

Software Implementation - Lessons to be learnt from the Novopay project

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ABSTRACT

Successful implementation of large software projects is, unfortunately, not common. Too often they exceed time and budget, lack desired functionalities, contain bugs, affect the users and usability, and fail to deliver the desired goal. This is a global issue for the ICT community, and New Zealand is not immune to it. This paper looks at the recent implementation of the Novopay payroll system for the New Zealand Ministry of Education in light of established principles for software development and implementation, knowledge management and organisational absorption capacity. It discusses the implementation process and analyses how the entire process became erroneous which led to the systemic failure of the Novopay payroll project. This research identifies a number of failure points, such as failure to follow the standard IS project management processes, failure to understand the complexities of a large IS project, failure to correctly define and initiate the project, failure to follow the project plan, failure to confront the external pressure for implementation, and failure to recognize the implications of critical test failures. However, we observe that lack of knowledge management and organisational absorptive capacity are the meta issue of these failures. We, therefore, argue to establish a centre for Central Absorptive Capacity (CAC) management as a remedial measure for future large IS/IT projects in the public sector.

Categories and Subject Descriptors

General Terms

Management, Measurement, Documentation, Performance

Keywords

Software project management, knowledge management, knowledge absorption, software implementation

1. INTRODUCTION

The New Zealand Education Service Payroll (ESP) is one of the largest and complex payroll systems in New Zealand, involving fortnightly payments of up to 110,000 staff of 2,457 primary and secondary schools. It manages a turnover of approximately 40 000 staff at the end and beginning of each year. Each school has a payroll administrator, who may be a full- or part-time and is responsible for entering payroll data and checking their correctness before each pay period. School principals use the system for various management activities such as approval of staff leave applications. More than 6 000 users need to understand and use the payroll system.

The key difficulty lies in the employment structure of the New Zealand school workforce. Approximately 30% of them are employed in flexible positions, and several thousand of them work at more than one school. A staff member may have more than one

employer as each school is a separate employer. The payroll system processes all payments due to an individual by their employers, using one pay slip, which sums all their hours and appropriate allowances, across all the schools for which they work. Further details of the payroll system can be seen in the Ministerial enquiry [18].

Although the Ministry of Education (MoE) is not the employer of school staff, it is responsible for managing the payroll service. Under a business process outsource (BPO) agreement, Datacom, an IT service provider, administered the payroll system during the period 1996-2012. This payroll system involved many manual processes. The MoE engaged Talent2, a software company, in 2008 to provide a cut down scoped payroll service scheduled to start in 2010 with a budget of NZD 30 million. Talent2 agreed to customize and implement a sophisticated and automated web-enabled payroll system 'Novopay' [18] for delivering the payroll services. According to the agreement, the MoE did not purchase or lease IT systems or hardware and Talent2 was not required to comply with some New Zealand Government IT standards [20].

The payroll service definition document was highly abstracted. The end user requirement was neither defined clearly nor understood by both the MoE and Talent2. The MoE was not aware of the service requirement and complexities as the last payroll services were fully administered by Datacom without much involvement or input from the MoE. Therefore, both the MoE and Talent2 could not comprehend the extent of the complexity of the payroll process, especially the consequences of withdrawing the human-intervention process and the introduction of an automated online business process. Obviously, Talent2 failed to deliver services in time and within budget. Since Novopay went live on 20 August 2012 [5], with hundreds of bugs, thousands of teachers and staff from 90% of the schools were underpaid, overpaid or not paid. Talent2 scrambled to fix the problems [6]. Three months after Go-Live, 70% of the schools continued to experience incorrect payroll services [26] and the budget crept up to NZD 100 million. In February 2012, NZD 5 million was injected for a remediation plan, and an additional NZD 6 million was given to the schools for additional person-hours required to use Novopay. A year after the implementation of the payroll system, Talent2 is still fixing bugs and Novopay is still a long way from being a complete system.

The New Zealand Government has undertaken several technical, and non-technical reviews and the findings have been made available online [19]. These reviews critically analyse failure and success points from various perspectives such as, shortcomings in service purchase process, failures in project lifecycle management, and failures during and after Go-live. Most of these discussions encompass failure to follow standard IT/IS project management guidelines. Therefore, the purpose of this paper is

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not to scrutinize Talent2 services using an IT project management methodological approach. It also does neither investigate the shortcomings of the Talent2 payroll services nor the technical issues of the Novopay system.

From this investigation, we observe that a number of similar projects have also been failed in education, health and police sectors, and many reviews have been conducted such as the first Teachers Pay project [29], INCIS [21, 24]. The government departments have been repeating similar mistakes. Are these problems and issues repetitive or totally different? Have they learned from those reviews? The key weakness of these reviews is that they failed to identify factors beyond project management. For example, the project failure may be caused from the lack of an organisational knowledge transfer process and organisational knowledge absorptive capacity [7]. This paper explores the issues of organisational knowledge management and proposes to a solution for rendering expert knowledge transfer services for future IT projects.

The following section provides a brief review of software project management literature with a focus on the failure and success issues of IT and IS projects, and the importance of knowledge management and organisational absorptive capacity. We then briefly discuss the research method, and analysis and findings. We conclude with the presentation of a high level model of a centre for Central Absorptive Capacity (CAC) for ensuring success of future large IT projects.

2. SOFTWARE PROJECT MANAGEMENT

The successes and failures of large software projects have been extensively investigated in information systems and project management literature, yet organisations are still beset with high implementation failure rates [9, 11, 27]. Software projects are seemingly plagued by technical and managerial problems. One cannot predict with certainty when software is likely to cause problems due to the intangible nature of software and endless variations in business processes. Large software projects are inherently complex and unpredictable, and their success particularly depends on how they are managed. In their model of ICT failure, empirically grounded from the case studies of the New Zealand government sector for large software development and implementation projects, Gauld and Goldfinch [12] state, "the processes involved in information system (IS) developments are not fully understood, that their complexity makes them difficult if not impossible to control and that large IS developments are likely to fail" (p. 133). Similarly, Nickson [23] observed that two-thirds of all IT projects exceeded budgets and timetables and up to a third of projects failed. Projects over \$10 million budget are less likely to be successful [12] (p.11), and the larger projects are more prone to be unsuccessful.

While it is difficult to obtain statistics on the actual frequency of IT failures, various sources indicate that at least half of all IT projects are not as successful as we would like them to be [13, 15]. While there are undoubtedly many different modes of IT failure, one pattern of failure that has been observed, but rarely studied, is the IT project that seems to take on a life of its own, "continuing to absorb valuable resources without ever reaching its objective" [12, 14-16]. Eventually, these projects are abandoned (or significantly redirected), but the cost of having funded them can be a tremendous waste of organisational resources [14]. Major modes of software project failure are late delivery or never completed, poor reliability, cost overrun and user dissatisfaction

for exhibiting poor performance characteristics, especially failing to meet the requirements [4].

Project management is the application of knowledge, skills, tools and techniques to manage project activities. It embraces four basic disciplines [17]: methodology, or procedures (15%), personnel management (50%), communications (25%), and planning techniques (10%). A project should always pass the SMART test [23] i.e. its objectives should be simple, measurable, achievable, supported by the organisational resources and attainable within the stipulated timetable. The quality, risks, and progress of a well-planned software project can be actively monitored and controlled. Software project management in information systems literature has frequently been referred to management of the system development lifecycle.

The actual costs of software projects often significantly exceed the estimated cost. Other projects are completed within time and cost but do not provide rich user satisfaction. The skilful integration of software technology, economics and human relations in the context of a software project is not easy. Poor strategic management and related human factors are the leading causes of failure [25]. Information overload, a high turnover of skilled staff, and an inability to learn from past failures are some of significant failure points of organisational learning [12]. Software implementations are largely affected by an organisation's absorptive capacity i.e. its ability to learn from external sources, management of prior knowledge and their application in IS project management.

According to the resource based view, knowledge is the most strategically vital resource. Knowledge can be defined as a belief that represents organisational capability and enhances an organisation's capability for proper decision making and effective action [1] and determines the organisational identity, its processes and its systems. However, knowledge-based organisational capability relies on the effective application and transfer of knowledge. Most organisations do not have properly defined knowledge management and knowledge absorptive capacities at the organisational level and usually rely on the individuals who possess the knowledge. Organisational units learn and benefit from sharing and transferring their knowledge resources [32]. Effective knowledge transfer within organisations is an antecedent of corporate success. Knowledge transfer in organisations is the process through which one unit (e.g. group, department, or division) is affected by the experience of another [2]. It is about dyadic exchanges of organisational knowledge between a source and a recipient in which the identity of the recipient does matter [30]. Myrna and Martyn [22] observe that knowledge transfer is processed through four steps: 1) acquisition of knowledge by the organisation, 2) communication of knowledge within the organisation, 3) application of knowledge for the creation of business value, and 4) assimilation of the results into business routines.

Knowledge transfer can be facilitated through training, communication, technology transfer and interaction with suppliers and customers [3]. The key issue is that organisations are not in a position to manage knowledge transfer without the participation of the employees who hold the knowledge. The individual's knowledge and skills of knowledge transfer does not necessarily constitute organisational knowledge absorptive capacity. Absorption capacity can profoundly influence the software implementation process [10] and, thereby, it leads to the success and failure of the project. Currently, the State Services Commission (SSC) and the Government Chief Information

Officer play governance and monitoring roles for large IS projects, but they do not provide the support infrastructure in the way it is needed for IT projects. In the absence of a centralised support infrastructure for absorptive capacity management, complex IT projects in all the ministries and departments are often prone to failure.

3. RESEARCH METHODOLOGY

We have reviewed substantial literature on IT project management, knowledge management, organisational absorptive capacity, and various case studies and reviews of the government sector projects. From this review, we observed a number of normative and empirical models of success and failures of information systems projects and applied them in this Novopay payroll case analysis using the qualitative study approach.

We have collected information from various sources such as New Zealand Government documents [5, 8, 18-21], technical magazines [6], Media [26, 28], and online resources [19, 31]. In addition to providing in-depth information of the project activities, many of these documents have presented critical analysis of various aspects and issues of the Novopay system failure. Though these review documents have analysed from a number of perspectives, they mostly focused on analysis of the project lifecycle and problems in the outcome. We observed that, in addition to normal project management related factors, the crucial issue was the lack of knowledge absorptive capability of both Talent2 and the MoE to deliver such a complex payroll service. Therefore, investigation and discussion of this paper focused on how knowledge management and organisational knowledge absorptive capacity relate to the outcome of Novopay payroll services. This paper does not discuss the impact of the erroneous payroll services.

Based on the analyses, discussions and findings, this research proposes a high level model for the improvement of organisational absorptive capacity improvement that aims to contribute towards improvement of the public sector IT project implementation.

4. PREVIOUS PAYROLL SYSTEMS IN EDUCATION SECTOR

Prior to 1989, the New Zealand Department of Education had 28 separate salary units delivering the schools payroll manually. In the late 1980s, a new centralised computer system was introduced. The ministerial enquiry [18] remarked that the transfer to this software was not problem-free, and many staff were not paid during the transition. The MoE contracted out the operation of the schools payroll to Datacom in August 1995 who introduced *Datapay* in 1996. The transfer to the new system was again difficult. The project ran late. On the first pay run, none of the employees paid by direct credit were paid and throughout the implementation period dissatisfaction was expressed by school employees about non-payment and incorrect payments. Similar to the Talent2 service, Datacom took considerable time to understand the payroll system, and to develop the transactions and payroll processes within *Datapay*.

In a paper for Cabinet on the project dated 6 May 2005, the MoE explicitly recognised the impacts of a failure during rollout, and outlined its intended mitigation strategies as including 1) an eight-month staggered implementation, 2) parallel runs of the new and existing systems, 3) ensuring internal capabilities to manage implementation and operation, and 4) extensive communication and change management with the schools. The MoE also assessed

that a 'Big Bang' model for rolling out the new payroll service to all users at the same time was unacceptably hazardous. However, when Novopay was implemented, the MoE changed its initial position and plan by deciding on a big bang approach [18]. The MoE made the same mistakes in the previous implementation and expected an improved outcome. While people involved in 1989 or 1996 may not be engaged in the Novopay project, the MoE could have easily overcome the previous mistakes and failures if it had a proper knowledge transfer process, and an established knowledge absorptive capacity unit.

5. CASE ANALYSIS AND DISCUSSIONS

Talent2's failure to provide satisfactory payroll services have extensively reviewed and analysed from various perspectives by the New Zealand Government ministerial enquiry [18, 21], technical review [8], media analysis [26, 28], etc. This analysis concentrates on how the systemic failures occurred due to lack of organisational capability in terms of absorptive capacity and knowledge management. The issues of what happened or what went wrong or what could have been done at what stage at the system or service level are beyond the scope of this discussion and analysis. We first analyse three key reviews conducted by the government, consultant and media in the following three subsections. We then conduct further analysis.

5.1 Ministerial Review

This analysis failed to realize that the agreement was to deliver the payroll service, not the Novopay system as an IS/IT infrastructure.

In its Foreword the ministerial enquiry [18] wrote:

There were many factors that contributed to the Novopay failures. It is our overall view that weaknesses in project governance and leadership allowed the service to go live with a number of significant risks which the Ministry and its vendors were over-confident of managing. When these risks resulted in service issues Post-Go Live, the Ministry and its vendors were overwhelmed by their nature and scale. Over the course of the project, Talent2 had missed agreed milestones or deadlines, which eroded trust and confidence in its ability to deliver. The nature of the service that the Ministry was seeking also diverged from the original proposition. (p.2)

The report also assesses that:

The Ministry of Education has much to learn from this long-running process. It is critical that public and private sector entities collaborate effectively to bring the required expertise to bear. (p.2)

This assessment clearly demonstrates that both the MoE and Talent2 either underestimated the problems or did not have the requisite knowledge to understand the gravity of the risks. They were, of course, under pressure to go-live due to the impending withdrawal of Datacom. This also demonstrates the lack of leadership and management by the MoE, which was caused from the lack of knowledge management, as the MoE had similar failures in the past but never retained knowledge from those projects.

In the chronology of events [5], we observe that the MoE decided to replace the Datacom administered system and service in 2003. The Synergy and Talent2 consortium was selected as the supplier of software and hardware for the new schools payroll system in 2005, but the contract was revised in 2008 before it even came to effect. Under the new 2008 agreement, Talent 2 was engaged as

the sole payroll service provider. According to the ministerial enquiry [18],

Work commenced on the requirements for the schools payroll project in October 2008. This process was lengthy, and never completed. Even after Go Live, new requirements were being discovered. There was little direct customer (boards of trustees) or user (principals and school administrators) involvement in the definition of the requirements, and Datacom's involvement was minimal. (p.3)

These are remarkably common mistakes and failure points in most of the enterprise systems implementation i.e. lack of a final sign off on requirements and scope, lack of end user involvement, and lack of involvement from the previous/existing service provider. However, this problem also lies at the core of the client's absorption capacity and knowledge transfer capability.

The ministerial enquiry [18] continues to express that:

The project had by this stage shifted from implementing a configured package software solution towards a heavily customized solution, and was therefore increasingly moving away from the original strategy, business case and basis for procurement. Requirements definition, design, development and testing activity were all occurring in parallel, making it very difficult to maintain a known level of quality. (p.3)

The enquiry clearly brings lack of strategic, as well as tactical, decision making capability at the ministry level. Both the technical review and the ministerial enquiry did not scrutinize the weakness of the methodological aspects of the Novopay system implementation. Some of the IT systems development methodologies such as Agile approach supports parallel processing of requirements definition, design, development and testing. However, was this methodological approach suitable for the project? The MoE should have done more analysis at the outset and could have taken assistance from the Office of the Government Chief Information Officer to conduct this review and analysis. However, it is not certain whether the later office had the expertise and capability or not.

The ministerial enquiry [18] also observes that:

During the service design and development phase, the intended pilot and phased rollout of the service were removed from the project plan. Some important areas of functionality were not fully tested prior to Go Live. Some types of testing were not completed to the original scope, on the basis that testing could be completed after Go Live, or that the risks of not doing the testing had been adequately mitigated. Not all System Integration Testing criteria were met. (p.3)

This was a totally disastrous decision on both the MoE and Talent2's part. Almost all of the monitoring organisations have failed here. Any sensible IT project management expert cannot take such an insane decision. They might have some hidden reasons which need to be made public or there should be another enquiry for establishing responsibility for such faulty decision making.

Another observation in the enquiry report states:

The Ministry understood that changes to business processes and roles within schools in relation to payroll administration were expected. However, it underestimated the impacts of the changes required of the schools by the introduction of the new payroll service. The execution of the change management plans which the Ministry did have was inadequate, and roles were unclear. The engagement with the payroll service's customers and users was also insufficient. (p.4)

This observation again indicates the inability of the MoE to provide the leadership required for such a complex IT project, without the support of a specialised IT knowledge organisation.

Other crucial issues observed are a lack of communication, a large degree of turnover in key project leadership positions, and lack of a program director. The MoE also lacked commercial experience to manage such a large vendor. The situation was exacerbated by the unhealthy relationship between the MoE and Talent2, the lack of overall accountability for Independent Quality Assurance, the unduly optimistic reporting, and the failure of monitoring by the State Services Commissioner. The ministerial enquiry [18] highlighted 19 findings on project lifecycle and another 19 findings on project execution and recommended 18 lessons to be learnt from the project. Project lifecycle related issues relate to 10 different areas, namely 1) The business case, 2) procurement, 3) The contract, 4) service requirement definition, 5) service design and development, 6) testing, 7) change management and sector readiness, 8) Decision making: the lead up to Go Live 9) Post-Go Live, and 10) remediation. Project execution related issues are: 1) governance, 2) project management, 3) vendor management, 4) assurance, 5) benefits and costs, 6) leadership, 7) culture, 8) relationship with the sector, 9) ministers, and 10) the central agencies. In order to solve these problems and issues, the New Zealand Government needs to establish an independent centre for absorption capacity as a central knowledge management organisation.

5.2 Technical Review

While the focus of this research is not to analyse technical issues, it does look into some of the technical difficulties that exacerbated the complexity of the overall payroll service management. Deloitte [8] conducted a technical review,

... to assess the core Novopay payroll software platforms with respect to their stability and make recommendations to enable the Ministry to ensure that immediate issues are resolved in short term and that the Ministry has suitable software platforms in place for the eight to ten year delivery of schools payroll. (p.4)

Use of consultants for technical reviews is widely practiced in many countries. However, this is normally done to supplement the client's internal reviews for identifying the deeper and external issues. In this case, no internal technical review was conducted due to lack of competence, confidence, or organisational capability in undertaking such a review.

According to the technical review [8], Deloitte observes –

...the core software platforms are not stable for the delivery of schools payroll. This is driven by a backlog of system issues (predominantly related to customized functionality), and difficulties with the entry of data and interpretation of reports by schools. (p.6)

While functionality cannot be tested until it is developed, the issues of data entry and report interpretation could be identified much earlier. This highlights lack of knowledge and capability on the client's part.

In order to provide a stable platform for the delivery of schools payroll for the next eight to ten years, Deloitte [8] states that the MoE needs to extend support to Talent2: "... this would require materially elevated and sustained effort and capability by both the Ministry and Talent2" (p.6). The MoE or another government department can extend this support only when they have the right knowledge and skills to do so.

Deloitte [8] also observes that existing functionality does not support the business processes, and customisation is difficult with the application architecture. Novopay had 500 open defects including 44 'very serious' seven months after Go-Live. There was no formal process in place to assess and manage data quality. Service support processes have struggled to manage the volume of issues. Deloitte also observed insufficient staff and lack of clear leadership accountability to manage end-to-end resolution. All these observations highlight the lack of the client's organisational capability which cannot be resolved overnight through hiring employees or consultants. Development of organisational absorption capacity and knowledge transfer capability is not an on-off issue; rather they are a continuous process and need to be developed over a sustained period of time.

5.3 Media Analysis

In a media analysis, Seven Sharp [28] presented how Novopay fulfils the eight habits [12] of highly effective IT fiascos: 1) ambitious project scope; 2) change of technical specifications during the project; 3) develop long and complex contract and assume this will solve problems that arise (and they will); 4) rely on the advice and skills of salespeople and contract and use lots of consultants rather than develop in-house IT expertise; 5) ensure project has a long development time-frame so technology becomes outdated and the likelihood of organisational changes increases; 6) believe everything you are told about the progress of the project and assume bugs will be ironed out once project is live; 7) look for the indication of forthcoming failure, do not terminate project. Instead rely on promised IT fixes, more processes and more monitoring; and 8) continue throwing money at the project. In this media analysis, item 4 has distantly touched the issues of knowledge, knowledge management, knowledge transfer and organisational absorptive capacity. Seven Sharp [28] made the comment that: "In August 2007 the Labour Cabinet agreed to outsource the payroll operation because it would require less expertise and resource from Ministry."

Though this comment may not directly link to implementation of this payroll project, it indicates avoidance of taking an active role in the overall payroll process due to lack of expertise in the MoE. The MoE was kept in the dark during the previous payroll process which was administered by Datacom without full documentation. However, the MoE neither designed a process nor took the initiative to develop a knowledge management capability within the MoE to understand the payroll service process. The MoE continued to make the same mistakes that they made during the previous two decades.

5.4 Other Analysis

So far, the Ministerial enquiry, consultants and media have focused on reviewing and analyzing incorrect functionality, the project lifecycle and aftermath of the Go-Live of the Novopay system rather than the failure of Talent2 and the MoE, especially their organisational capability, to deliver the required services even with extended time and budget. The service procurement was erroneous. Talent2, being an Australian company, lacked the understanding of the complex New Zealand Education payroll services. A joint venture with an experienced New Zealand organisation could have placed them in a better position to deliver the services.

Nickson [23] observes that the bugs in an implementation are not critical in a government funded project as long as the system demonstrated the correct functions so that the training and demonstration staff could prepare their work. However, Novopay

even fell below Nickson's expectation. Nickson [23] also states that scope changes are common in Government IT project, such as 2,500 change requests after the initial specification of this payroll systems project. However, Talent2 could not even finish requirement gathering for Novopay before go-live.

We observe that the payroll project was initiated in 2003 and went-live in 2012. This is a quite long time to change business processes, and laws and regulations. There was no process in place to handle time bound events. The MoE controlled macro level processes, but they lacked understanding of the micro level practices and the Payroll Reference Group (PRG), that was established to support the MoE, was not that useful [18].

According to Nickson [23], a fully staffed project team that has people who have the wrong skill sets, or who require extensive training before they are productive, is a real problem. We also observe some staffing and expertise issues in this project. Most of the school payroll admin and call centre staff had either no, or inadequate, training at Go Live [18]. Failure of communication and management is a common problem in most IT projects. The project team normally tries to hide and solve the issues before they become critical and unsolvable, within their expertise and capacities. Communication issues and missing deadlines from the beginning of the Novopay project were known by the MoE but they did not undertake proper remedial measures for unknown reasons, which could be a further research issue. There was a lot of false hope within the MoE and Talent2 that problems and issues would be fixed once the system went-live.

Strategies such as abandonment, fresh start, or salvage may be used to overcome project disasters [23]. However, none of these options was feasible as the MoE did not have an alternative strategy to manage the schools payroll when the deadline to go-live was imminent.

6. FINDINGS

The ministerial enquiry finds, "The strategic decision to change from purchasing software to an outsourced service was valid, but the rationale was simplistic" [18] (p.11). We argue that this was the key problem point of this project. Contracting a software company to deliver payroll services is the same as hiring a medical equipment manufacturer to undertake surgical operations. Talent2 was hired to configure the Novopay software to deliver the schools' payroll service requirements. Suddenly, though with valid reasons, the software supply contract was changed to Business Process Outsource (BPO) for payroll services for which Talent2 lacked expertise. The MoE also lacked experience and knowledge, and exhibited a 'lack of ownership of the problems' as it believed, albeit without a valid basis, that Talent2 could finally manage the payroll service. Astonishingly, the State Service Commission, Office of the Government Chief Information Officer, Auditor General, and the cabinet division could not either realize or speak out. Even the current review teams are reluctant to mention this directly. This caused the entire process such as requirements gathering, scope management, design, development, testing (pilot, integration, implementation, deployment, etc) to be flawed. The monitoring and governing bodies tried to minimize the impact of non-achievement (failing milestones) instead of taking timely remedial measures. Quality seemed to be never an issue for any of the stakeholders.

Talent2 was contracted to deliver a complete payroll service which is more than an information system. After dropping the consortium in the 2008 agreement, Talent2 lost a crucial segment of experience and skilled human resources required to deliver

such a complex and large payroll service. Hiring of skilled individuals does not make up organisational capability immediately and deliver the required services without hiccups. Datacom who had good experience in both system development and service delivery was kept out of the loop though they were willing to undertake services at a substantially reduced cost. It is apparent that the MoE wanted to avoid Datacom at any cost. Datacom could have been engaged as a consultant and given a transitioning role. Government ICT department was also kept out of support or monitoring process in the contract. Key stakeholders, especially the MoE were paralyzed in identifying contact variations and conducting reviews and failed to provide proper leadership to the project team. The key user groups (schools) were not involved in development and testing, and were neither trained adequately, nor did they buy-into the new payroll processes which required changes to long established practices.

7. CONCLUSION

This research observed that Novopay project was a victim of systematic failures during 2003 -2012. The initial scoping of the project was wrong and therefore, the decisions for customisation and implementation processes were changed again and again. No one in the MoE was sure of the success of this project other than relying on a dramatic and magical outcome.

The way forward for the government is to establish a Centre for Absorption Capacity (CAC) as a central learning organisation and to set up of a process for the development of organisational capability. In the current form of organisation strengthening process, the New Zealand ministries and departments normally hire at the start of the project and let them go at the end. Consequently, the experience and knowledge gained, often at a painful cost, disappears after a certain time. It is important to note that while a group of individual experts may be hired to constitute the organisational absorption capacity, this does not increase organisational capability in the long run. The proposed CAC would be tasked to establish a central knowledge management infrastructure that does not rely on individuals and to sustain it even after losing any expertise. The processes of knowledge absorption and capacity are entirely different from organisation to individual. A CAC could be involved in any complex project for supporting the MoE or taking a proactive role in the project.

Further research needs to be done in order to define structure and working proposition for the CAC.

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