

Chapter 21

Fingerprint Systems

**Vote 19 Justice and Law Reform
and
Vote 20 Garda Síochána**

Fingerprint Systems

21.1 In November 2006, the Irish Naturalisation and Immigration Service (INIS)¹⁷⁶ and An Garda Síochána awarded a contract to an international consortium, led by Accenture, to design and implement a new automated fingerprint identification system (AFIS) for use in both organisations.

21.2 The project principally involved the introduction of a new Printrak biometric information system, which was designed to replace an existing system (AFIS 2000) that was in operation in the Garda Technical Bureau (GTB) and enhance a manual fingerprinting system used in the administration of asylum applications in the Office of the Refugee Applications Commissioner.

21.3 The enhancements envisaged included

- improved matching algorithms resulting in an increased ‘hit rate’ (matching new fingerprints with historic marks and fingerprints stored on the AFIS database)
- remote electronic capture of fingerprints and immediate transmission and search against the central AFIS database, providing near real-time information to agencies and field officers
- enabling all users to capture, store, search and match fingerprints on the AFIS database for their own business purposes¹⁷⁷
- interconnection between the system and other existing or future Garda systems including PULSE and the Garda National Immigration Bureau Information System and external fingerprint databases including those of Eurodac, Interpol and the Police Service of Northern Ireland
- allowing for exchange of data with external agencies through an integration framework.

The Change being Implemented

21.4 The previous AFIS computer system, introduced in 1996, had become obsolete by the end of 2006. Under the new AFIS, fingerprints can either be captured manually using the traditional ‘wet ink’ method or electronically using a livescan machine. Fingerprints captured using a livescan machine can immediately be transmitted for search against a central database. Where fingerprints are captured using wet ink, an additional step is required, which involves scanning the prints onto the system before a search can take place. While the previous system also facilitated electronic fingerprints capture via livescan machines, the devices were not as mechanically reliable as newer models and were not fully integrated.

21.5 Under the previous system, there were three livescan machines in operation, including one used by the Irish Prison Service and located in Mountjoy Prison. These machines enabled the digital capture of fingerprints, but most prints were captured using the standard wet ink based process. Moving data from the previous AFIS database involved

- rescanning a selected number of wet ink cards, in respect of active investigations, to ensure that the images in the new AFIS were stored at the highest resolution available¹⁷⁸
- cleansing and verifying data, prior to transferring it to the new system.

¹⁷⁶ INIS is an executive office within the Department of Justice and Equality, with responsibility for the administrative functions of the Minister in relation to asylum, immigration (including Visas) and citizenship matters.

¹⁷⁷ Previously, the Garda Technical Bureau had to carry out these functions on behalf of other bodies.

¹⁷⁸ AFIS is capable of storing images at a resolution of up to 1,000 dots per inch.

21.6 The project also involved the development and implementation of an integration framework and the integration of the new AFIS with additional agencies and systems, including

- the Garda National Immigration Bureau (GNIB)
- the Office of the Refugee Applications Commissioner (ORAC)
- the PULSE Information System, which is the main system used by An Garda Síochána to manage the lifecycle of relevant incidents
- the Schengen Information System¹⁷⁹, which is a cross-border system that allows participating countries to share information on certain categories of persons and property
- Eurodac, which is the official fingerprint database of asylum applicants and certain categories of illegal immigrants within the EU
- Interpol.

21.7 The aim of the integration framework was to facilitate communication between AFIS and existing and future Garda IT systems and those of external agencies.

21.8 The overall aim of the project was to introduce modern biometric technology to assist An Garda Síochána and the immigration authorities to carry out their work more effectively in areas such as crime detection, border management and identity validation generally.

Project Delivery

21.9 The project was to be delivered over four phases. These phases are outlined in Figure 103 beneath.

Figure 103 AFIS Project Phases

Phase	Principal elements
1	Replacement of existing AFIS in the GTB and upgrade of existing livescan units at Mountjoy Prison, Store Street Garda Station in Dublin and the Bridewell Garda Station in Cork. All fingerprint data from the previous system was converted to the new format. A link to Eurodac was also provided from the livescan stations located in ORAC.
2	Introduction of an integration framework (Garda Broker), integration of AFIS with the GNIB Information System, implementation of mobile AFIS capability and deployment of scanning equipment for the electronic capture of fingerprints of foreign nationals at selected ports of entry.
3	Integration of AFIS with the PULSE system.
4	Integration of AFIS with the fingerprint databases of Interpol and the Police Service of Northern Ireland.

Source: An Garda Síochána.

21.10 In addition, the project included a six-month pilot E-Visa biometrics project that commenced in March 2010, on foot of a formal submission from INIS in relation to the significantly increased volume of Irish visa applications being made in Nigeria.

¹⁷⁹ It is envisaged that Ireland will join the Schengen Information System in 2013, when the EU Commission have released an updated version of the system. Consequently, the integration of AFIS with the Schengen system was not carried out as part of the project.

Chapter Focus

This chapter reviews the financial outcome of the project and whether

- there was adequate pre-contract appraisal of the project
- a suitable project management structure was established
- project costs and commitments were adequately controlled
- the system has been brought into use and fully exploited.

Project Appraisal

21.11 The procurement process began in 2004. However, An Garda Síochána did not complete a business case for the project until 2006. In reality, the business case conducted was more in the nature of a post-hoc justification, conducted as part of a peer review process that began in early 2006. It noted that the supplier of the existing system (Motorola) had indicated it would be withdrawing support with effect from 31 December 2006 and that there was a requirement to commence the relevant provisions of the Immigration Act 2004. In addition, it noted that the new generation of AFIS solutions available offered an opportunity to improve detection rates through the implementation of a significantly enhanced and integrated solution.

21.12 Ultimately, the business case recommended replacing the existing system with one that would integrate AFIS with national systems such as PULSE and the GNIB Information System as well as international systems such as Eurodac and the Schengen Information System. It noted that this option would also allow An Garda Síochána to integrate future systems at lower cost and ensure full interoperability between AFIS and those systems.

21.13 The retrospective business case set out the advantages and disadvantages of four potential options, but only in the case of the option that was actually selected did it outline the anticipated implementation costs and the expected benefits, in terms of effectiveness, that would be realised post-implementation. The principal enhancements to effectiveness were identified as follows

- the system would provide An Garda Síochána and other agencies with access to the latest in fingerprint technology and thereby improve crime detection rates and enable electronic fingerprinting of all non-EEA¹⁸⁰ nationals and asylum seekers, as provided for under national and EU legislation
- it would assist in tackling immigration abuses arising from, *inter alia*, multiple identities with consequent benefits for welfare fraud detection and national security and anti-terrorism initiatives
- it would enable agencies such as GNIB and ORAC to carry out remote searches against the AFIS database and other international fingerprint repositories
- it would facilitate integration with existing Garda systems such as PULSE and external police agencies such as Interpol and Europol, whilst also providing a framework to allow easy integration with future systems.

¹⁸⁰ The European Economic Area (EEA) consists of the 27 EU Member States, Iceland, Norway and Liechtenstein.

Project Budget

21.14 The business case estimated that it would cost approximately €8 million¹⁸¹ to fully implement the project, but no breakdown of this overall figure was provided.

21.15 The Garda authorities stated that the indicative budget was based on examining the market, discussions with other countries which had installed an AFIS system and previous experience of developing, testing and commissioning large IT systems.

Peer Review Process

21.16 A peer review was conducted by a four-person group comprising senior officials from the Property Registration Authority, the Department of Social Protection and the Department of Finance and a retired senior official from the Department of Defence. The review commenced in early 2006. It had three elements

- a business case review
- a business systems selection review
- a governance, capacity and planning review.

21.17 In effect, the first two peer review stages were carried out retrospectively, since the preferred business option had already been selected. However, the review noted that a structured approach had been taken to system selection.

Conclusion – Project Appraisal

A project budget, sufficient to inform cost benefit analysis and detail the cost of each project element, was not formulated.

The business case was finalised in early 2006 as part of the Peer Review Process, even though the procurement process for the preferred option had actually commenced in December 2004. Consequently, the business case apparently served to justify a decision that had already been made rather than to inform the decision-making process. However, the peer review process, which was also retrospective, was satisfied that the business case and system selection was sound.

21.18 In relation to the project budget, the Accounting Officers¹⁸² stated it had not been possible to specify a detailed budget in advance because the cost of each project element could not be defined until the final contract had been negotiated.

¹⁸¹ The business case did not specify whether or not this figure was inclusive of VAT.

¹⁸² As the project was jointly funded under Vote 19: Office of the Minister for Justice, Equality and Law Reform and Vote 20: Garda Síochána, a joint response was received from both Accounting Officers.

21.19 In relation to project appraisal, the Accounting Officers informed me that a strategy document was prepared in late 2003, which analysed national requirements in respect of automated fingerprinting and defined options to meet those requirements. The strategy document highlighted the specialist nature of automated fingerprinting and the limited number of service providers. It also recognised the existing situation whereby the GTB was responsible for providing a centralised service for all fingerprint processing within the State, whether obtained for criminal, asylum or immigration purposes. Although a multi-criteria analysis was not undertaken, the preferred solution was selected in view of the constraints identified in the strategy document and the fact that support for the existing AFIS would soon be unavailable.

Project Management

21.20 In order to develop and deliver a project of this scale, it would be necessary to have well defined and functioning systems, practices and structures for project management and governance.

21.21 The project management system employed was the PRINCE¹⁸³ methodology, as recommended by the Department of Finance. The governance structure included a project board which was the overall sponsor of the project, a project directorate which provided day-to-day leadership and project teams which carried out work assigned by the project manager. There was also a risk management system in place to identify potential obstacles and agree any necessary mitigating actions.

Conclusion – Project Management

The project board established to oversee programme direction, project delivery and governance included representation, at senior management level, from all key stakeholders in the project. The project management structure included appropriate lines of decision-making and progress reporting through all levels from the project teams to the project manager, project directorate and project board. The risk management procedures in place were adequate to ensure that all major risks were identified, understood, evaluated and managed.

Commitment and Cost Control

21.22 In order to manage the project in a cost effective manner, it would be desirable to have

- a focus on selection of the most economically advantageous offering
- a system to control project changes.

Procurement of the Services

21.23 The process to procure the prime contractor was conducted by way of the restricted procedure¹⁸⁴, commencing on 16 December 2004.

¹⁸³ PRINCE (Projects In Controlled Environments) is a process-based method for effective project management.

¹⁸⁴ Restricted procedure is a two-stage process, permitted under the revised EU Public Sector Directives, whereby only those candidates who meet minimum requirements in areas such as technical capability, experience and financial capacity are invited to submit a comprehensive tender for the project in question.

Pre-qualification Stage

21.24 The project board appointed an evaluation team to assess expressions of interest received, in response to a contract notice published on the eTenders website. Submissions were received from five companies prior to the stated deadline of 4 February 2005. At its meeting of 22 February 2005, the project board accepted the recommendation of the evaluation team that all bidders should progress to the second stage of the procurement process.

Vendor Evaluation Stage

21.25 A separate evaluation team, appointed by the project board, evaluated the four tender responses received prior to the stated deadline of 9 May 2005.

21.26 The evaluation process, included a desk-based examination of proposals submitted, presentations from vendors (including responses to clarification questions) and site visits to the highest-ranking vendor. One of the vendors withdrew from the process prior to the vendor presentation stage, so only three vendors received scores following the evaluation process.

21.27 The Accenture consortium scored highest overall, achieving 92.59% of the maximum marks available. In terms of the individual evaluation criteria, Accenture achieved the highest mark under four out of the five headings and the second highest mark under the cost criterion.

21.28 At its meeting of 7 February 2006, the project board unanimously accepted the report of the evaluation team and it was agreed to give preferential bidder status to the Accenture consortium.

Evaluation of Cost

21.29 Cost was the second most heavily weighted evaluation criterion, being worth 25% of the overall marks available. The model used to evaluate the costs of the proposed AFIS implementation for each tender was the Total Cost of Ownership (TCO)¹⁸⁵ over three years.

21.30 For the purposes of evaluation and in the interests of fairness and transparency, the evaluation team constructed a likely rollout scenario, which was used to derive a TCO figure for each vendor's solution.

21.31 TCO was scored on a relative basis with the lowest cost bid receiving the maximum score and the other bids being marked proportionately. The following are the actual TCO monetary values per proposal (adjusted to include VAT at 21%), calculated by the evaluation team on the basis of the rollout scenario used to generate the marks awarded under the TCO criterion

- **Accenture** – €16.05 million
- **Bidder B** – €12.01 million
- **Bidder C** – €18.22 million.

¹⁸⁵ TCO is used to calculate the total cost of IT projects that include a combination of upfront costs such as hardware and software and ongoing costs such as licensing, support and maintenance.

21.32 Under the scenario used for the TCO calculation, the cost of the tender submitted by Accenture is considerably (34%) more expensive than that submitted by Bidder B. Although Bidder B achieved the highest mark under the TCO criterion, it received the lowest mark under the other four criteria. In fact, if the TCO mark was disregarded, Bidder B would have finished third, being over 10 points behind Bidder A and over 6 points behind Bidder C.

21.33 The Evaluation Report concluded that the cost keenness of Bidder B's proposal was outweighed by the fact that

- the approach to integration proposed by Bidder B wasn't seamless and it would require modifications before any client could access services through the framework
- the approach to security proposed by Bidder B was not considered to be sufficient, as it relied on the security of the client workstations for access to services and could be circumvented
- there were no facilities for the centralised management of users, which would add greatly to the administrative overhead and operating costs of the system.

Pricing of the Services

21.34 As instructed in the invitation to tender (ITT), the proposal submitted by Accenture included a pricing schedule, which set out full details of each constituent element within the overall price quoted. In relation to each hardware item, Accenture quoted a baseline unit price and also a range of alternative unit prices, which would apply for different volumes actually purchased. In addition, the proposal provided that should an unforeseen item of equipment be required, the cost would be agreed in advance of procurement, together with a 5% handling charge for Accenture.

21.35 In relation to software, Accenture provided a comprehensive list of every software item required for the project and quoted a license/purchase price for each. In relation to the various professional services required for the project (including design, development, configuration, testing, implementation, training and project management), Accenture quoted a fixed price for each service, supported by a schedule providing the name, role and daily rates for all consultants proposed. In relation to the post-implementation support phase, Accenture quoted a fixed price to cover business hours and a call out rate to ensure full 24-hour coverage, seven days a week.

Conclusion – Procurement of the Services

Although the proposal submitted by Accenture was not the lowest price proposal, the evaluation process found that it represented the best value for money.

While the Accenture contract stated that the overall project was based on a fixed price, in reality, only the price for professional services was fixed. For the hardware, software and maintenance support elements, contract prices were unit based and the final outturn was dependent on volumes actually required. For common hardware items (e.g. workstations, printers and scanners), lower unit prices were available as the number of units purchased increased.

Procurement of Technical Advice

21.36 BearingPoint Ireland Ltd was initially engaged by An Garda Síochána, in September 2004, to provide consultancy support in relation to the procurement of the AFIS prime contractor. The letter of engagement stated that services would be provided under the terms, conditions and rates specified in a drawdown contract agreed with An Garda Síochána in 2003. During the course of this examination, the Garda authorities were unable to supply any documentation in relation to the drawdown contract referred to.

21.37 The September 2004 letter of engagement quoted a VAT inclusive fee of €151,250, excluding expenses, in return for the following deliverables

- creation of a briefing document (setting out a technical overview of the future solution required) to accompany the contract notice in the EU Journal
- development of a scoring matrix for evaluation of responses at the pre-qualification stage
- creation of comprehensive ITT documentation, including a detailed requirement specification for the overall solution, for circulation to short-listed contractors
- development of a scoring matrix for evaluation of responses to the ITT
- assistance with the technical evaluation of responses.

Framework Service Contract

21.38 At its meeting of 27 September 2004, the project board decided to undertake a public procurement process for the provision of technical advice and quality assurance services to An Garda Síochána during the project implementation period, following the selection of the AFIS prime contractor. The procurement was progressed as part of a wider process to establish a framework service contract, from which An Garda Síochána could draw down such services, as required, for other large scale IT projects.

21.39 The request for tenders (RFT) invited bidders to apply for two initial lots, consisting of the AFIS project and a Schengen Information System (SIS) project, but indicated that services might be drawn down in respect of other large scale IT systems implementation projects over the two-year duration of the framework. Bidders were invited to apply for either of the initial lots, or both if they wished. In order to ensure that bids received would be comparable, the RFT requested respondents to submit a price for estimated consultancy requirements of 930 days on the AFIS project and 850 days on the SIS project.

21.40 BearingPoint received the highest evaluation score in respect of each lot. A framework service contract (titled 'Master Services Agreement') was signed with BearingPoint in September 2005, containing an agreed schedule of daily rates for a range of consultant roles, to be applied in respect of any services purchased under the agreement.

21.41 The proposal submitted by BearingPoint quoted a VAT inclusive price of €1.43 million for the estimated 930 day consultancy requirement on the AFIS project. In the end, BearingPoint was engaged under the framework to provide a total of 2,179 days consulting in respect of AFIS. The fee for each deliverable was calculated by estimating the number of days required and applying the daily rates contained in the framework. The total agreed fee was €3.12 million, comprising

- €1.57 million to review all document deliverables prepared during each project phase by the prime contractor, for technical completeness and accuracy (1,148 days)
- €0.67 million to support and review the development of new business processes, support all testing conducted and carry out specific expert reviews of key project aspects (462 days)
- €0.57 million to review test scripts and test closure documentation for each phase and provide support for the identification and resolution of operational issues arising in the period immediately after 'go-live' (382 days)
- €0.23 million to prepare documentation for each phase of the evaluation process for responses to the ITT (142 days)
- €0.08 million to assist with reference site visits to Swiss Police facilities in Berne and preparations for the peer review process (45 days).

21.42 The payments made to BearingPoint in respect of these deliverables totalled €3.3 million. It was not clear from the payment documentation examined during the review what proportion of the excess related to expenses and what proportion related to the number of consultancy days required being more than was anticipated.

21.43 While the initial framework made reference to two projects (AFIS and SIS) and BearingPoint's proposal in respect of those projects totalled €2.75 million, it was subsequently contracted under the framework to provide consultancy services in respect of 16 additional Garda IT projects, bringing the total amount paid over the lifetime of the framework to €15.16 million.

Conclusion – Procurement of Technical Advice

Although the Garda authorities stated that BearingPoint was initially engaged, in September 2004, to provide consultancy support for the early stages of the AFIS project under the terms of an existing drawdown contract, they were unable to supply any documentation relating to the drawdown contract during the course of the examination. The price agreed for these services amounted to €51,250.

In relation to the framework services contract signed in 2005, the RFT set out estimated requirements for an initial two projects, but neither the tender documentation nor the agreement itself provided any estimate of the likely scale or value of services to be drawn down over the two-year duration. In the end, BearingPoint was engaged under the new framework to provide services in respect of 16 additional Garda IT projects. The total amount paid to BearingPoint in respect of services contracted under the framework was €15.16 million.

It is desirable from the viewpoint of vouching expenditure that State bodies be in a position to demonstrate that payments made are in accordance with the rates quoted for individual service components at procurement stage.

21.44 With regard to the technical advice and quality assurance services provided in respect of 16 additional Garda IT projects, the Accounting Officers stated that all services supplied were covered by the scope of the framework service contract.

Change Control and Cost Management

21.45 Once a contract is developed, cost control is exercised by ensuring that variations are authorised in advance and that the cost of both the original and additional elements are priced in accordance with its terms.

Contract Development

21.46 Having obtained Department of Finance approval, the project team informed Accenture in April 2006 of their preferred bidder status. The Chief State Solicitor's Office (CSSO) agreed to provide assistance to the project team in relation to the drafting of the contract. At its meeting of 25 April 2006, the project board indicated that it expected the contract to be finalised quickly and the first phase of the work to commence before the end of May 2006. However, the draft contract was not actually received from the CSSO and sent to Accenture until early July 2006. Over the following months, representatives from the Department of Justice and Equality, An Garda Síochána, BearingPoint, the Attorney General's Office and the CSSO took part in the contract negotiations with Accenture. The contract was signed on 17 November 2006.

Contract Deliverables

21.47 The contract included details of the objectives, timeframe and key deliverables associated with each of the implementation phases. In addition, it set out details of specific deliverables for each phase under the headings of system functionality, hardware, servers and infrastructure, software, service and project documentation.

21.48 However, the contract also provided that the scheduled list of deliverables would be superseded by a Project Initiation Document (PID), to be prepared and agreed at the outset of each phase of the project. The purpose of the agreed PIDs was to define the deliverables to be produced during each phase. For each deliverable defined in the PIDs, the details specified included a target completion date, the arrangements for review and the quality criteria against which delivery would be assessed.

Specification of Timelines

21.49 The contract provided for an 18-month project implementation plan, as had been presented in the original proposal submitted by Accenture in May 2005. Based on the actual project start date in November 2006, the implementation plan envisaged the completion of all project phases by the end of April 2008.

21.50 Although the target completion dates in the PID were slightly different for some phases to those in the original implementation plan, the planned completion date for the project was unchanged at April 2008.

Contract Charges

21.51 The contract provided that the overall project was based on a fixed price contract, subject to agreeing variable charges in respect of the final required number of peripherals e.g. livescan units. On the basis of the volumes assumed in the contract, the final cost was expected to be €17.52 million, inclusive of VAT.

Contract Change Authorisation

21.52 The contract provided for a change control process. In addition, the agreed PID set out details of the control mechanism to be employed to manage the implications of requests to change any part of the contractual agreement.

21.53 Over the lifetime of the contract, An Garda Síochána formally accepted 11 cost-increasing change control notices (CCNs) at a total value of €2.01 million, which represented an 11% increase on the sum specified in the contract.

- In six of these cases, priced at €1.71 million, changes were costed in accordance with rates agreed under the contract. Documentation in respect of the largest of these CCNs, priced at €1.35 million, was inspected during the examination. The CCN related to a requirement for enhanced AFIS hardware at some locations, due to organisational changes within An Garda Síochána introduced under a new policing plan in 2008. Given the scale of the proposed change, a separate business case was prepared and sanction was obtained from the Department of Finance for the additional project expenditure.

- In the other five cases, priced at €0.3 million, there was no equivalent price available under the contract. An Garda Síochána stated that in these instances, it requested Accenture to submit costings, which were then checked to ensure that no cheaper price was available elsewhere. Documentation was inspected in respect of two CCNs, priced at €0.18 million. They related to a training course that had been specifically tailored for An Garda Síochána and the provision of an enhanced storage solution for the project. The CCNs were prepared and approved at an appropriate level but did not provide details of any price checks undertaken.

E-Visa Biometrics Pilot Project

21.54 In addition to the contract variations approved through the CCN process, it was agreed to extend the contract to include a pilot biometrics project in respect of visa applications originating in Nigeria. The cost of the proposal submitted by Accenture for the E-Visa pilot was based on the daily rates used in the original contract and came to €1.51 million. Discounts totalling €0.18 million were agreed during subsequent negotiations between Accenture and the Department of Justice and Equality, bringing the final agreed sum to €1.33 million.

21.55 A separate business case was prepared in respect of the E-Visa pilot and Department of Finance sanctions totalling €1.33 million were obtained in June 2009 and February 2010.

21.56 The context for the E-Visa pilot proposal was a very significant increase in the volume of Irish visa applications being made in Nigeria. The annual number of applications received had risen from approximately 4,000 in 2006 to in excess of 11,000 in 2008, representing a rate of increase far in excess of that being experienced elsewhere. It was considered that the increase in applications for Irish visas was related to the decision of the UK authorities to introduce fingerprinting for visa applicants in Nigeria, with effect from mid-2007.

21.57 The six-month E-Visa pilot project commenced in March 2010. It involved the introduction of two additional steps into the visa administration process

- fingerprints of applicants to be captured during the application process at two locations (Abuja and Lagos) in Nigeria
- fingerprint verification at Dublin Airport to confirm the identity of visa holders, when entering the country.

21.58 Fingerprints captured during the application process were compared against the AFIS database to check whether the applicant had an existing immigration, asylum or criminal history. The search results were returned to the Visa Office of the Irish Embassy in Nigeria within 24 hours and were given consideration as part of the decision making process on the visa application.

21.59 An in-house evaluation of the E-Visa pilot project has been accepted by the AFIS project board. The aim of the evaluation was to review the operation of the pilot scheme and to make recommendations as to how INIS and An Garda Síochána should proceed in relation to the future use of biometrics in the visa regime. The evaluation report noted a significant decrease in the volume of visa applications submitted during the pilot period. It also identified a reduction in the number of asylum applications from Nigerian nationals and highlighted the detection of a number of individuals seeking to re-enter Ireland, having previously been deported.

Conclusion – Change Control and Cost Management

The contract development and negotiation phase took longer than envisaged by the Project Board and the project start date was consequently delayed for approximately six months. The change control procedures applied to the Accenture contract ensured that all contract changes were adequately specified and approved at an appropriate level.

Over two thirds of the value of agreed contract changes related to additional hardware requirements, which arose from organisational changes introduced in An Garda Síochána under a new policing plan in 2008. The remaining contract changes related to a variety of issues including software changes, additional testing and additional training.

Overall, the changes increased the contract cost by 11%.

21.60 The Accounting Officers stated that some of the authorised contract changes related to the realignment of Garda divisional structures and could not have been envisaged at the outset of the project, so had to be accommodated under the change control process.

Project Cost, Timescale and Delivery

21.61 The business case set out a cost estimate of €18 million to fully implement the new AFIS system and integration framework, but there was no indication as to whether or not this figure was inclusive of VAT. This figure was intended to include payments to external contractors, internal costs such as staff salaries and training initiatives as well as ongoing costs including user support and maintenance.

21.62 As Figure 104 indicates, €23.13 million was ultimately paid out on externally contracted services. The cost of internal resources was not tracked.

Figure 104 AFIS Project Payments

Element	Amount Paid €m
Accenture contract	16.32
Agreed CCNs under Accenture contract	1.97
E-Visa pilot	1.33
BearingPoint letter of engagement (Sept 2004)	0.21
BearingPoint framework contract (Sept 2005)	3.30
Project total	23.13

21.63 The cost of the Accenture contract came in at €1.20 million below the projected amount due to savings of €1.27 million on software and €0.57 million on hardware, partially offset by an excess of €0.64 million on maintenance and support services.

21.64 In relation to the savings achieved, the Accounting Officers informed me that

- some of the required third party software for the AFIS solution was covered by an existing corporate licence agreement held by An Garda Síochána
- mobile AFIS hardware was not drawn down as a result of delays in the enactment of the Immigration, Residence and Protection Bill.

21.65 The excess in respect of maintenance and support services relates to the decision to extend the support period for the entire system to the end of December 2010. This decision was taken in light of delays experienced with project implementation and in order to avoid a situation where the warranty period for the first phase would expire before the final phase had been accepted.

21.66 The September 2004 engagement letter for BearingPoint's work on the early stages of the AFIS project quoted a price of €151,250. The total payments subsequently made in respect of that engagement were €210,136, which represents a 39% excess.

21.67 Payments to BearingPoint in respect of AFIS project work contracted under the framework service agreement totalled €3.3 million, which represents a 6% excess on the figure agreed.

Conclusion – Project Cost

The business case set out a cost estimate of €18 million. This estimate encompassed all anticipated project costs including payments to external contractors, internal project management and support costs and ongoing costs such as workstations, licenses and computer supplies. In the end, €23.13 million was paid under contracts with two suppliers working on the project, including €1.33 million in respect of a project extension to trial the use of biometrics in the visa regime. No detailed records of in-house project management and support costs or ongoing project costs were maintained.

At a process level, the external costs incurred were controlled to an acceptable standard.

Project Timescale

21.68 The implementation plans contained in the Accenture contract and the subsequently agreed PID envisaged the completion of all project phases by the end of April 2008. During project implementation, the project board decided to defer the rollout date for Phase 3 (integration of AFIS with PULSE) until after the release of an updated version of the PULSE system. Ultimately, the project board accepted the final phase of the project in October 2009.

Conclusion – Timescale

At an overall project level, by the time of completion of the final phase in October 2009, an 18-month time overrun on the initial project implementation plan had occurred.

21.69 The Accounting Officers stated that the overrun on the project timescale was due to factors outside the project board's control and was attributed mainly to a delay in the enactment of the Immigration, Residence and Protection Bill and the requirement to deploy a new version of the PULSE system.

Project Delivery

21.70 It appears that the project has substantially delivered the anticipated benefits but it is difficult to make a definitive assessment, since many of the expected benefits are too general to verify. For example, in some cases the benefits were framed as being to improve on certain areas (e.g. improve public confidence, improve technologies), without any quantification of the scale of improvement that was envisaged. In other cases, the anticipated benefits quoted were already being delivered to some extent by the previous AFIS system (e.g. solve crimes using fingerprint data, fingerprint all asylum seekers).

21.71 On the basis of an analysis of data over the period 2004 to 2009, An Garda Síochána has reported a 94% improvement in the 'hit rate' for fingerprint matches, since the introduction of the new system.

21.72 An AFIS Project Closure Report assessed the extent to which the required functionality and anticipated benefits have been delivered. It also reviewed project timelines, considered what aspects of the project were successful and set out the lessons learned that can be applied to future projects.

21.73 The closure report identified the following opportunities for improvement in the context of implementation of future projects

- All stakeholders should be engaged as early as possible in the process – it found that the Garda Telecommunications Division and the Office of Public Works could have been engaged at an earlier stage.
- Project schedules should be issued and communicated clearly – it noted that this had not been achieved during Phase 2 in particular.
- Ad hoc testing should be a significant element of user acceptance testing and the test team should receive training on how to conduct a robust user acceptance testing cycle. For AFIS, ad hoc testing was not integrated into the process for Phase 1, but was implemented for the second, third and fourth project phases.
- Test environments should mirror the live production environment to the greatest extent possible, in light of budget considerations. On the AFIS project, instances occurred where solutions had performed well in the test environment but failed in production.

Conclusion – Project Delivery

The general benefits outlined, while clearly important, are difficult to capture in measurable form. There would be merit in future projects in attempting to identify distinctive benefits of new generation projects in quantifiable terms.

A closure report was completed and identified opportunities for improvement.

From the viewpoint of functionality, the 94% improvement in the 'hit rate' is a tangible measure of the improvement in the core capability of An Garda Síochána to match prints and solve crimes.

21.74 In terms of project delivery, the Accounting Officers expressed their view that the system has been successfully implemented and has delivered the key business benefits identified for both the immigration and criminal related aspects. They highlighted specific outcomes arising from the AFIS project, including

- a significantly lower processing time for asylum applications, due to the use of livescan machines for fingerprinting and the immediate search of the Eurodac system
- increased detection of immigration and asylum abuses, such as attempts to gain access to the State under a false identity.

Commissioning and Use

21.75 While all elements of the project have been delivered, some issues relating to the timing and extent of the deployment of the technology remain.

Industrial Relations Issue in the GNIB

21.76 In preparation for AFIS implementation, single finger scanners were installed in GNIB offices to enable the capture and storage of fingerprint data on GNIB Cards¹⁸⁶ and livescan machines were installed to enable the capture of full sets of fingerprints and searches against the AFIS database. Due to an industrial relations issue concerning the respective roles of immigration officers and GNIB civilian staff, the five livescan machines installed in Burgh Quay in August 2008 have never been used. Initially, civilian staff did use the single finger scanners so it was possible to save fingerprint data on the GNIB Card, even though a search of the AFIS database was not possible. However since September 2009, no fingerprints are being taken as part of the registration process in Burgh Quay, so GNIB Cards are issued with no fingerprint data. There is a similar industrial relations issue with GNIB civilian staff in the Anglesea Street offices in Cork, but Garda personnel have been available there to take fingerprints and ensure that the system remains fully operational, during the dispute.

21.77 The industrial relations issue is confined to these two locations, so fingerprints are being taken as part of the registration process in all other GNIB offices. Since the beginning of the dispute in August 2008, the GNIB has met regularly with CPSU¹⁸⁷ representatives and made significant efforts to resolve the situation. A working group was established in December 2008, consisting of GNIB management and CPSU representatives, with the aim of resolving the issues of concern. In addition, GNIB has received advice from both the Offices of the Attorney General and the Chief State Solicitor, while the Director of the Garda Civilian Human Resources Unit has undertaken an evaluation of the work carried out by civilian personnel.

21.78 When a resolution to the industrial relations situation is achieved, it is estimated that a lead-in time of approximately five weeks would be required prior to 'go-live' in Burgh Quay. It is estimated that three people will be required to carry out training and related work at a cost of approximately €0.06 million.

¹⁸⁶ The GNIB card is the common name for the Certificate of Registration issued, under the Immigration Act 2004, to legally resident non-EEA nationals.

¹⁸⁷ Members of the Civil Public and Services Union (CPSU) comprise clerical and administrative grades in the civil service, including the GNIB staff involved in the current dispute.

Immigration, Residence and Protection Bill

21.79 The ability to deploy certain elements of the new system was dependent on changes to existing immigration legislation. After the timetable for enactment of the legislation had been put back several times, the project board decided in May 2008 to proceed with the rollout of the system, without the functionality that was dependent on the new legislation.

21.80 Consequently, the following elements have been scoped, designed and delivered as part of the AFIS project but cannot be deployed until the new legislation is enacted

- capture of palm prints during GNIB and ORAC registration processes
- capture of fingerprints for those refused leave to land¹⁸⁸ at ports/airports of entry
- use of mobile AFIS equipment to allow GNIB field officers to capture fingerprints and to perform remote searches against the AFIS database.

21.81 The current position is that the Immigration, Residence and Protection Bill 2008 was withdrawn in May 2010 and a new version was published in July 2010.

Other Commissioning Issues

21.82 Additional matters which need to be addressed in order to ensure maximum efficiency in implementation include

- the present version of the AFIS system does not fully meet the current requirements of the GTB in respect of the preparation of fingerprint evidence for court cases, but a new process has been introduced to solve the problem and the required functionality will be available in a subsequent version
- the maximum potential benefits of the new technology are not being derived, because there are still a significant number of fingerprints being taken by An Garda Síochána using the previous 'wet ink' system¹⁸⁹
- the six-month pilot period for the E-Visa biometrics project is complete but no decision has been made on the future use of biometrics in the visa regime.¹⁹⁰

21.83 While the time taken to process latent marks using the latent entry application was regarded as excessive by An Garda Síochána, it has stated that this issue was resolved in March 2011.

Conclusion – Commissioning and Use

The systems have been accepted and brought into use, except for instances where industrial relations disputes have hindered their full deployment. Certain operational issues militated against exploiting the full benefits of the new system, including the continued use by An Garda Síochána of the traditional wet ink method to take fingerprints at some locations and delays, up to March 2011, in the processing of latent marks on the latent entry application.

¹⁸⁸ Refused leave to land refers to people being refused permission to enter Ireland at a port/airport for various reasons e.g. no passport/visa or no means of support.

¹⁸⁹ Figures received from An Garda Síochána in respect of June 2011 indicate that almost 33% of fingerprints taken were obtained by the wet ink method.

¹⁹⁰ An evaluation report, containing recommendations in relation to the future use of biometrics in the visa regime, was accepted by the AFIS Project Board in July 2011.

21.84 With regard to the industrial action in the GNIB, the Accounting Officers informed me that a meeting took place recently between senior officials from the Civilian Human Resources Directorate in An Garda Síochána, the Department of Finance and the CPSU. A potential solution to the issue was identified and is currently being pursued. In relation to the Immigration, Residence and Protection Bill, the Accounting Officers informed me that the Minister for Justice and Equality expects it to be progressed in the near future.

21.85 In relation to the residual commissioning issues identified in the report, a Fingerprint Working Group has been established within An Garda Síochána to ensure that fingerprints are taken using livescan machines, wherever possible. In relation to the E-Visa pilot project, the Department of Justice and Equality is satisfied that the technological approach has been successfully tested. The Accounting Officers outlined other benefits derived from the pilot project including increased detection of abuses of the visa and asylum processes and the associated deterrent effect on potential future abuses.

Conclusion

A new automated fingerprint identification system has been delivered and is being used within the immigration, asylum and policing regimes.

Although the system delivered provides the enhanced features originally envisaged, challenges remain in respect of its commissioning and use, which will need to be addressed before the full benefits of the system can be realised

- due to ongoing industrial action in the GNIB offices at Burgh Quay, the new system is not being used in the registration process for non-EEA nationals, with the effect that registration cards are being issued without fingerprint data
- at some locations, there are still a significant number of fingerprints being taken by An Garda Síochána using the manual ‘wet ink’ system
- the new system delivered all of the functionality originally specified, while additional requirements to assist with the preparation of fingerprint exhibits for court cases, subsequently identified within the GTB, are envisaged under a further system update
- the E-Visa pilot successfully tested the technological approach to the use of biometrics within the visa regime, but a decision has yet to be made on its future deployment
- some of the functionality which has been delivered by the new system cannot be deployed until legislation is enacted.

From a planning perspective, the business case was completed post-hoc, as was a peer review. In that respect, both exercises served to justify a decision that had already been made, rather than to inform the decision-making process.

From a control viewpoint, the procedures in place ensured that project changes were approved at an appropriate level. The changes added 11% to the project cost.

From a project delivery point of view, the overall project management arrangements were sufficient to ensure that the system was delivered to the desired specification.

Chapter 22

Central Government Funding of Local Authorities