (which are held on Phoenix). The old manual system was extremely slow and labour intensive and, consequently, very few jurors were vetted. The electronic link between JUROR and Phoenix has speeded up the process and allows checks to be made on all potential jurors.

3.2 Achievement of Objectives

14 The "Phoenix Links" architecture developed for this project has used Enterprise Java Bean (EJB) technology and an Extensible Mark up Language (XML) interface. The EJB API has been published to both the Court Service and EDS to enable the Juror / Phoenix link to be developed.

14 The link to the Probation service CRAMS IT system was not achieved as the Probation service withdrew from the project in mid 2000, under contractual difficulties with their PFI supplier Bull which were unrelated to this project.

14 The link to the Court Service JUROR system was completed and has been operating successfully from its switch on date of Monday 21st May 2001.
During the first 4 weeks of operation 12 Jurors who agreed to serve and said they were eligible, were matched on the Phoenix database and were shown as having disqualifying convictions. The convictions as indicated on Phoenix were manually checked against the Magistrates and Crown Court records and found to be correct.

From the date of switch on, excepting the initial additional checks as described, no other requests for criminal convictions have been requested by the Court Service from the Police. It can therefore be concluded that, subject to the initial assumptions being correct, the annual saving of £52,000 and £70,000 for the Court Service and Police respectively will be achieved.

Significant additional business benefit could be gained if the link was extended to provide antecedents for use during court hearings. This was an original aim of the project but not included in this "first phase". The existing hardware architecture at the Court Service JUROR end of the link could be used as a gateway to request and receive antecedents, by batch, overnight. This could be fed from and fed back into the standard Court Service GSI accredited e-mail system that is shortly to be updated.

3.3 Project Plan – Timescales

The original planned timetable, with a projected go-live date of 18th February 2000 was delayed because of various problems.

Firstly, the three business areas PITO, Courts Service and Probation Service all encountered unrelated problems with the continuity of personnel working on the project.

Secondly it is the nature of the ISB projects that require organisations to bid for funding. It is much more difficult to plan in advance because of the need to await for confirmation that funds have been granted. As a result the project start-up was delayed and slower than was usual.

Thirdly, project was taking a new technological approach and the learning curve was steeper than usual.

These problems meant that there was a subsequent re-planning exercise, the result of which was a new date for the Juror / Phoenix link to be operational by 23rd March 2001. The link was actually fully operational and being monitored on 21st May 2001. The Data Communications link was finished to plan. The additional delay in implementation (from March to May) was due to the late delivery of the draft Interchange agreement produced by the IBIS unit. The commercial section in PITO and finally the commercial section in the Court Service then further delayed this.

The main area of delay, from the Court Service perspective, was the introduction by PITO, in the interchange agreement of an indemnity clause. It is felt that such a clause, while necessary when dealing with outside commercial organisations, was inappropriate in an agreement between two government-sponsored agencies (in reality would they be allowed to sue each other?).

The present Data Communications link from the Courts Service to the PNC is an interim link only. The original solution involved linking JUROR through PNN-2 to Phoenix. Delays in the development of PNN-2 prevented this happening.

3.4 Usage Statistics for the Court Service

During the first 8 weeks of operation the details of 37088 Jurors, that had been summoned and had agreed to sit, were submitted for checking against the Phoenix Database. Of these 495 were matched and of these 29 had disqualifying convictions. The details of the first 12 jurors with disqualifying convictions that were identified were manually checked against records held in the Magistrates and Crown Courts. The nature and validity of the convictions was confirmed as correct in all cases.

In statistical terms 1.3% of Jurors summoned that agreed to serve have a corresponding record on the PNC this compares with 10.9% of the population as a whole who have a record on the PNC. The apparent discrepancy is most likely due to the Juror link requiring and exact match on name, date of birth and Post Code. When people move the PNC is unlikely to have the address updated unless they come to the attention of the police for some reason.

The figure of 29 with disqualifying convictions gives a percentage of less than 0.1% of those summonsed and agreed to serve. These people may in effect have deliberately lied on their summons form, and under the Juries Act 1974 are liable for prosecution.

4 Funding for the Project

Funding was jointly serviced from the Treasury Invest to Save budget. Of the total budget each department had to provide 25% of the costs from its own budget. A more detailed breakdown of budget spend is at appendix A. The project took advantage of 'Year End Flexibility' to carry over funding from 1999/2000 to 2000/2001.

4.1 PITO Budget

The PITO budget was £500,000 of which £125,000 was to be funded from PITO funds.

For the financial period 2000/2001, PITO's costs were recorded as £572,660. Of this £403,391.48 was spent on non-pay running costs and £169,269 on pay running costs. The overspend of £72,660 was subsumed within PITO's overall budget.

It should be acknowledged that PITO incurred additional costs that have not been included in this report. Additional costs were incurred in the provision of the Phoenix Links architecture for the financial year 2001/2002. However, in practice it was difficult to separate these costs and specifically assign them to the Phoenix Links project. This was because the infrastructure was at this stage being simultaneously developed to enable other new applications such as CRB, Firearms and DNA to use the same interface.

4.2 Courts Service Budget

The Courts Service budget was £365,000 of which £91,250 was to be funded from Courts Service funds.

There was additional funding of £80,230 successfully secured for the project by submission to treasury for funding from the "Unfunded Interface budget". There was an additional debit for £20,000 resulting from an invoice submitted by EDS to the Courts Service, after their project had been concluded.

4.3 Probation Service

Figures for Probation Service costs were not available to the author and have not been included.

5 Summary of Project Risks

The table below is a summary table of the project risks that were monitored and controlled during the project. An Access database was used to record the actions taken to manage the risks for their duration.

Id	Risk Title	Impact	Likelihood	Risk Assessment	Date raised	Date Closed
1	Finance - Safeguarding Project Budget	4	3	High	18/06/99	02/02/01
2	Team Skills - Training & Funding Required	3	1	Low	18/06/99	08/05/00
3	Project Scope - Clearly Defined User Requirements Needed	4	3	High	18/06/99	10/04/00
4	Clash with other Projects	4	4	Very High	18/06/99	21/05/01
5	Project Goals - Unexpected Change in Scope or Deliverables	3	3	Moderate	18/06/99	21/05/01
6	Consultancy - Additional Requirement from Valtech	2	2	Low	18/06/99	09/08/99
7	Third Party Suppliers	2	3	Moderate	18/06/99	09/10/00
8	Unavailability of network link	3	2	Moderate	14/07/99	28/09/00
9	Slippage in Court Service delivery due to Unavailability of network link	4	4	Very High	31/01/00	18/09/00
10	Security Policy	4	2	Moderate	09/08/99	21/05/01
11	Procurement	4	2	Moderate	09/08/99	05/02/01
12	Consultancy	2	2	Low	27/09/99	05/02/01
13	Courts Service Representative Committed to Juror Project	4	2	Moderate	13/03/00	08/05/00

6 Summary of Project Issues

There were a total of thirteen Project Issue Reports raised by the Hendon PSO. Six were categorised as technical issues, two as procedural issues, two as resource issues and three as finance issues.

The table below is a summary table of the project issues that were monitored and controlled during the project. An Access database was used to record the actions taken to manage the Issues for their duration.

PIR no	Date raised	Issue	Owner	Priority	Date Closed
1	3/8/99	Will PNCD staff have adequate technical skills to undertake the necessary work?	M Dearing	M	13/8/99
2	1/9/99	Is the use of browser software and internet access a	M Dearing	M	27/9/99

		security risk?			
3	1/9/99	How do we progress through Procurement quickly our wish to use Valtech as our 3rd party resource.	K Wissgott M Dearing	L	27/9/99
4	13/3/00	Doubt as to whether the carry over of ISB funds into the new financial year had been fully approved.	Project Board	M	19/2/01
5	10/4/00	Delay in the availability of the PNN2 which would result in a shortfall in funding for the Courts Service.	Project Board	H	2/2/01
6	8/11/00	Delay with the procurement of the middle tier server hardware (Reference Risk Log ID - 10).	G Baird	M	5/2/01
7	8/11/00	The cabling which will provide power via a UPS board to the cabinets located in Zone B has not been installed by the supplier Carillion.	A DeSilva	M	29/11/00
8	10/1/01	Requirement to provide maintenance cover 24hrs a day, 7 days a week before go-live at the end of February 2001. Call-out procedures also need to be drawn-up.	G Baird	M	6/11/01
9	5/2/01	The Development system may potentially need to be used for go-live as there may not be time to carry out the 4 weeks Testing and Acceptance of the Live Server Hardware and Software before scheduled go-live date of end of February 2001.	R Benham	M	8/5/01
10	5/2/01	When tested locally Digital Certificates worked. When tested externally from PNC to Courts Service, the Certificates failed. The deadline for the certificate system to be in place and PNC to supply supporting working procedures is 16 February 2001 with go-live on 26 February 2001.	R Benham	M	4/5/01
11	5/2/01	There is an issue regarding concurrent access with Entire X. Intensive investigation into a problem with the TRW NAFIS test link into Host3 revealed a compatibility issue between DCAM v13 (under OSD4) and the SAG Network product. Under the new DCAM release, SAG Network can only support a single declared link.	G Baird	M	8/2/01
12	5/2/01	A contract with Valtech was let in March 2000 for 30 days consultancy with individual days to be 'called down' as required. At the moment only a proportion of the 30 days had been used and there was still a number outstanding.	E Maxwell	M	13/6/01
13	28/2/01	Delay to go live due to the System Operational Procedures and Interchange Agreement not being completed and signed off.	A Robb	M	16/5/01

7 Lessons Learned

Any additional Lessons Learned identified up to the Post Project Review will also be noted for future reference. PITO has an access database used to record all Lessons Learned from this, and other projects.

It is noted that the OGC are setting up a similar database to record Lessons Learned. PITO representatives are in regular contact with OGC and have been asked to determine what procedures and processes should be put in place to allow any appropriate lessons to be shared.

Lessons Learned

	Description of Events	Tick Relevant column			Recommendations
		Went Well	Went Badly	Lack-ing	
1	The decision as to the architecture concept to be used was made in November 1995 and has proved it value. Police force IT Directors have also been very interested in using this concept in other areas. The use of the architecture, envisaged by PITO, using XML and Java has demonstrated that this architecture is appropriate for connectivity and provides the basis for wider access to the PNC.	☺			As a result of the success of this project it was decided to consider its use for other PITO applications. *Subsequently it has been used for 3 major PITO project and is also more widely recognised (eg by OGC) as the right approach.*
2	There was general agreement that the decision to use a small project to pilot the use of XML and Java for the first time, was a good one. This meant that although there was a years delay its' impact was not as critical as it could have been for a high profile project. The draw back was that it was difficult to engage the Senior Managers with a project that they did not considered as strategically important in the larger scale of things.	☺			Future projects of this type should deal with these potential problems when considering risks to the project.
3	A considerable amount of prototyping and evaluation of the prototypes took place. This caused problems in the using the 'classical' project management and Product Based Planning approach and a different mind-set needs to be applied to a 'prototyping project'. As a result the initial stages were inadequately monitored and reported, albeit without affecting the work being done. It meant that no one could easily determine how elements of work were progressing against expectations. When a more realistic approach was attempted later this generated additional work in ascertaining the exact state of the project.		☹		The level of project management, project support and the approach methodology should be decided early in the project and maintained throughout and alternative methods used that are appropriate to the type of project being managed (e.g. time-box planning).
4	The completion of the interchange agreement (based on a generic version) required considerable consultation and discussion. The time taken for its completion was underestimated and it was not drafted and ready for signing until far too late in the project.			😐	These agreements need to be put in place at the very beginning of the project to allow for correct procedures and documents to be identified between the supplier and user.
5	a) The generic interchange agreement contained an indemnity clause; put in by PITO, that the Courts Service considered inappropriate for agreements between government sponsored agencies. As a result the Courts Service sought legal representations which resulted in a delayed go-live date			😐	a) It is recommended that Mr P Price put a submission to the PSSC requesting they review the clause in question in relation to its suitability for agreements that are between Government agencies.

	Description of Events	Tick Relevant column			Recommendations
		Went Well	Went Badly	Lack-ing	
	delayed go-live date. b) It must be acknowledged that at a strategic level, when multiple agencies are involved, risks are greater. Even more so when sharing data with 3rd parties.			😐	b) It is recommended that any future projects record and manage the risks that may occur relating to Data Quality. In particular the implications should be assessed for the impact that the provision of (poor) data quality from one organisation might have for the recipient organisation(s). There should be a structured approach to identification of all potential Risks to a project, including data quality in relation to governance and use in the Development & Live stages of a project.
6	The amount of time and effort required to get security accreditation was underestimated. As we move towards using the Government Protective Marking Scheme (GPMS). It is likely to be increasingly important as the Police Service have only recently adopted GPMS as official policy and the police forces are in the process of implementing the policy incrementally.		☹		Whatever GSMS is agreed should be adopted and followed. In the interim it would aid all parties if the system being used to connect to the PNC was accredited (preferably GSI). The effort to achieve this should be planned, documented and included in project plans as part of the project initiation.
7	Many of the project documents produced by EDS for the Court Service were confidential as they formed part of a commercial contract between the two parties. This meant that they could not easily be given to other partners involved in the project. In addition much of the contents of the Interchange Agreement had to be duplicated and sanitised.		☹		Documents and agreement between 3rd party suppliers where at all possible should be non-confidential. In this way they can be freely cross-referenced and included in project documentation. Close liaison with PCRD and customer/supplier Contracts Department to implement the recommendation for future projects.
8	There were changes of personnel at all levels, in all departments working on the project PITO, Courts Service, Probation Service and IBIS throughout the life of the project. The first Project Board, with respective senior members from each department met only once. This led to continuity difficulties.		☹		Whilst there were there may be unplanned changes in personnel these should be managed effectively. The aim should always be that the personnel who start on the project should remain on the project to the end, with a CLEAR expectation of staying with to the end. This would provide, not only continuity but would safeguard the retention of knowledge by key staff (which is of crucial importance to the Project Support function).

	Description of Events	Tick Relevant column			Recommendations
		Went Well	Went Badly	Lack-ing	
9	PITO personnel changes. There were several changes to the Project Manager. This was exacerbated by the lack of the SEO Team Leader.				Commitment from Project Board to provide additional resources and provide continuity of approach.
10	There was difficulty in getting the three parties to be able to work together, when each has their local priorities and pressures imposed by their specific customer base requires commitment from all sides at Senior Management level.		☹		A clearly defined Senior Responsible Owner should be mandatory along with clear roles and responsibilities for project board members. Accompanying the business case, there must be a clear communication plan. A joint plan must be agreed and have a structure in place to provide a monitoring and control function at the start of the project.
11	Need for a robust business case, of benefits realisation process in place for the project and to secure commitment as was demonstrated by the problems withdrawal of the Probation Service from the project.		☹		There needs to be a clear benefits realisation programme (measurable and capable of being evaluated) and one that is accepted by the whole business and user community. The customer or business community must drive the business realisation process. There needs to be a clear recognition that there is no such thing as an IT project, these are business change projects.
12	Production of Interface Control Document was delayed because EDS needed clarification on a number of technical issues.			😐	Involvement of Court Service (Customer or User) as the Intelligent Customer.
13	Funding issues arose because of the nature of the Court Service PFI contract with EDS (payments quarterly in arrears). This made spend targets unrealistic			😐	Court Service adopted proactive stance and agreed five staged payments.
14	The number of Project and Board meetings was excessive with duplicated attendees at different series of meetings inevitably discussing the same matters. The Project Board towards the end of the project became a reporting forum to provide confidence that the project was on schedule.			😐	For project involving multiple-agencies working together in an integrated way paying careful attention to Project Management structure and reporting mechanisms is essential. There should be a differentiation between progress meetings and decision-making meetings and therefore a different approach to how they are managed.
15	Contention for resources was a problem in the latter stages of the project. New potential users for the interface were keen to get started even though the original objectives had not been completely achieved.			😐	Better scheduling within OS and or PITO should have not allowed changing priorities of other projects to impinge on the core objectives of the project when resources were so scarce.

	Description of Events	Tick Relevant column			Recommendations
		Went Well	Went Badly	Lack-ing	
	Other PITO Projects such as, Airwave, CRB and DNA were quick to realise the benefits of using the architecture. As a result the Phoenix Links began to be seen as a lower priority even though it had not been completed. There was a great deal of pressure to work on these other projects. There was a danger that the benefits would not be delivered if the temptation to apply the technology to other projects was not resisted.				Strict controls should be in place and this potential problem should be managed as a Risk.

8 Continuing Responsibilities

	ACTIONS TO BE COMPLETE	RESPONSIBILITY OWNER:
1	Report on the business benefits realisation from Courts Service.	Mr Page
2	Input for benefits realisation report from Operational Service, PITO on the Architectural benefits.	Mr Howarth
3	Decision to be made on whether there is a need for a SLA to manage the service between PITO and the Courts Service. (i.e. clear identification of Court requirements for service availability e.g. over Bank Holidays)	Mr Baird Mr Page Mr Napthene
4	Provision of Help Desk log to identify any trends or specific problems encountered since go-live.	K Lane
5	Contact OGC to decide on how relevant lessons learned should be made available to other Government Departments.	U. McGarvie/P Latham
6	The present Data Communications link from the Courts Service to the PNC is an interim link only. The original solution involved linking JUROR through PNN-2 to Phoenix. Delays in the development of PNN-2 prevented this happening. A decision to be made on whether the link should be migrated and when this should be planned.	R Thurston
7	The business case was not clear on whether the functionality to be able to download information was one way or 2-way. The checks submitted by the Courts Service are processed as a batch enquiry. The architecture can support the flow of information both ways. If the CRAM system has information that would be useful to the Police Service then this should be followed up in the User Requirements area (J Thompson).	Mr Page/Mr Thompson
8	The Courts Service commented that significant additional business benefit could be gained if the link was extended to provide antecedents	B Page

	ACTIONS TO BE COMPLETE	RESPONSIBILITY OWNER:
	for use during court hearings. The Courts Service to raise a Request for Change.	

9 Post Project Review

This will be scheduled for late March 2002. This will look at the following topics following the go-live in May 2001 of the system:

- The Benefits realisation in terms of both expected and unexpected benefits
- Unexpected problems
- User reaction
- Follow-on work recommendations.

Following consultation with IBIS in November 2001 it was agreed that, as Probation Service dropped out of the project so early, there was nothing worthy of note to report on their behalf at the Post Project Review (PPR) stage.

Also, in terms of conducting the review, the IBIS unit felt it was not best placed people to conduct the PPR. With the evolving role of IBIS (changing to the CJIU) its priorities were not clear and it was unlikely that the CJIU would have the manpower or resources to carry out a review.

It was agreed that the two remaining parties, the Courts Service and PITO (Operational Services) would each review and report upon their respective benefits from the project.

10 Benefits Realisation

The original Business Case identified the potential benefits to Users. These have been reprised at Appendix C (Benefits) and Appendix D (Estimated Financial Savings) for reference and will be formally assessed as part of the Post Project Review. However, it is worth summarising the current position regarding those that have been achieved and those that have not.

10.1 Benefits Realisation - Probation Service

The reader should be aware that the Probation Service withdrew from the project with effect from November 2000. As a result none of the benefits identified in the Business Case will be delivered.

10.2 Benefits Realisation – Prison Service

The Prison Service did not have any representatives directly involved with the project. There was a comment in the Business case which stated that "The Prison Service is reviewing its options for implementing a new strategic IT infrastructure and information system (IS) by using Public/Private/Partnership arrangements. The strategic IS will make use of the "Phoenix Links" architecture that will be developed under this project."

The benefits for the Prison service were to be derived from the Probation Service link to the PNC. As the Probation Service withdrew from the project the Prison benefits will not be delivered.

10.3 Benefits Realisation – Courts Service

In terms of the scope of the project the Courts Service was the sole user of the Phoenix Links Architecture delivered. It was agreed with the Courts Service representative that the benefits would not be assessed until at least nine months after the system had been live. This will take place as part of the formal PPR, which has been scheduled for March 2002.

10.4 Benefits for PITO/PNC

The design of the Phoenix Links Architecture has been developed in a way that has allowed for reuse of most of the components and is readily adaptable to any application and provides a fully versatile interface to other systems. This was achieved using a combination of object-oriented/component design and the use of open standards, in line with currently accepted IT best practice methods for system design and development.

The architectural design has subsequently made it possible to reuse the underlying infrastructure for other interfaces such as DNA and Firearms, both of which are in their respective development phases.

Although, the interface to the Probation Service CRAMS system was not implemented due to the Probation Service withdrawing from the project, the software components that would have been used were developed by PITO. It has since been possible to reuse these same components to fully meet the business requirements for the interface to the Criminal Record Bureau, and to partially meet the Airwave requirements. This is a strong indicator of the flexibility of the interface.

The Phoenix Links Architecture has been warmly welcomed by IT Directors in individual police forces and is expected to be used as the basis for establishing further system-to-system links between PNC and forces as part of the PNC Modernisation programme.

11 Appendix A Budget Breakdowns

11.1 Courts Services Budget Breakdown

The Courts Service original budget was £365,000. An additional £80,230 was secured from the Treasury Unfunded Interface budget that increased the overall budget to $445,230. It should be noted that there was a subsequent invoice from EDS for an additional £20,000 for the provision of Digital Certificates which has not been included in the breakdown, this was paid for from Courts Service funds.

No:	Milestones	Actual Spend			
		Current			Capital
		EDS	Court Service	Total	
1	RFC Part 2, and 3 Issued		£0	£0	N/A
2	RFC Agreed		£0	£0	N/A
3	Acceptance Criteria Agreed	£82,867	£9,600	£92,467	N/A
4	Prototyping Complete	£35,457	£6,400	£41,857	N/A
5	Acceptance Agreed	£182,620	£19,200	£201,820	N/A
6	PNC Connection Installed				N/A
7	System Integrated & Operational	£80,591	£4,800	£85,391	N/A
8	Initial Operation Period	£17,296	£6,400	£23,696	N/A
Totals:		**£398,830**	**£46,400**	***£445,230***	*N/A*

11.2 PITO Budget breakdown

PITO's budget was originally £500,000, the overspend was subsumed by PITO.

PITO Financial Return				
Consultancy				
	Valtech	IBIS Consultancy	£35,250.00	
	Valtech	Project Initiation Folder	£17,625.00	
	Valtech	Consultancy	£36,425.00	
	Valtech	22 days technical architecture consultancy & 3 days mentoring	£31,229.15	
	Methods Application	Consultancy Services - R Benham	£45,710.00	
	Netfusion	Consultancy x 5 days	£5,287.50	
	De La Rue Interclear	Consultancy x 10 days	£14,687.50	
	BEA Systems	Consultancy for Weblogic x 3 days	£5,640.00	
	Orion	Consultancy Services - G Brown (March 2001)	£7,843.14	
	Orion	Consultancy Services - G Brown (April 2001)	£6,274.51	
	Orion	Consultancy Services - G Brown (May)		

				£205,971.80
Software:				
	Computacenter	Visio Standard upgrade	£87.28	
	Computacenter	Software	£3,051.27	
	Computacenter	Merant PVCS	£293.52	
	Computacenter	Merant PVCS V3.6 CD	£912.68	
	Object UK Ltd	4 x Licence for Together Developer Edition	£11,468.00	
	BEA Systems	Weblogic Licences	£12,721.73	
	BEA Systems	Weblogic Licences and support	£43,592.50	
	BEA Systems	Maintenance for Weblogic 1/3 - 29/2/01	£2,035.48	
	PTS Plc	J Probe Suite software	£1,762.50	
	TBC Ltd	DB2 Workgroup	£3,443.93	
	Technical Indexes Ltd	BSI Online rental 31/8/00 - 30/8/01	£2,785.93	
		SOLARIS 8 Media Kit - User Manuals/Documentation	£4,465.59	
				£86,620.41
Hardware:				
	Computacenter	Compaq Deskpro x 5	£4,506.42	
	Computacenter	Compaq Deskpro	£917.90	
	Computacenter	Sun Live server	£46,031.89	
	Computacenter	Sun server x 2	£5,282.54	
	Computacenter	Sun Turbo GX and graphics board	£584.99	
	ML Integration	Router, Wan modules and patch leads	£3,572.19	
	ML Integration	Routers and Hubs x6	£13,548.54	
	Netshop	Datacomms cabinets and cabling	£5,034.09	
	Global	Hubs x 5	£1,105.68	
	Global	D/SP Hubs stackable	£452.79	
	Computacenter	Sun FC-AL GBIC Modules -Cables-Cooling Module	£2,951.84	
				£83,988.87
Training:				
	Valtech		£11,045.00	
	Learning Tree	Phoenix Links training for Operations staff	£15,392.50	
				£26,437.50
Misc:				
		Catering for meetings	£318.66	
		Travel costs	£54.24	
				£372.90
		Total Non-Pay Costs**:**		£403,391.48
		Total Pay Costs	£169,269	£169,269.00

Staff Costs		**Total PITO Costs**		£572,660.48

12 Appendix B Project Plans

12.1 Courts Service Milestones

The original high level milestones for the Courts Service:

No.	Item	Start Date
1	RFC Part 2, and 3 Issued	24-Apr-00
2	RFC Agreed	15-May-00
3	Acceptance Criteria Agreed	1-Jun-00
4	Prototyping Complete	20-Jun-00
5	Acceptance Tests Agreed	8-Jul-00
6	PNC Connection Installed	4-Aug-00
7	System Ready for Integration	31-Aug-00
8	System Operational	8-Nov-00

Revised milestones and delivered dates as at 18th August 2000 following re-planning exercise with completed dates.

No:	Milestones	Date	RFC 325 (18 August 2000)
1	RFC Part 2, and 3 Issued	14-Jul-00	
2	RFC Agreed	18-Aug-00	
3	Acceptance Criteria Agreed	29-Sep-00	Stage 1
4	Prototyping Complete	27-Oct-00	Stage 2
5	Acceptance Agreed	2-Feb-01	Stage 3
6	PNC Connection Installed	3-Feb-01	
7	System Integrated & Operational	23-Feb-01	Stage 4
8	Initial Operation Period	23-Mar-01	Stage 5

12.2 PNC Milestones

1.	Increment 1.	01/11/99
2.	Increment 2.	29/11/99
3.	Increment 3.	28/7/00
3.1	Implement System Management requirements, policies & tools	28/7/00
3.2	Design/Produce Monitoring & Control Mechanisms	28/7/00
3.3	Design/Produce Logging & tracing Mechanisms	28/7/00
4.	Security Architecture	18/8/00
5.	Courts Service Mainframe Application Development	30/06/00
6.	Probation Service Mainframe Application development (not used)	28/7/00
7.	Completion of ICDs (Courts Service)	20/10/00
	ICDs (Courts Service)	20/10/00
	ICD (Probation Service - work suspended)	n/a
8.	Increment 4	24/11/00
8.1	Application Server Evaluation, selection and procurement.	3/11/00
8.2	Full implementation and acceptance testing	7/5/01
9.	Training	2/2/01

9.1	Training for Database Team	10/11/00
9.2	Training for Operations Staff	2/2/01
10.	Go-Live	21/5/01

13 Appendix C – Benefit Realisation for Post Project Review

As part of the PPR there should be a planned assessment of whether the expected benefits identified in the Business Case have been delivered. These are listed below.

13.1 Benefits to Probation Service

.4.1 If probation officers had direct access to Phoenix they could quickly obtain offenders' pre-cons and therefore prepare comprehensive PSRs for the courts in the timescales specified by the National Standards.

.4.1 Timely provision of offenders' previous convictions would also greatly contribute to the administration of justice and public safety by permitting a more informed assessment of the risk of re-offending to be made. It would also benefit sentencers because their decisions would be based on more accurate and up to date information.

.4.1 There have been a number of reported cases where the prompt availability of offenders' pre-cons would have helped probation officers to make better overall assessments of individuals re-offending.

13.2 Prison Service

.4.1 As far as the Prison Service is concerned, having direct access to Phoenix would provide timely access to previous conviction reports. This would allow risk assessments on inmates to be quickly completed after which prisoners could be categorised. And remove the burden of providing pre-cons from the police service.

.4.1 Prompt categorisation would allow prisoners who have committed less serious offences to be quickly identified and moved to lower security accommodation, which is less costly to provide. This would allow scarce high security accommodation to be exclusively used to house those offenders who have committed serious offences and not those who are simply awaiting previous conviction reports.

.4.1 Prison Service statistics have shown that the abscond rate for inmates is far higher if their pre-cons (and some other items of related information) are not available at the time of allocation. A survey was carried out last year and showed that due to extreme pressure on accommodation some local prisons had been forced to transfer inmates to training prisons before detailed previous conviction information was available to complete a risk assessment. In a significant number of cases this meant that recently convicted prisoners were sent to open (category D) prisons when the full set of pre-cons would have indicated a closed or category C prison. In the worst case, the survey reported that some 200 inmates absconded in one year. Out of these around 150 would not have been sent to open prisons if their previous history of bail or probation failures had been available to make a full risk assessment. (Please note that this information is not in the public domain and should therefore be treated sensitively).

.4.1 Inmates who abscond from prison not only increase the workload on the Prison Service but also on the police because the offenders have to be located, arrested and processed again through the criminal justice system. It is therefore in the interest of all criminal justice

agencies that reasonable measures should be taken to reduce the likelihood of incorrect allocation.

.4.1 Prompt categorisation would reduce:

(a) the number of temporary transfers which occur when offenders cannot be assessed (due to missing pre-cons) and are therefore constantly moved from prison to prison until they are eventually categorised and allocated to an establishment;

(b) number of absconders, because offenders would be allocated to suitable long term holding accommodation following the risk assessment;

.4.1 The Prison Service has obtained approval and installed a small number of dumb Phoenix terminals in the busiest reception prisons in England and Wales. These terminals allow Prison Service staff to obtain paper copies of pre-cons from Phoenix.

.4.1 Whilst the dumb Phoenix terminals help to ease the problem of promptly obtaining the information required to complete risk assessments on offenders, they are only a temporary solution until a better one like the electronic CRAMS to Phoenix link is developed and implemented by the Prison Service.

.4.1 The Prison Service is reviewing its options for implementing a new strategic IT infrastructure and information system (IS) by using Public/Private/Partnership arrangements. The strategic IS will make use of the “Phoenix Links” architecture that will be developed under this project.

13.3 The Court Service

13.3.1 Juror Vetting

.1 The Juries Act 1974 stipulates that Crown Court centres carry out an eligibility check on those members of the public who are selected to serve as jurors. Under the old manual system a random juror check was conducted by each Crown Court centre in the following way:

- Crown Court staff prepared a sample list of potential jurors and send them (by post or fax) to the local police force.
- Police check each name against the PNC for previous convictions.
- Police send results to Crown Court (by post or fax).

.1 The entire process, which can take up to two weeks to complete, has to be constantly monitored by Crown Court staff to ensure that relevant information is received before jurors are due to attend court.

.1 This system is slow and labour intensive and, consequently, checks are only made quarterly (monthly in London). The most recent available figures show that only 1% of jurors are investigated for criminal convictions, so an individual who fails to declare previous convictions could potentially serve as a juror. This may have an adverse impact on the quality of justice. In addition, failure to seek disqualification on the grounds of a previous conviction is a criminal offence.

.1 Similarly, following the implementation of JUROR, the JCSB assumes responsibility for carrying out police checks. Without automated vetting, they would have had to carry out the checks using semi-manual methodology on behalf of all the Crown Courts in England and Wales.

.1 An electronic link between CREDO and Phoenix would mean that the eligibility of every potential juror could be checked automatically. This would improve the quality of justice by ensuring the integrity of all jurors, and decreasing the likelihood of perverse verdicts. It would also lead to considerable savings in police and court staff time by removing the need for lengthy manual checking procedures. (The additional automatic checks would lead to only a 1% increase in the workload of the PNC system.)

.1 The electronic interface would therefore reduce the:

(a) chances of a mis-trial occurring. This could arise if an unsuitable juror was selected and the error was discovered during the trial;

(b) likelihood of a miscarriage of justice occurring. This could arise if an unsuitable juror was selected and the error was not discovered during the trial;

(c) costs incurred by other agencies such as the CPS, Police and Probation Service as a result of mis-trials occurring;

(d) number of manual actions that are required by court staff to obtain pre-cons;

13.4

.1 Future developments in the CREDO link could also enable Phoenix to be automatically updated with the results of Crown Court cases. This would mean that the police would be notified almost immediately of the results of the case and improve the accuracy of their records.

.1 Phoenix data input is undertaken, in many if not all cases by police staff. Due to competing priorities, the Phoenix system is not updated promptly. The delay in updating Phoenix with the results of cases can have serious effects in both the Crown Court and the Magistrates Court. If a defendant reoffends and the information provided by the police to the Courts does not reflect the most recent conviction then it could, in certain circumstances, lead to an inappropriate sentence being passed.

.1 Having access to up to date records would enable sentencers in both Crown and Magistrates courts to make more informed decisions. This would improve the quality of justice. The recent decision to transfer control of the Magistates Courts to the Court Service makes this seem even more appropriate.

.1 Having overcome the obstacles in establishing links to PITO, the Court Service is now better placed to establish similar links to other inter justice agencies as part of its modernisation programme.

13.4.1 Sentencing

.1 As part of the sentencing process, the trial judge requires the details of a defendant's previous convictions and personal details before sentence can be passed. Currently seven copies of this information are provided by the Police to the Crown Court in printed format. The police are also required to provide detailed information on the three previous convictions which have most relevance to the current case (these are commonly known as antecedents).

.1 A significant number of Crown Court cases are adjourned after the defendant has been convicted and before sentence has been passed, because the antecedents are not available and therefore the judge cannot proceed to pass sentence. This leads to delay and also causes distress and frustration to both the witnesses and the victim in the case, who having endured what can often be a traumatic court hearing, cannot put the experience behind them but have to wait and return to court to find out what sentence has been passed. The delay also adds significant costs to the case for the various criminal justice agencies involved, and for the legal aid fund.

.1 If previous convictions were available electronically via a Phoenix link, the case progression officer in the Crown Court could then check whether the defendant had been convicted of similar offences in the past, and could contact the local police force to request the production of the details of the three relevant convictions. Staff would be able to produce hard copies of the information to pass to the judiciary. This would eliminate the delay caused by the lack of antecedents, and would enable sentence to be passed at the earliest opportunity.

13.5 Police Service

.4.1 The police service would gain the following benefits from this project:

(a) the burden of providing pre-cons to the Probation Service and Court Service would no longer rest with the police, thus relieving pressure on already limited police resources;

(b) the burden of providing pre-cons to the Court Service would no longer rest with the police, thus relieving pressure on already limited police resources

.4.1 In due course:

(a) the police service would also benefit from not having to provide pre-cons to the Prison Service. Prison staff should be able to obtain pre-cons for categorising inmates directly via the Quantum/Phoenix link;

(b) the police service would need to allocate less resource to locating and arresting prison absconders. This is mainly because correct initial categorisation and allocation by the Prison Service would result in fewer absconders in the first place;

(c) having up to date information on the location of offenders (eg period on home leave or date when released from prison) would help police officers to progress crime investigations by helping to narrow or expand the list of suspects as required;

.4.1 Because of the administrative overhead involved in manually re-keying information, many police forces are currently taking up to 4/5 months to enter court results on to Phoenix. Electronic resulting should reduce this to less than 2 days and remove the burden of resulting from the Police Service.

13.6 Crown Prosecution Service

.4.1 Having up to date pre-cons would help the CPS to promptly make better informed decisions on how to proceed with cases eg discontinuance and bail related matters.

.4.1 The “Phoenix Links” architecture would also allow the CPS to quickly update Phoenix on decisions relating to case discontinuance. This would provide CPS staff and the police service with accurate information on the defendant. And therefore help them to make better informed decisions on how to proceed with any other cases relating to that individual.

13.7 Other Benefits

14.4 The proposed “Phoenix Links” architecture Phoenix interface will pave the way for CJOs to upload any information that they may already hold in electronic form on their local IT systems to Phoenix. This would not only remove the burden of re-keying information (such as court results and prisoner release data) from the police, but also ensure that the information held on Phoenix is more accurate and up to date. It also avoids unnecessary transcription errors and duplication of effort in addition it will reduce the chances of keying errors by reducing the amount of physical keying.

14.4 Having access to up to date and accurate previous conviction information would help sentencers to make more informed decisions. This would help to improve both the quality and administration of justice.

14.4 For example, if an individual re-offends in a short period of time then the court would have an up to date record of his/her recent conviction when deciding on the most appropriate sentence. This would help to identify repeat or dangerous offenders and keep them away from say children or vulnerable members of the public, thus improving public safety.

13.8 Overall Benefits

.4.1 Producing better quality PSRs in less time, speedily completing risk assessments on new inmates and quickly recording case results on to Phoenix promises to:

(a) reduce delays in the criminal justice system;
(b) improve the quality of justice through more informed sentencing;
(c) improve public safety;
(d) make better use of prison accommodation, reduce the number of absconders and therefore the burden on the police of locating and arresting them;

.4.1 The Comprehensive Spending Review (CSR) concluded that there was "considerable scope to improve the efficiency and effectiveness of the CJS through the use of information systems". The proposed “Phoenix Links” architecture and the CRAMS to Phoenix link would be a significant step forward in realising the benefits that were identified by the CSR.

.4.1 Additionally, the Ministerial Committee on the use of Information Technology in the Criminal Justice System has agreed that one of the main areas from which benefits will be gained is computerising access to the information held on Phoenix. This will reduce the very large amounts of time spent by police staff in the entry and retrieval of information on behalf of other CJO organisations, and the inevitable delays in getting the information to those who need it.

14 Appendix D Estimated Savings for Post Project Review

14.1 Probation Service

.4.1 The anticipated financial savings of developing and implementing a link between CRAMS and Phoenix are mainly due to probation staff not having to ask the police for a copy of the offenders' pre-cons. This is not a great saving, but as stated before the main benefits to Probation Services are intangible and are mainly due to:

- promptly preparing better quality pre-sentence reports;
- fewer court adjournments;
- better informed decisions by sentencers;
- improved public safety

14.2 Court Service

.4.1 The Court Service expects to save around £52,000 per annum because staff would no longer have to (a) manually select jurors for checking, (b) provide information to the Police in an acceptable format and (c) chase up the Police for outstanding replies.

.4.1 The Court Service saving is based on 250,000 juror checks being made at 1.5 minutes per name, which equals 6250 man hours work, at £8.38 per hour, which equals £52,375.

.4.1 There are also non quantifiable savings which have been mentioned earlier, these are due to the improved quality of service and improved quality of justice.

14.3 Police

.4.1 It is estimated that the Police Service would save around £77,000 in staff time alone during the first year of the CRAMS to Phoenix link by not having to deal with paper requests for pre-cons from Probation Services. (The financial saving is based on the Probation Services preparing 220,000 PSRs this year, with each one requiring a pre-con printout that takes at least 2.5 minutes of police staff time to produce at 14 pence per minute, ie 220,000 x 2.5 x 0.14=£77,000). This saving will increase over the years in line with the year on year increase in the number of PSRs that are produced by Probation Services.

.4.1 The Police Service would also make savings by not having to manually check the Phoenix database for the previous convictions of potential jurors. The saving is estimated to be around £70,000. The saving is based on 250,000 juror checks being performed every year, which takes 2.5 minutes per enquiry at a cost in police time of 14 pence per minute. 250,000 is currently the number of jurors who attend court. The number of summonses actually issued is twice that figure, if all those jurors were checked, the savings to the Police would be £140,000 per year.

14.4 Total Cumulative Savings to the CJS

.4.1 The total cumulative quantifiable saving to the CJS of implementing electronic links to Phoenix over the next 10 financial years, is estimated to be £17,000,000 (£12,750,000 if discounted at a rate of 6%).

.4.1 It should be noted, however, that in order to fully realise the above saving CJOs would have to develop links between their strategic IT systems and Phoenix. For example the Prison Service's Quantum System would need a link to Phoenix.

.4.1 The cost of implementing and operating future links to Phoenix would have to be offset against the anticipated savings. But, the cost of implementing these links should be much less than the cost of implementing the CRAMS or CREDO links to Phoenix. This is mainly because the new links would be designed and implemented as part of the new IT systems eg built in functions of Quantum. And the basic PNC interface would already have been developed as part of the CRAMS to Phoenix link project. Enhancing an existing IT system is usually more expensive than specifying an additional function at the design and development stage of a new system.

.4.1 An outline of the financial saving to the CJS as a result of having direct links to Phoenix are shown in the table below:

Organisation	**Cumulative benefit over the next 10 financial years (1999 - 2009)**
Police	£ 7,597,000
Probation Service	£ 108,600
Prison Service	£ 9,343,000
Total	**£ 17,048,600**
(Total discounted at 6%)	(£ 12,750,000)

.4.1 It should be noted that the estimated saving to the Police Service is as a result of police staff **not** having to undertake the following for **all** CJOs:

- dealing with enquiries for all pre-cons;
- keying pre-cons, results and jury checks into Phoenix;
- keying prisoner release information into Phoenix;

.4.1 A detailed breakdown of how the above figures were calculated including the assumptions that were made is given at Annex B of the Business Case ISB-12.