



the Australia and New Zealand

School of Government

CASE PROGRAM

2005-30.1

## The Integrated National Crime Information System (A)

On 23 September 1994, New Zealand Police Commissioner Richard MacDonald and the CEO of IBM New Zealand Gowan Pickering signed a contract in Wellington, which represented the largest single capital investment New Zealand Police (NZP) had ever made.<sup>1</sup> It committed IBM to deliver the Integrated National Crime Information System (INCIS) – the biggest document management system in the southern hemisphere.<sup>2</sup> Both parties were excited by the project.

Both had spent a good deal of money getting to this point, prompting one of the IBM team to remark, on seeing the 4,000 pages of documents: “That’s \$8 million sitting on the table”.<sup>3</sup>

Gowan Pickering saw the contract as a golden opportunity to put IBM New Zealand back on its feet after some difficult years, and to develop the company’s services sector.

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This case was written by Jane Westaway, under the supervision of Professor Michael Vitale, Australian Graduate School of Management (AGSM), with editorial advice and assistance from ANZSOG (Janet Tyson and Dr Richard Norman). It has been prepared as a basis for class discussion rather than to illustrate either effective or ineffective handling of a managerial situation. The contribution of key interviewees Peter Doone and Gowan Pickering is gratefully acknowledged. Valuable assistance was given by Susan and Graham Butterworth, Tony Crewdson and Professor Philip Stenning.

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<sup>1</sup> *Ministerial Inquiry into INCIS: Report of Dr Francis Small to the Minister of Justice, November 2000*, Schedule 9: Sapphire Report.

<sup>2</sup> Russell Brown, “175 jobs to go along with INCIS – and there may be more”, *Computerworld*, 10 August 1999.

<sup>3</sup> All figures in New Zealand dollars. At the time NZ\$1 = approx US\$0.66c ([www.oanda.com/convert/fxdaily](http://www.oanda.com/convert/fxdaily) downloaded 12 September 2005.)

For Deputy Police Commissioner and INCIS sponsor Peter Doone, also at the signing, it promised NZP two simple but compelling – and eagerly awaited – benefits: efficiency and effective information. He saw INCIS as the tool that would propel New Zealand crime-fighting into the 21st century.

## **New Zealand Police**

New Zealand Police was a rare example of a national police service. At that time, with around 6500 sworn staff, it was the third largest in Australasia, after New South Wales and Victoria. Internationally, it was a medium-size force – larger than all but three of the United States’ 10,000 police agencies, but dwarfed by some of the big city police services of Europe – and spread over a wide geographical area. New Zealand Police were generally versatile and law-abiding,<sup>4</sup> and enjoyed a good deal of public admiration: more than half of New Zealanders had “full trust and confidence” in the Police, and another 40 percent “some trust and confidence”.<sup>5</sup>

In 1994, NZP operated on government funding of \$502 million. The Police Commissioner was constitutionally independent, ensuring that the government of the day could not deploy the force for its own ends. This structure also circumscribed the role of the Minister of Police.

Historically the police force was a quasi-military organisation. Although it had ceased routinely bearing arms more than a century earlier, it still ran on a hierarchical, command-line management structure. It had decentralised in the late 1980s into 28 districts and six regions, with regional commanders who, together with Police Headquarters’ Assistant Commissioners, formed the Police Executive Conference. This body, which also included the Commissioner and Deputy Commissioners, helped the Commissioner draw up national policy and was responsible for all major decisions.

Unsworn (civilian) staff<sup>6</sup> worked for NZP in many situations alongside, but always clearly differentiated from, the tight-knit group who wore the badge. Police culture traditionally favoured physical skills, and the introduction of computer technology in the mid-1970s had required NZP to put huge effort into training often reluctant staff.<sup>7</sup> Frontline officers were an “inherently sceptical bunch”.<sup>8</sup> Prior to the INCIS contract, a number of national Police IT initiatives had failed partly due to lack of internal support.<sup>9</sup>

In the 1980s, NZP had experienced a demoralising succession of reviews questioning its role and services. Morale had also been affected by restructuring and staff cuts. At the individual and organisational level, Police were subject to public and political pressure. Police funding and staffing had traditionally been population-based, but from 1976 numbers were negotiated annually, with minimal increases.

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<sup>4</sup> Susan Butterworth, *More Than Law and Order: The Police in New Zealand 1945–1992*, vol. 5, *The History of Policing in New Zealand, Volume Five* (University of Otago Press, 2005).

<sup>5</sup> Opinion poll cited in New Zealand Police Annual Report 1991.

<sup>6</sup> About 1,500 in 1994.

<sup>7</sup> Butterworth, *More Than Law and Order*.

<sup>8</sup> Quote attributed to Inspector Peter Mildenhall, head of the police user group for the INCIS project, in Tom Pullar-Strecker “Success of INCIS relies on front-line quality data” *New Zealand Infotech Weekly*, Edition 2, 22 March 1999.

<sup>9</sup> *Ministerial Inquiry into INCIS: Report*, Schedule 9: Sapphire Report.

New Zealand Police had also had to adjust to the wholesale reform of the public sector and, in particular, to the State Sector Act 1988 and the Public Finance Act 1989. Along with all other government departments it had had to adapt to a culture driven by performance measures and the achievement of the government's desired outcomes.<sup>10</sup>

## **Bureaucracy**

In 1994, crime-fighting in New Zealand was still almost entirely a paper war. With 350 different forms in use and a million paper-based files created each year, the only nationwide computer facility available to frontline police was a set of terminals to access the Law Enforcement System (LES).<sup>11</sup> By the mid-1990s, 80 percent of frontline police staff had still not used a PC.<sup>12</sup>

Officers were spending around a third of their time on administrative tasks, and while they were doing so, they were not fighting crime on the street. Information was replicated at least three times. A rape or robbery complaint with witnesses multiplied the replication. An arrest and prosecution meant the same information being written out seven or eight times. The resulting tens of thousands of files might be scattered around the country in separate filing systems, retrievable only by a few individuals.

Only basic details about a case were stored electronically – a name and the location of the paper file. Yet to work effectively, police needed to know not just where criminals lived and what they looked like, but where they lived the year before and what they looked like then. What's more, the "customers" police needed to keep track of often lied about these crucial aspects of their lives.<sup>13</sup>

A police officer going to a domestic violence incident had no way of knowing if there had been similar incidents at that address before, unless these had resulted in an arrest. And the 25–40 person squad on a major crime investigation spent around 40 percent of its time doing paperwork and administration and tying incoming information together.

## **Police and technology**

The Law Enforcement System (LES) had been commissioned in the mid-1970s. NZP shared key components and applications (and the massive mainframe computer that ran the system) with the then departments of Transport and Justice. Each agency had specific views and capabilities. The LES acted as a vast national filing system, handling operational, management and historical information, recording car and gun licences, traffic and criminal convictions, and the personal details of hundreds of thousands of New Zealanders.<sup>14</sup>

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<sup>10</sup> Police, whose special employment conditions banned them from going on strike, were less affected by the passing of the Employment Contracts Act 1990, which in some other sectors led to a dramatic reduction in union membership.

<sup>11</sup> Popularly known as the Wanganui Computer, after the town in which it was sited.

<sup>12</sup> According to a 1997 police survey cited in *INCIS Ministerial Inquiry: Submissions for New Zealand Police, Part 1 – Background*.

<sup>13</sup> Inspector Peter Mildenhall, head of the Police user group for the INCIS project, quoted in Tom Pullar-Strecker, "Success of INCIS relies on front-line quality data", *New Zealand Infotech Weekly*, Edition 2, 22 March 1999.

<sup>14</sup> " 'Big Brother' switched off after 30 years service", *New Zealand Herald*, 21 June 2005.

Once ground-breaking, LES was by the mid-1990s frustratingly inadequate. Peter Doone said:

“It did nothing to help information flows at an investigation level and it was very limited at best in providing intelligence – information on individuals other than their criminal convictions, like who’s known to be dealing heroin in Lower Hutt. Who their associates are, where they’ve been staying? – all the things that modern policing needs. It had none of those and it wasn’t designed to have those.”

He said an analysis of the LES showed a less than 40 percent match between what police needed and what the facility could provide.

On top of that, the Wanganui facility was costing money. When he became Assistant Commissioner Planning and Finance, Peter Doone was frustrated that the firm maintaining the facility was a monopoly supplier charging NZP \$14 million a year: “There had to be a better way to manage Police computer and IT needs to support Police business.”

A confidential 1985 report<sup>15</sup> had criticised the general state of Police technology. It said NZP lacked a national IT plan, and that new stand-alone systems were springing up around the country. The independent 1989 Quigley Review had asserted that NZP computing lagged well behind that of other forces, the private sector, and other government departments.

As police had been coming to grips with access to the LES, the first microcomputer was in production, and within years, fast, powerful personal computers (PCs) were on sale, moving much of the processing power to the desktop. This was made possible by a new generation of operating systems. In 1981, IBM, which dominated the international mainframe computer market, had adopted the microcomputer operating system MS-DOS for its PCs. By 1984, the IBM PC and MS-DOS had become the de facto gold standard for all PCs. In 1987, IBM had released its OS/2 operating system. OS/2 was developed in association with the then fledgling Microsoft, which would collaborate on several upgrades before going its own way in the early 1990s with Windows NT as a rival operating system.

Paradoxically, the success of the PC brought new competitors into the market, and IBM’s profits began to slide. IBM PC clones sold all over the world, while Microsoft controlled applications. With technology racing ahead and these two giants struggling for market share, the 1990s looked like another volatile decade for IT.

### **Peter Doone – INCIS sponsor**

As a detective-inspector in Otahuhu in the 1980s, Peter Doone had been aware of the limitations of the LES and known of work going on to replace it. In 1987 he had come back from the Kennedy School of Government at Harvard, after 21 months as a

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<sup>15</sup> *Report of the Technology Transfer Group into the impact of technological change on the New Zealand Police: A Strategic Overview 1986–7* cited in Butterworth, *More Than Law and Order*. It is referred to in the case study as the “1985” report.

Harkness Fellow,<sup>16</sup> and been posted to National Headquarters in Wellington where he was promoted to Superintendent Planning in 1990 and General Manager Finance in 1991. When, in 1992, he took over the Finance and Planning portfolio as Assistant Commissioner, the ongoing IT work came into his orbit. He understood just how invaluable a national system would be in the field and was now in charge of the budget that might bring it a step closer to reality:

“We had 6,500 police officers doing operational and other police work and within that, about 1,000 doing detective work and investigations work – murders, rapes and burglaries and other crime. What was planned [in the early 1990s by those working on the INCIS concept] was an investigation tool. It was quite a major change in thinking – from individuals keeping track on an investigation, to a computer being able to keep track and make the connections which people would quite often miss.”

What was being envisioned was an integrated national system – INCIS – that would revolutionise traditional approaches to crime prevention and investigation. Accessible to officers via their own station computers, it would allow them to quickly bring up a map of a suburb’s burglary hot spots and a list of a suspect’s criminal friends, to identify the “who, why, what, when, where and how”<sup>17</sup> of crime, “answering specific questions ... [such as] what do we know about Mr Harry Jones or what has happened at 110 Church Street in the last three months?”<sup>18</sup>

The system would log complaints too, so that police turning up at an address would know if this were the third or fourth time, and be able to make a better decision about what to do. Vastly improved intelligence would record any and all observed activities. INCIS’s huge promise lay not just in the prospect of reducing 90 minutes of form-filling to 15 or 20,<sup>19</sup> but in its ability to automatically link items of information, whenever and by whomever they were recorded and in whatever circumstances.<sup>20</sup>

Groundwork for a national Police information system<sup>21</sup> had been laid in the mid-1980s, but the project had foundered two years later due to lack of funding. A 1988 workshop had resulted in Police setting up a serious crime case-management system to tide the organisation over until something bigger and better came on-stream. Development began on an intelligence tool for use by the Criminal Investigation Branch.

After investigations into available systems during 1990, the more ambitious INCIS project began to take shape. It was in line with the wider strategic direction being developed, which would be formalised two years later in the NZP Strategic Plan.<sup>22</sup>

In August 1989, NZP had announced that *Community-Oriented Policing (COP)* would be its main strategy for delivering services in the 1990s. In this strategy, police were

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<sup>16</sup> The Harkness Fellowships, administered by the New Zealand Fulbright Foundation, are “for actual and potential leaders in any field, to carry out research or a degree in the US”.

<sup>17</sup> *Ministerial Inquiry into INCIS: Report*, 24.

<sup>18</sup> *Ministerial Inquiry into INCIS: Report*, Schedule 5: INCIS Business Case, 236.

<sup>19</sup> Malcolm McDonald, “INCIS staff join frontline police” *The Dominion*, Edition 2, 24 April 1995.

<sup>20</sup> “Success of INCIS relies on front-line quality data”, *New Zealand Infotech Weekly*, Edition 2, 22 March 1999.

<sup>21</sup> Serious incident computer application (SICA), cited in Submissions.

<sup>22</sup> New Zealand Police INCIS Project; Information Technology Infrastructure Selection; Case No 1999-001, School of Communications and Information Management, Victoria University of Wellington, 4.

envisaged as proactive members of communities rather than as a mere arm of the criminal justice system. The community would become a client, working alongside police to maintain law and order. Police would form local partnerships and undertake community consultation to complement their more traditional approach to combating crime. This philosophy shifted the focus from reactive policing to community peace and security, and made traditional law enforcement just one way of achieving it.

*COP* had defined a new set of priorities and a new way of operating to achieve them. By 1991, what was being envisioned was not a computer project per se, but a business project using technology to support operational policing.

Because work on the Wanganui computer had been outsourced, NZP had few skilled and experienced computer specialists of its own. The first Integrated National Crime Information System (INCIS) project team, established in early 1991, was a small group of experienced investigators working within the Criminal Investigation Support and Intelligence Group, supported as required by technical advisers from the Police Computer and Engineering Services.<sup>23</sup>

In mid-1991, NZP commissioned consultancy firm Price Waterhouse to report on the fledgling project. The report<sup>24</sup> identified challenges, including the need for project documentation to reflect operational, legal and organisational changes. These included the upcoming 1992 merger with the Ministry of Transport, which was to bring all traffic policing under the NZP umbrella.

The Police responded to Price Waterhouse's concerns by contracting the firm to manage the expanded information technology project. In October 1991, Price Waterhouse seconded Martyn Carr to NZP as project manager. David Cittadini, also from Price Waterhouse, joined him, and they, together with computer services staff from the original project team, worked on the Police vision for INCIS, setting its parameters and specifying its elaborate technology.

Carr was required to report regularly to an INCIS Steering Committee, chaired by the Project Sponsor, originally Don Gray, a non-sworn officer, who was Head of Finance and Planning, and Computer and Information Technology. Overseeing the INCIS Committee was the Police National Systems Steering Committee, which consisted of district commanders and operational officers from around the country, brought together to facilitate the change process and get organisation-wide buy-in for INCIS and other initiatives.

Throughout 1992, the project team, led by Martyn Carr, worked on defining Police business requirements, estimating needs for advanced IT, and then followed this up with a feasibility study. NZP did not intend to be "first on the block" with its new technology, said Martyn Carr in September 1992, but would "endeavour to select approaches which can be seen and touched elsewhere".<sup>25</sup>

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<sup>23</sup> *INCIS Ministerial Inquiry: Submissions*, 11.

<sup>24</sup> This report was eventually dated November 1991.

<sup>25</sup> *Ministerial Inquiry into INCIS: Report*, 34.

In October 1992, Don Gray put a proposal to the Police Executive Conference to take the INCIS concept to tender. Up to this point, the project had come under NZP's research and development budget; to go further required specific funding.

In November 1992, with authorisation from the Executive Conference, the project team issued a request for information (RFI), advertised for project positions, and began to prepare a formal business case. Sixty-two responses were received from the 141 interested private-sector parties sent an RFI for “[technology to] support operational Policing by providing improved information, investigation and analysis capabilities.” A month later the respondents were narrowed down to four, who were then presented with a request for tender (RFT). Specific technical requirements included object-oriented technology, decision support technologies, portability, and a process manager.<sup>26</sup> Some of these technologies had yet to be used in an INCIS-type application or by police anywhere in the world.

### **Request for tender**

The RFT also included a requirement, which came from “on high”,<sup>27</sup> for a fixed contract price. NZP, government and Cabinet believed this would limit their financial risk and that without a fixed-price quote “Police would not know what it is getting, when it will get it and how much it will cost”.<sup>28</sup> The contract was also to cover the complete development of the entire system.

Two of the four suppliers chose to go no further; Andersen Consulting and an IBM/GCS<sup>29</sup> consortium remained.

In February 1993, on his return from studying in the United States, Inspector Tony Crewdson was appointed to the project team with the title of change manager. Like Peter Doone, he had been a Harkness Fellow to the Kennedy School of Government at Harvard. Crewdson had extensive experience both in business and IT, although none managing projects the size of INCIS. His initial brief included assessing whether NZP could and should continue with the project, and subsequently, developing the business case.<sup>30</sup>

During 1993 – an election year – Tony Crewdson, with other Police representatives, visited computer facilities in the United Kingdom, Australia, Canada and the United States, gathering information about the performance of the short-listed vendors, and in what would prove to be a fruitless search for off-the-shelf products.

As Deputy Commissioner Barry Matthews would put it later: “If we could have – and we tried [to] – got a shrink-wrapped product we would have. We looked all around the world – at that, and at buying from two different companies and cobbling the systems together ... But we couldn't”.<sup>31</sup>

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<sup>26</sup> *Ministerial Inquiry into INCIS: Report*, 35.

<sup>27</sup> Attributed to Martyn Carr and Peter Doone in *Ministerial Inquiry into INCIS: Report*, 43.

<sup>28</sup> *Ministerial Inquiry into INCIS: Report*, 36.

<sup>29</sup> Government Computing Services, then a State-Owned Enterprise, was subsequently taken over by international company EDS.

<sup>30</sup> Tony Crewdson, personal communication, 8 September 2005.

<sup>31</sup> “INCIS blues – police computer system in firing line”, *Computerworld*, 21 April 1997.

On 23 March 1993, Don Gray presented a formal proposal for INCIS to the Police Executive Conference (PEC).<sup>32</sup> A summary of major costs included \$82 million in capital, \$7m in police development and implementation costs, \$7.3m in police training costs, \$16.8 m in annual operating costs and \$198.2 m in lifetime costs. The proposal offered benefits valued at approximately \$796 m, including \$74.1 m savings through reduced paperwork and improved workflows, \$12m savings on current systems, \$10m savings to the Justice Department through reduced prosecution costs; savings to other government departments of approximately \$100m in developing, implementing and operating INCIS-like systems by using INCIS on a user-pays basis; overseas sales worth \$45 million. Other benefits included increasing officer safety and empowering individuals through providing timely and relevant criminal information; improved crime prevention capabilities and operational information, all leading to improved relationships with the community.

On 26 March 1993, the PEC recommended to Minister of Police John Banks that INCIS go ahead. In his memo, Commissioner John Jamieson cited costs of \$131 million and net lifetime benefits of \$312 million.<sup>33</sup> John Banks, however, decided it was the wrong time to approach Cabinet for extra funding, and asked NZP not to widely discuss the project, for fear of creating a demand he could not satisfy. This prevented the project team from “selling” INCIS within the organisation,<sup>34</sup> and resulted in the project going into abeyance for several months.

By April 1993, NZP was evaluating the Andersen Consulting and IBM/GCS tenders in the belief that both bidders could deliver what it wanted.<sup>35</sup> Andersen, though, was challenging the fixed-price requirement. It wanted instead to work towards an understanding of the project’s scope and requirements, thereby determining whether the proposed technology was capable of meeting police needs. Peter Doone was also put off Andersen because it was proposing dumb terminals, whereas IBM would put PCs on police desks, which offered much more flexibility for local policing.

## **The business case**

The business case, dated 12 May 1993, frankly acknowledged that the strategic goals of INCIS – transcending traditional crime prevention and seeking to stem and reverse crime trends – were ambitious and not achievable without “significant changes in policies, processes and attitudes within the New Zealand Police”. Successful implementation, though, would “above all, improve relationships with the community”.<sup>36</sup> Itemised lifetime costs totalled \$188.5 million, and benefits – including an estimated \$45 million in profits from overseas sale of the application – \$566.1 million.

Under the heading “What are the key risks to manage?” the business case stated that NZP was better prepared than ever before to undertake such a challenge, evidenced by the appointment of Tony Crewdson “to sell INCIS both internally and externally and to

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<sup>32</sup> *Submissions*, 22.

<sup>33</sup> *INCIS Ministerial Inquiry: Submissions*, 23.

<sup>34</sup> *Ministerial Inquiry into INCIS: Report*, Schedule 9: Sapphire Report.

<sup>35</sup> *INCIS Ministerial Inquiry: Submissions*.

<sup>36</sup> *Ministerial Inquiry into INCIS: Report*, Schedule 5: INCIS Business Case, 232.



prepare the organisation for change”.<sup>37</sup> This section identified business process re-engineering to change the way NZP worked as most critical to ensuring NZP realised the benefits of INCIS. Also important for successful implementation, it said, would be careful planning, monitoring and issue resolution, quality assurance and quality personnel.<sup>38</sup>

The business case timed rollout for completion just over two years from the start of development. Phase one would see PC networks installed in all police stations, and the replacement of the LES with a new suspect and information database, as well as facilities for crime trend and intelligence analysis, performance measurement and email. If the contract could be signed in 1993, this would all be in place by 30 April 1995. Phase two, to be delivered by 31 July 1995, involved roll-out of the case and investigation management processes.<sup>39</sup>

The first half of 1993 saw the project team raise more than 1,500 issues with IBM.<sup>40, 41</sup> Some were to do with management of the project; others, according to IBM New Zealand’s Gowan Pickering, showed a lack of understanding of the practicalities of implementing such a complex project.

Nevertheless, in June 1993, NZP told the IBM/GCS consortium it was the preferred bidder. It saw IBM as having good experience in developing and implementing complex projects, especially those using a blend of image, text and data, and the company’s bid as the basis for successfully negotiating a contract.<sup>42</sup> IBM too had every reason to be optimistic.

### **Gowan Pickering and IBM/GCS<sup>43</sup>**

In July 1991, New Zealander Gowan Pickering was heading up IBM’s Indonesian operations when, at a meeting in Tokyo, the Asia-Pacific head of IBM said to him: “We’d like you to go to New Zealand, we’ve got a problem there”. They flourished a mid-year statement predicting year-end losses of over \$30 million for IBM New Zealand. The business plan had assumed revenues in excess of \$320 million – and the company was staffed accordingly – but IBM had been hit by the New Zealand economic downturn, and its products and services were no longer as competitive as they had once been.

Gowan Pickering agreed to come back and in August 1991 became chairman and managing director of IBM New Zealand. As far as he was concerned, things could only get better. IBM New Zealand when he arrived had about 650 staff, mainly in Auckland and Wellington. By November, 300 had opted for voluntary redundancy, and the massive restructuring of IBM’s New Zealand business had begun.

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<sup>37</sup> *Ministerial Inquiry into INCIS: Report*, Schedule 5: INCIS Business Case, 238.

<sup>38</sup> *Ministerial Inquiry into INCIS: Report*, 119.

<sup>39</sup> From *INCIS Liaison Update* January 1995, cited in *Ministerial Inquiry into INCIS: Report*.

<sup>40</sup> *Ministerial Inquiry into INCIS: Report*, Schedule 9: Sapphire Report.

<sup>41</sup> Or 1,150 as in *INCIS Ministerial Inquiry: Submissions*, 29.

<sup>42</sup> *INCIS Ministerial Inquiry: Submissions*.

<sup>43</sup> From this point on, referred to for the sake of simplicity as IBM.

IBM had traditionally made 70 percent of its revenue from hardware<sup>44</sup> and some software, but by the early 1990s it was looking to expand its services sector, a significant structural change with implications for resources. Gowan Pickering:

“IBM recognised an opportunity, and the need to become a strong service organisation. The customers were seeking outsourcing of their IT operations, and it was the chance for IBM to create new revenue and profit streams to expand on the hardware and software markets it already participated in.”

Gowan Pickering had been in the job a year when the Police opportunity came up. And it was an exciting one: “We could see ourselves not only having good business, but it had potential to be sold on the worldwide front.” The company’s preferred course would have been to respond to NZP as it did for other such bids – by doing a model and finding out what was really needed: “But the government always wanted a fixed price.” He acknowledged that the fledgling IBM service operation in reality didn’t have the experience to correctly estimate the cost, or to conclude that it was too high a risk to enter.

By the time NZP told IBM it was the preferred bidder, the company had spent hundreds of thousands of dollars, and by the time of the signing of the contract, Gowan Pickering estimated IBM had spent several million dollars.

### **Preparing for partnership**

As IBM was given the news in June 1993, Don Gray left the project and the Police. Peter Doone was promoted to Deputy Commissioner, with overall responsibility for resource management issues encompassing budgets, strategic and corporate planning, information systems, internal audit, and human resources. Doone became the new sponsor for INCIS.

IT constituted only 25 percent of his responsibilities. His keen interest in the project, though, led him into quite detailed involvement. His vision was that INCIS would enable NZP to “go from behind to leap ahead”, not just catch up.

As sponsor, Peter Doone became chair of the INCIS Steering Committee, and project leader Martyn Carr reported to him. Peter Doone saw the sponsor’s role as an internal meeting point for all planning and development, and a point of contact for any external action, which included reporting to the Commissioner and Executive Conference, the Cabinet expenditure committee, and various other government committees. He would also become a member of the independently-chaired audit committee that was established in 1994.

Between April and August 1993, the project team had refined the business case to include feedback from other government departments, particularly Treasury. A key issue was the off-ramp provision, designed to allow NZP absolute discretion on whether to proceed with the project or withdraw without penalty, thus avoiding a legal wrangle with the supplier. IBM and NZP agreed to position the off-ramp at the end of phase one,<sup>45</sup> when PC networks would be installed in police stations, the LES replaced with a

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<sup>44</sup> Today, software and services account for 70 percent of revenue.

<sup>45</sup> *Ministerial Inquiry into INCIS: Report*, Schedule 9: Sapphire Report.

new suspect and information database, and facilities for crime trend and intelligence analysis, performance measurement, and email delivered.

The project team was regularly briefing several Ministers on INCIS progress, including the Prime Minister's Office and the country's first Minister for Information Technology, Maurice Williamson. The latter firmly believed major aspects of INCIS technology were not deliverable, and that the project should not be going ahead. Maurice Williamson was an enthusiastic proponent for a Microsoft's Windows NT platform, rather than IBM's proposed OS/2, and would eventually bring Microsoft founder Bill Gates himself to Wellington.<sup>46</sup>

On a number of occasions in 1993 and 1994, NZP met with Maurice Williamson over his concerns, that NZP was making the wrong decisions about architecture and project design. Peter Doone recalled:

“There was a conflict in technology advice from the project consultants (Carr and Cittadini), and Maurice Williamson (who at some meetings was accompanied by Microsoft advisers). The key issue was that Windows NT was still in its infancy and was not proven in systems as large as INCIS, whereas OS/2 could demonstrate its effectiveness. This was discussed at great length between Police, [Police Minister] John Luxton, and Maurice Williamson. I recall a significant briefing paper that responded to all the issues [the Minister] had raised. At the end of the process it was agreed that Cabinet would make the decision having considered the conflicting advice, and this is what happened.”

In July 1993 Ernst and Young (Sydney), commissioned by the Minister of Police and Treasury partly in response to criticism from unsuccessful supplier Eagle Technology,<sup>47</sup> reported on INCIS strategic considerations, the business case and the IBM bid. Although the report contained cautions, and warned that many of its conclusions should be subject to “very detailed work”<sup>48</sup> before NZP or Treasury relied on them, its tone was positive, particularly in the executive summary.

This said “The preferred tenderer's bid is totally compliant with [the Police vision of how Information Technology will be used to support the Corporate Strategy]”. It went on, “The nature of Police work and culture is such that they will adapt naturally and willingly to new systems which replace aging technology and the benefits should be readily achieved.”

The body of the report noted that the preferred solution was sound. The client/server architecture was “good proven technology”, although object-oriented technology was still emerging. It noted, though, that IBM had not been as successful in delivering applications as it had infrastructure.

Ernst and Young said NZP needed to import “very considerable skills” – “upwards of 40 staff” – to deal with the project. It recommended NZP require the IBM development team to relocate from the US to Wellington, in spite of the extra cost this would incur, so that NZP could develop vital skills and support. NZP would also need to carefully manage IBM if it were to control aspects of design traditionally liable in such projects

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<sup>46</sup> As reported by the *Press* 23 February 2000.

<sup>47</sup> *Ministerial Inquiry into INCIS: Report*, Schedule 9: Sapphire Report.

<sup>48</sup> *Ministerial Inquiry into INCIS: Report*, 37.

to dispute and cost blow-out. As the project had a long lead-time, and technology costs were changing fast, the report discounted the \$45 million projected benefits from sale of the new software overseas.

The body of the report also suggested setting up a top-level NZP steering committee that could ensure resources were mobilised on time. It was recommended that, prior to negotiating a contract, NZP should develop ways of accounting for project time and costs, define its own roles and activities when working with contractors, and draw up a comprehensive quality management plan. Expert external assistance would be crucial, adding up to \$1 million in costs; training 6,000 sworn officers to work with INCIS would add another \$10.6 million. IBM had also presented NZP with an estimate of additional resources needed, which included several managers and a number of analysts.

### **Cabinet go-ahead**

In July 1993, the business case was tabled to Cabinet, and in early August, Minister of Police John Banks presented his colleagues with a proposal for developing and implementing INCIS. The proposal included the executive summary from the Ernst and Young report.

Cabinet was told to expect that a total investment of \$203 million over eight years would bring government and NZP lifetime benefits of \$336 million.<sup>49</sup> These would begin flowing in year three of the five-year project. Replacing current systems, including the LES, would save \$14.2 million, a further \$1.8 million would accrue from other unspecified savings, and \$45 million could be expected from overseas sales of the application.

Most benefits were predicted to come from reduced paperwork and improved police workflows, which would free up a total of 800 frontline staff.<sup>50</sup> This represented an estimated 1.9 million annual hours, or 11 percent of the total 17 million hours a year that NZP staff worked, staff-hours that could then be redeployed on the frontline.

The Police team now began work on a draft contract, which continued until November 1993. Midway through the process, Peter Doone – concerned about how much time had passed since the project had been first planned – asked the INCIS team whether, if it were to go to tender that day, they would choose any other technology solution. No, responded the team, they would not:

“... negotiations to date have been on the basis that Police can substitute any component of the solution as and whenever they choose. The approach ensures that INCIS grows as technology changes and continues to be the best solution at that point in time.”<sup>51</sup>

This concept of technological substitution would, the team believed, allow it to future-proof INCIS. It would let Police replace proprietary IBM components with those of

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<sup>49</sup> INCIS Business Case presented to Cabinet in August 1993, cited in *Ministerial Inquiry into INCIS: Report*, Schedule 5. These figures vary somewhat throughout the Inquiry report.

<sup>50</sup> It was agreed that all benefits would be split 30:70 between the government and the police, an arrangement reflecting the constitutional separation of force and executive. There would be a net gain for NZP of 540 staff.

<sup>51</sup> *Ministerial Inquiry into INCIS: Report*, 39.

their own choosing. In addition, NZP had developed the concept of an off-ramp provision, which would allow them to exit the project if it did not progress satisfactorily in the first review period.

## **Request for proposal**

In early December 1993, NZP issued IBM with a 10-volume<sup>52</sup> RFP that covered, among other things “definitive costs”<sup>53</sup> for “hardware, software and communications technology and system development, system management and support services,”<sup>54</sup> and a full description of the “products, tools, techniques, resources and infrastructure” IBM would provide. IBM was asked to “confirm an INCIS management approach”.

The RFP timetable set the start of INCIS development for six months later – at April 1994 – with implementation to begin in June 1996 and be completed by December 1997.

Throughout the New Zealand summer of 1993/94, NZP continued to raise technology and architecture issues with IBM. While the supplier accepted that most were valid, it was concerned that its team did not have the time or knowledge to deal with so many. It also began to feel that many points “questioned its solution”, and should not have to be addressed until after the contract was signed.<sup>55</sup> Gowan Pickering:

“These guys were pushing us, pushing us, to deliver ‘the perfect system.’ They were requiring us to meet international standards that were yet to be approved. By doing this they envisaged that the software IBM developed for NZP would also sit on other than IBM hardware platforms, and therefore make it possible for Police to change from IBM hardware, if they wished, or to sell their application to other police users around the world, who might require different platforms. IBM tried hard to get the Police to appreciate that there were many impracticalities to this approach; but they weren’t to be persuaded.”

In a January 1994 report, KPMG recommended the project go ahead with the original choice of OS/2. The report had been commissioned in response to further complaints from Eagle Technology, as well as the open criticism of the Minister for Information Technology Maurice Williamson. Williamson saw IBM’s OS/2 increasingly losing market share to Windows NT and believed NZP would be disadvantaged by the restrictions that OS/2 would put on their new facility. NZP, on the other hand, noted that none of their potential INCIS suppliers had suggested using Windows, and it had not yet been proven in the market place; a subsequent review of the intended platform held that deficiencies in OS/2 could be overcome and project should go ahead.

Briefing new Minister of Police John Luxton in March 1994, NZP said that “Police have selected proven leading-edge technology but will ensure that future risks in development and support are fully future-proofed in contracts.”

The conventional wisdom at that time, Peter Doone recalled, was that “you had to get all of your business solutions and the IT solutions integrated at the one time, because all

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<sup>52</sup> *INCIS Ministerial Inquiry: Submissions*, 39.

<sup>53</sup> *INCIS Ministerial Inquiry: Submissions*, 39.

<sup>54</sup> *INCIS Ministerial Inquiry: Submissions*, 38.

<sup>55</sup> *Ministerial Inquiry into INCIS: Report*, Schedule 9: Sapphire Report.

of the technology had to be compatible and if you did it on a modular basis, the next lot of technology might not work with the first one.”

Cabinet finally approved implementation of INCIS on 26 April 1994, following “normal rigorous and robust” procedures which had seen it several times refer the application back to NZP. Cabinet expected to spend \$203 million over the next eight years, and approved expenditure of \$97.83 million through to 1999. The balance of the project’s cost was to be met from NZP’s budget. Included in the predicted \$517 million total benefit was \$45 million from export sales of the application. Cabinet directed NZP to provide quarterly performance reviews to the Minister of Police, with copies to Treasury.

Price Waterhouse was contracted to audit INCIS quarterly through Tony Crewdson’s reports, and report to the Police audit committee and the project sponsor, with copies to Treasury. NZP was also required to report to the Minister of Police and, every six months, to the Cabinet State Sector committee, with the first report due in February 1995.<sup>56</sup>

### **Approaching contract**

IBM submitted its proposal for supplying INCIS in May 1994. NZP again asked KPMG to advise on the project. Again, KPMG held that NZP’s original choice of OS/2 was valid. The report noted, however, that the “moment of truth”<sup>57</sup> was drawing near, and asked about the risk NZP was taking: “Do Police currently have the confidence and commitment to achieve the successful delivery of INCIS and its integration with other Police initiatives?”<sup>58</sup>

INCIS represented more than just a contract for new technology – it would change the way Police did business, and KPMG noted that NZP should be asking before it signed the contract if it was ready to embark on such an adventure. KPMG questioned NZP “ownership” of the project, and top-level understanding of the resources it would require, given concurrent Police initiatives.

In July 1994, the project team met to formally address a series of questions and concerns, raised over previous months by several senior Police managers. Peter Doone had always been aware of some internal resistance:

“We took those views into the decision-making process to let the contract and certainly put them to Martyn Carr and Tony Crewdson and the team who were negotiating. And put them to IBM and got satisfactory responses back from them as to how those concerns could be managed.”

Martyn Carr would later label those who dissented at the meeting “complainants”.<sup>59</sup>

Between June and August 1994, the parties negotiated the contract. The Police hired independent negotiator Colin Jacobs. Their team included a solicitor specialising in IT,

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<sup>56</sup> Kirsten Broomhall “Terrorised by technology” *The Daily News*, Edition 1, 8 June 1999.

<sup>57</sup> *Ministerial Inquiry into INCIS: Report*, Schedule 8: KPMG Report.

<sup>58</sup> *Ministerial Inquiry into INCIS: Report*, Schedule 8: KPMG Report.

<sup>59</sup> *Ministerial Inquiry into INCIS: Report*, Schedule 9: Sapphire Report.

and the project team's Tony Crewdson. Project manager Martyn Carr acted as advisor. IBM was represented by its own law firm and an in-house lawyer, along with lead staff negotiator Derek Bealing.<sup>60</sup>

Gowan Pickering found it a "hideous" process. Rather than starting from a set of principles, from which a contract was developed, IBM was confronted with a detailed contract that was to be negotiated clause by clause. This approach meant that, in Pickering's view, often the big picture was being forgotten in the interests of some minute detail. In addition, IBM saw the independent negotiator's confrontational style as a serious impediment to good faith negotiation. "We spent hours and hours in circular discussions, and you have to ask what sort of contract and what sort of relationship this leads to," he reflected.

For its part, NZP felt IBM was after more money, while NZP wanted security and surety of delivery. Peter Doone:

"Most of our contract negotiations were about making sure that (a) they could deliver, or (b) if they couldn't deliver then we would be able to have an effective remedy. So the shape of the contract was important in holding IBM accountable for what they said they could do."

Doone said NZP derived some comfort from the fact that IBM World Trade in New York was willing to underwrite delivery: "and if (the system) was installed and didn't work, they would buy it back from us".

With agreement in sight, a meeting attended by Peter Doone and Gowan Pickering, along with Martyn Carr and Tony Crewdson and a US-based IBM representative, worked through each outstanding issue of concern. Were NZP and IBM happy that they'd resolved those issues, they were asked? The meeting was unanimous – "Yes" – and it agreed to go ahead with the contract signing.

Martyn Carr's secondment to INCIS ended on 31 August 1994. In the previous year he had left Price Waterhouse to set up his own company, and he mentioned to Peter Doone that he was interested in becoming INCIS project manager on a permanent basis. Doone had had to tell him Police were unsure, because they were planning to employ a new IT manager or director. Now, Peter Doone asked Martyn Carr for a "warts and all"<sup>61</sup> handover report.

## **The Sapphire Report**

In what became known as the Sapphire Report,<sup>62</sup> Martyn Carr said, that when it came to technical requirements, NZP did not want to be the proving ground for "bleeding edge" technology, and every component of the eventual solution would have to have been used effectively somewhere in the world. At the same time, though, NZP recognised that nowhere else in the world was there an existing system using this particular combination of products and approaches. Furthermore, INCIS had to be designed to avoid obsolescence, with allowance for substituting system components as technology

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<sup>60</sup> Malcolm McDonald "Police downplay rumoured cost of INCIS delay" *The Dominion*, Edition 2, 9 September 1996.

<sup>61</sup> *Ministerial Inquiry into INCIS: Report*, 42.

<sup>62</sup> After Martyn Carr's new company.

developed. This would make it an attractive proposition for overseas law enforcement agencies and therefore a source of revenue.

This, said Martyn Carr, had always been the INCIS project team's vision, and it was important that the new project team understood and propagated this vision into the future. The new Police project team would be under pressure from IBM and "politically-motivated groups within Police to alter these visions."<sup>63</sup> He repeatedly mentioned IBM's difficulties with the project and the need for NZP to keep the company up to the mark in the face of a trend to "de-commit" from developing certain solution components.

Carr quoted positive comments from the July 1993 Ernst and Young report, but said that NZP had yet to begin detailed work on crucial business process re-engineering. The organisation was slow to make decisions, and getting slower, partly due to "lack of understanding of the issue"<sup>64</sup> and a lack of focus on the part of senior management, exacerbated by the lack of an IT manager. Police had not put together a project team for the next phase, and 20 more skilled technical staff were needed.

On 3 October 1994, when Peter Doone received and read Martyn Carr's report he was shocked. It seemed to re-litigate all the issues he thought had been resolved and clarified, then confirmed as such, at the meeting he and Martyn Carr and others had attended in August.

By the time Peter Doone received and read Martyn Carr's report the contract for INCIS had been signed, supported by his recommendation as sponsor, 10 days earlier. At that point he could only conclude that the issues raised in the Sapphire Report would be manageable throughout the life of the project and were not grounds for reviewing NZP's position.<sup>65</sup> He would ask new Police IT director Greg Batchelor to take them up with Tony Crewdson – who would see and read the report for the first time six years later.

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<sup>63</sup> *Ministerial Inquiry into INCIS: Report*, Schedule 9: Sapphire Report, 283.

<sup>64</sup> *Ministerial Inquiry into INCIS: Report*, Schedule 9: Sapphire Report, 284.

<sup>65</sup> *Ministerial Inquiry into INCIS: Report*, 42.