

Chapter Eight: Business Process Re-engineering with Stable Loan (Case Four)

8.1 Introduction

The fourth and final case has been undertaken with Stable Loan¹, a medium sized management accounting firm in Hong Kong. Stable Loan has a sizeable Hong Kong office with over two hundred employees in various divisions, viz.: tax, audit, administration, business services and company secretarial services.

Contact with Stable Loan was originally made through the Chief Information Officer (CIO), at a seminar on IT applications in May 1996 organised by the Hong Kong Management Association. Following this seminar, a hands-on demonstration of the GSS software was conducted for the CIO and his staff. They were impressed with the software and could think of several application areas where it could be used. Unfortunately, the nature of their project work at that time was unsuitable for GSS support and therefore they were compelled to postpone any introduction of the software. Some seven months later in December 1996, the CIO re-established contact since a suitable project had become available and arrangements were made to engage in an action research project to use the GSS accordingly.

The CIO was interested in applying the GSS to the support of a Business Process Re-engineering project, specifically a review of the process whereby the organisation billed its customers. He initially expected that this process would take approximately ten weeks.

The initial planning for the project took place in late January 1997 when the team members were identified and initial documents were drawn up. The CIO explained at the outset that while he could simply re-engineer the process himself, it was important that all the different departments that would be affected by the changes be represented in the project, since he expected that they would have strong views on some of the key elements. If they did not buy-in to the re-engineered solution, it would all be a waste of time. Consequently, he asked each department to nominate a volunteer representative. The team members are introduced below.

¹ The true identity of the organisation has been withheld at its own request. Stable Loan is a pseudonym.

Apart from the team members, and their individual reservations about changes to the proposed new system, the CIO acknowledged that the firm itself was conservative and would not accept change easily. He explained that when he had been appointed as CIO, he had been given the authority from the Managing Partner to reorganise the processes employed in the firm so as to improve its productivity - indeed this authority was a key element in his acceptance of the job. Nevertheless, he felt frustrated with the bureaucracy that pervaded all sectors of the firm.

To start the review process, the CIO requested the researcher to write a short document (see Appendix 8.1) explaining why GSS could be of benefit to Stable Loan in respect of the billing process review and how the research interests of the researcher matched with this review. The CIO then developed a number of documents so as to: introduce to the re-engineering team the objectives he hoped to achieve through the review; establish a provisional schedule of activities; and describe the key characteristics of Business Process Reengineering. These are all presented below. These three documents were distributed to all members of the team and also made available as 'activities' in the GSS so that members could easily refer to them throughout the duration of the project.

The objectives of the project, as defined by the CIO, were:

- to devise an effective Billing Process, together with a plan for its implementation, for submission to the Strategy Review Group (SRG)²;
- to learn about the appropriateness of a variety of process review tools and techniques that could be used within the organisation.

The provisional schedule was as follows:

Week 1	Identify problems with the existing Billing Process
Week 2	Identify goals for the new Billing Process
Weeks 3-4	Understand the existing Billing Process
Weeks 5-6	Devise an ideal Billing Process
Weeks 7-8	Develop a practical new Billing Process, together with an implementation plan, for submission to the SRG.
Week 9	Review what had been learned about the appropriateness of the various process review tools and techniques applied.

² The Strategy Review Group is a committee at Stable Loan that meets to consider major changes in corporate policy or strategy. The billing process review fell under its control.

Week 10 Develop an action plan for the new Billing Process on the basis of feedback received from the SRG.

The key features of Business Process Reengineering, also as defined by the CIO, were that it should incorporate: Customer Focus, Radical Change, Cross-Functionality, Aggressive Goals, and Enabling Technologies.

The team members, and some characteristics, are as follows³:

Albert - the CIO of Stable Loan. An expatriate from the UK, he has degrees in Statistics and Information Systems and is currently studying for his MBA in Australia.

Alexandra - a local manager in the Company Secretarial department. She is a graduate from a tertiary education institution in Hong Kong. She has many years of experience in Stable Loan and is computer literate.

Belinda - a local administrative officer in the EDP department. She has three to four years of experience in Stable Loan, but is only educated to O-level standard and has poor spoken English.

David - a local manager in the Tax department. He has spent a long time studying and working in Australia, where he also graduated.

Francis - a local manager in the Audit department. He has spent over fifteen years studying and working in the USA, is articulate and a highly computer literate manager. He joined the team in week ten to replace Vance (see below).

Rachel - a local manager in the Business Services department. She has over ten years of experience with Stable Loan, but no tertiary qualifications, and is computer literate.

Sonny - an expatriate manager from the UK, he works in the Insolvency department. His level of computer literacy is low, but he is a qualified chartered accountant.

Vance - an expatriate from Malaysia, he is a manager in the Audit department. He is a university graduate from the UK and is computer literate. Vance resigned from Stable Loan in week nine and was replaced by Francis.

All of the team members had their own specialisms within Stable Loan, and so had a unique contribution to make to the discussion process. Occasionally members were unable to attend meetings, on which occasions they usually nominated their

³ As per footnote 18, all names have been changed to protect the identity of the team members.

colleagues to stand in for them. However, this was only on a one-off basis and those alternate members are not introduced here.

Some potential team members were notable by their absence. There were no front-line staff on the team, i.e. those who fill in forms, nor any junior administrative staff. The reason for excluding these junior staff related primarily to their perceived low level of willingness to contribute ideas (due to evaluation apprehension) and their perceived inability to communicate fluently in English. Furthermore there were no partners or other senior members of the firm. The latter were deliberately excluded on account of any normative status influence they might exert on the meeting process and the other team members. An executive sponsor for the team was identified, but his contact with the team was sporadic and entirely remote - through the CIO. A third group of missing people is the clients/customers. While their views would have been valuable, the CIO felt that it would be too difficult to involve them in the project as the review process was still in its infancy and the processes being discussed were primarily internal, not external. After an implementation plan had been agreed upon by the SRG, it would be possible to involve selected clients so as to get feedback on points that were pertinent to them.

8.2 Software and Hardware Set-up and Meeting Scheduling

When it had been decided that the project would be initiated, the researcher and Brian, the Technical Manager at Stable Loan, set up the GSS software⁴ on a server running Novell Netware 4.11 in Stable Loan. At that time, the operating system used was Windows 3.1. No problems were encountered during system set-up and the software was successfully pilot tested. The Training Room, where all the meetings would take place, was adjacent to the IT department where the CIO worked and on the same LAN. The Training Room was used by Stable Loan for all training activities or meetings that required face-to-face contact. It was also used for system testing, which meant that the PCs allocated to the room were frequently being reconfigured so as to simulate different set up procedures. When other PCs failed elsewhere in Stable Loan, these Training Room PCs were used as substitutes, hence at times there were fewer available than the eight needed. In addition to this set-up, the software was installed on the local hard disks of all team members' office PCs so as

to improve network performance when they accessed the GSS remotely. The introductory documents, described above, were also loaded onto the GSS at this time.

In 8.3-8.12 below, week one, week two, etc. refer to the sequence of weeks when meetings were held and other activities took place. From time to time, a meeting was delayed, up to six weeks in one case, so these 'weeks' do not correspond to an unbroken sequence of calendar weeks.

8.2.1 Introduction to the Meetings

Before the first meeting took place, the researcher and the CIO (as process owner) had a series of detailed discussions. The first objective was to identify the key issues to be discussed. Although the CIO was the principal author of these ideas, the researcher queried him frequently, clarifying points of detail especially over details relevant to the organisation about which the researcher was unclear. The CIO and the researcher also discussed how to arrange the GSS meetings. The CIO wanted the meetings to be a weekly event (on each Monday morning from 11:00-12:45). However, at the end of each meeting, 'homework' should be prescribed for the team members to undertake during the week. In this way, the GSS would be used in a face-to-face, synchronous mode once per week and in a distributed, asynchronous mode during the rest of the week. Such an approach should permit much better use of time to be made, with each team member able to participate at a personally convenient time. Although a week-by-week schedule was drawn up (see 8.1 above), it was clear that in principle the project should run for as long as was necessary in order to achieve its objectives. The CIO agreed that the questionnaire (see Appendix 8.2), as described in Chapter Four, should be completed by the team members at the end of each meeting so as to provide feedback to the researcher which could be used to improve the facilitation style.

⁴ GroupSystems 1.1c was installed initially. In Week 3, it was upgraded to 1.1d, and in Week 4 to 1.1dSP2.

8.3 Week One (January 26th-February 1st)

8.3.1 Planning

Following the discussions described in 8.2.1 above, the CIO and the researcher agreed that the first meeting should be primarily introductory so as to familiarise the team members with their remit, and to introduce the researcher and the GSS software. This could usefully be followed by an initial use of the software for an exploration of the issues relevant to the Billing Process.

8.3.2 Introduction

In the first meeting, the CIO briefed the team members on the purpose of the project, explaining why it was necessary, why the team had been put together, how he expected the team members to participate, what outcomes he expected from the project, and how long he expected the project to last.

Following this briefing, he introduced the researcher and explained how he wanted the team members to use the GSS as a tool to assist them in their deliberation, discussion and decision making. He explained that he had personally been introduced to the software and believed that it had the potential for facilitating the group discussions so as to make them more productive and beneficial for all team members. He also explained that the researcher would be primarily involved in technical issues. The team members had a number of questions to ask about the functionality of the software, and also the confidentiality of their input. They were aware that the re-engineering of processes was likely to be controversial and some members might disagree not only with each other, but also with existing practices in the organisation involving the partners. They wanted to be sure not only that their anonymity would be protected by the system, but that people outside the team (specifically partners of the firm) should not gain access to the information without their permission. This request for data security amounted to a condition of participation. The researcher assured them that the data was confidential within the system and that it was impossible to identify who had said what. At the same time, the CIO confirmed that the information generated would indeed remain confidential and that any reports he made to the SRG would simply summarise what the team had discussed or resolved, not cite any particular person's contribution. At the same

time, he, as process owner, would take personal responsibility for the project as a whole.

8.3.3 Execution

In order to give the team members a feel for the software, the researcher started them up in the Categoriser tool and asked them to brainstorm issues that they felt were relevant to the billing process in general. They were reminded that all their input was anonymous. Typical ideas that they generated were (original idea numbers used):

2. Timely rendering of invoices
3. Debit note text is not effectively spell checked
8. Art of billing - value of services
13. Input of Contact Partner on billing amount
17. Turnaround time is too long
28. Responsibility for bill raising

After five minutes, the researcher instructed the team members to double-click any of the ideas they had generated so far so as to see the comment sheet. He explained that they could use this to submit more detailed comments about the ideas that had been created, to ask questions, to request clarifications, or to respond to others' comments. The comments were number stamped for easy reference. Over the next fifteen minutes, ten comments were generated (all team members were instructed to generate at least one) as well as several more ideas. After this time, the CIO asked the team members to stop as he had another meeting to attend. He requested them to continue with the process over the week so that by the time of the next meeting (a week later), a good understanding of the issues would have been achieved by all team members. The debriefing questionnaire was also handed out at this time, but unfortunately it was not possible to collect it until the following week. Nevertheless, even though we could only use the data to inform the week three meeting, we discuss the results in 8.3.4 below.

Over the next three days, some thirty ideas and 102 comments were generated in the GSS. As expected, this initial exploration of the ideas proved very useful for the team members with many questions being asked and answered.

8.3.4 Reflections

While the first meeting of the team proceeded smoothly, it was disappointing that the questionnaire could not be completed on the spot by the team members and returned to the researcher immediately. Such feedback would be of great use in determining how to plan for the next week's meeting. Furthermore, the longer the gap between the meeting and the questionnaire being completed, so the less accurate the information would be. These concerns were subsequently communicated to the CIO, who agreed that it would be better if the feedback was immediate. However, he was either unable or unwilling to force the team members to respond immediately. The CIO shared the perception that a good start had been made to the project and he therefore felt it was safe to proceed the following week without any changes in operational procedure, i.e. using the GSS in a similar manner.

Analysis of the data from the questionnaires (see Table 8.1 below) was instructive and provided a useful initial understanding of how the team perceived meeting process issues.

The first two items in the communication construct do not present problems, with the team members disagreeing quite strongly that the use of English in meetings prevented their participation or that they found it hard to understand others. The scores for the second two items, however, measuring the team members' inability and reluctance to contribute ideas, indicate that they only weakly disagree.

Where the discussion quality construct is concerned, the perception was that there were few problems - the scores for the first three items suggest that the discussions were seen as reasonably meaningful, appropriate and open, though the imaginativeness was not very strong. When we examine the efficiency construct, we see that the result orientation of the meeting was perceived to be partial, while it was weakly agreed that time was used efficiently in the meeting, somewhat less than half of it thought to be spent on serious discussion.

Where the status effects construct is concerned, three of the items exhibit no problem, the team members not perceiving that they felt intimidated, inhibited or experiencing substantial pressure to conform. However, their disagreement that they felt influence is weaker.

Table 8.1 Questions, Scales and Mean Scores from Stable Loan Meeting 1

Question	Var.	Scales	Week 1
The language of the meeting prevented your participation	C1	1 Strongly Agree; 5 Strongly Disagree	4.4
You found it hard to understand others	C2	1 Strongly Agree; 5 Strongly Disagree	4.3
You experienced problems expressing yourself	C3	1 Strongly Agree; 5 Strongly Disagree	3.3
You were reluctant to put forward ideas	C4	1 Strongly Agree; 5 Strongly Disagree	3.4
The discussion was meaningful or meaningless	D1	1 Very Meaningful; 5 Very Meaningless	2.3
The discussion was appropriate or inappropriate	D2	1 Very Appropriate; 5 Very Inappropriate	2.0
The discussion was open or closed	D3	1 Very Open; 5 Very Closed	1.9
The discussion was imaginative or unimaginative	D4	1 Very Imaginative; 5 Very Unimaginative	2.6
To what extent was the meeting result oriented?	E1	1 Strongly Result Oriented; 5 Weakly RO	2.4
The time in the meeting was used efficiently	E2	1 Strongly Agree; 5 Strongly Disagree	2.4
The issues in the meeting were discussed thoroughly	E3	1 Strongly Agree; 5 Strongly Disagree	3.0
What percentage of time was devoted to serious discussion?	E4	0% - 100%	41
Some group members tried to intimidate others	S1	1 Strongly Agree; 5 Strongly Disagree	4.0
Some group members tried to influence others	S2	1 Strongly Agree; 5 Strongly Disagree	3.3
You felt inhibited from participating due to the behaviour of other group members	S3	1 Strongly Agree; 5 Strongly Disagree	4.1
You experienced pressure to conform to a viewpoint	S4	1 Strongly Agree; 5 Strongly Disagree	3.9
Other members appeared willing to answer questions	T1	1 Strongly Agree; 5 Strongly Disagree	2.6
Members worked together as a team	T2	1 Strongly Agree; 5 Strongly Disagree	2.9
Members had sufficient access to the information they needed so as to participate in the meeting	T3	1 Strongly Agree; 5 Strongly Disagree	2.4
You felt that you played a useful role in the meeting	CR1	1 Strongly Agree; 5 Strongly Disagree	2.0
How would you rate your overall satisfaction with the meeting?	CR2	1 Strongly Satisfied; 5 Strongly Dissatisfied	2.4
To what extent was consensus achieved in the meeting?	CR3	1 Strongly Achieved; 5 Weakly Achieved	2.6
How comfortable did you feel using the technology?	Tech1	1 Very Comfortable; 5 Very Uncomfortable	1.9
To what extent did the technology hinder or facilitate your participation?	Tech2	1 Strongly Hindered; 5 Strongly Facilitated	4.0

The teamwork items do not show serious problems for the team's interaction, yet the scores could certainly be improved. Where the use of the technology is concerned, the team members appear to be comfortable and sense that it facilitates their work.

This judgement is perhaps a little premature, in view of the fact that they had not yet made significant use of it when they completed this first questionnaire. Where the criterion measures of usefulness to the meeting and satisfaction with the meeting are concerned, the scores are healthy, as too is the score for the amount of consensus achieved, at this stage of the project. Given the nature of the task in the first meeting - surfacing problems with the current billing process, no attempt being made to encourage consensus - it is not surprising that consensus was not perceived as being strongly achieved.

While this data showed that the team discussions, and their perceptions of that interaction, were generally healthy, a number of issues needed monitoring, especially the motivation of the team members to participate and the influence that they perceived from other members. However, at this early and formative stage of the project, the researcher did not wish to intervene directly in the meeting processes, since he was not totally familiar with the content of the discussions. Furthermore, he was primarily seen by team members as a technical facilitator.

8.4 Week Two (February 2nd-8th)

8.4.1 Planning

A planning meeting was held ninety minutes before the week two meeting was due to start. The CIO said that none of the team members had reported any problems with the software to him, yet the system had crashed when he tried to create a report. The researcher checked this problem and found that creating the report was not a problem, but reading the report crashed the system. This problem was reported to Ventana Corporation who suggested that it might be a problem with the printer driver. As a short-term solution, the report file was identified from the database and printed from MS Word.

The CIO and the researcher then planned how the second meeting should run. A key problem that had emerged from the first week's activities was that the

ideas generated covered a very wide area and there was no clear focus. In fact, some team members appeared to be searching for solutions before the problem itself had been fully explored. The researcher had deliberately not tried to focus the discussion in the first week since he wanted the team to learn how to use the system, without the additional cognitive load of thinking about idea categories. The CIO suggested that the initial focus should be on the scope of the billing process review. The next task would be to identify the objectives of the new billing process. Both of these activities would use the Categoriser tool on an anonymous basis and the latter activity would continue through week two. Although these plans were rather ad hoc in nature, this was not unintentional since the CIO wanted to have a free hand to manage meetings as they went along without an undue load of activities to complete.

8.4.2 Execution

Two of the team members (Vance and David) were absent from this meeting and were replaced temporarily by two substitute members. They had not used the system before and so had to be introduced to it. The whole team spent ten minutes reacquainting themselves with the ideas created the previous week and then started to discuss the topics verbally. Most of this discussion was between the CIO and Sonny with occasional interjections from the others. This conversation was not very productive as it was clearly dominated by two people and no clear consensus emerged. After thirty minutes of discussion, the team decided to categorise the original list of thirty items, each team member generating categories, ten appearing very quickly. They then copied ideas to categories, but it soon became clear that this was not going to work as some categories were actually just ideas and others remained 'empty'. The CIO commented that this was becoming a software exploration process, but not really a useful meeting. He initiated discussion on the method they should use and suggested that they consider each of the thirty ideas purely in terms of whether or not they lay inside or outside the scope of the billing process review. The researcher was asked by the CIO to delete all the previously created categories and to create two new categories: 'Inside Scope' and 'Outside Scope'.

The CIO started the process by reading out the ideas one by one and suggesting that they be put in either one or the other category, the researcher

performing the actual moving of ideas to categories. After some ten ideas had been categorised, the CIO realised that he was dominating the process, few of the others raising any objections to his suggestions, and therefore requested Alexandra to read out the items and lead the discussion of each. She was a little unwilling but complied. The process now became slower and more people participated. On several occasions, the CIO was overruled by a majority of other team members and he felt forced to respect majority rule, though he often indicated that he might reintroduce his ideas at a later stage of the review. Eventually twenty eight items were categorised - seventeen inside the scope and eleven outside. The remaining two were deleted on the CIO's suggestion as he believed them irrelevant. The CIO then tried to start the team members on the next activity - Objectives of the New Billing Process - but this did not take place as it was lunch time and team members soon left, once again taking a copy of the debriefing questionnaire to complete (results discussed in 8.4.4 below). Before they left, they agreed to work by themselves on how billing took place in their respective departments and to submit this material through the GSS before the next meeting.

Two days after this meeting, the CIO informed the researcher that the GSS had crashed and the technical staff were unable to solve the problem. Consequently the researcher went in to Stable Loan and 'repaired' one damaged activity. He explained to the CIO how to repair activities, but the CIO pointed out that such matters were more properly the concern of Brian, the Technical Manager. Unfortunately, Brian expressed little confidence in being able to fix problems himself in future. At the same time, the researcher helped the CIO to enter information into a new activity called New Billing Process Objectives using the Categoriser.

8.4.3 Feedback from the CIO and a Team Member

After the Monday meeting, the CIO expressed his frustration with the team members to the researcher: "if you open up the meeting to everyone, they cannot decide quickly, cannot focus and then make some strange decisions". He commented that the team members did not fully understand why the billing process review was necessary and why they should be involved in it. Furthermore, they seldom participated if he was leading, so he usually ended up dominating the discussion. He was also unsure about the suitability of the software, specifically its apparently limited functionality. He wanted to be able to 'lock' certain parts of an agenda item,

for example some selected categories, then permit the team members to add ideas only to the remaining categories. Sonny also felt perturbed by the process, not because of the software, but because of the general unwillingness of the team members to take responsibility for introducing changes.

Conversations with the CIO and Sonny revealed a deep unease with the attitudes of the team members. The organisational culture was one of conservative and entrenched ideas, where creativeness was not encouraged, let alone rewarded. The CIO wanted to adopt a participatory line, permitting all team members to have a fair go at contributing to the processes, yet he also felt the need to be autocratic from time to time to ensure that things did get done. Sonny felt that the software was useful for stimulating idea generation, but that this idea generation needed a strong foundation, i.e. awareness of the relevant issues by all team members. Nonetheless, he asserted that much more had already been accomplished than would normally have been the case in the usual face-to-face situation.

8.4.4 Reflections and Lessons Learned

Observing the CIO interacting with his office staff, it became evident that he took responsibility and authority very seriously. However, his sphere of influence was not wide and he still had to argue with the administrators in Stable Loan so as to get approval for what he regarded as insignificant things. He found the organisational culture to be bureaucratic, while Sonny had commented that this kind of culture would eventually suffocate the organisation as it was impossible to get work done efficiently. Sonny recounted how even authenticated copies of documents had no value in Stable Loan - only originals could be used. The local staff in Stable Loan, on the other hand, had become accustomed to this culture and neither worried about it nor tried to change it.

Clear problems emerged in this meeting that relate to the interaction between the CIO and the team members. The willingness of the team members to participate appeared to be low, as was their willingness to take responsibility. Indeed, they appeared to have little vested interest in, and hence motivation for, the problem they had been assigned to tackle. This lack of interest was augmented by a failure by the CIO to communicate effectively why the review process was important. The CIO was frustrated by the lack of participation, yet did not seem able to understand the reasons for the team members' behaviour. He attempted to motivate them through

email communication and when face-to-face, but the results did not improve. Furthermore, his style of motivating them was more in the way of urging than encouraging. As a corollary to this, the CIO himself tended to dominate the discussions, which then brought into question the purpose of the team's existence. His intention to reintroduce his 'voted down' ideas at a later stage were a clear manifestation of this overt dominance, not to say lack of respect for the participative process he was promoting. In a similar manner, the deletion of two items from those in the scope list by the CIO demonstrated his 'power' to decide what to do. None of the team members queried that decision.

A second problem related to the way that by the second meeting, some team members already found themselves unable to attend (due to conflicts with other meetings), and hence had to appoint their colleagues to replace them. Not only did these new members have to be trained in the use of the software, but they also had to familiarise themselves with the task at hand quickly in order to be able to contribute to it. When queried on this point, the CIO admitted that the team members did have other commitments besides the billing process review, and that sometimes these would take priority.

A third problem related to the confidence and willingness of the technicians at Stable Loan to solve GSS-related problems. Normally, such software support would be handled by an applications support representative from the software vendor or developer (Ventana Corporation in this instance). Unfortunately, such a person did not exist in Hong Kong. Therefore, it seemed reasonable that this duty should default to the researcher who consequently needed to be available (given the constraints of his own timetable) to trouble-shoot on demand so as to ensure that the GSS was up and running for as much of the time as possible.

An examination of the data from the questionnaire (see Table 8.2) distributed after the week two meeting shows that while a small number of items had improved scores, many had deteriorated. It was encouraging to see that the scores for all four items in the communication construct indicated disagreement that there were communication problems. However, the quality of discussion was perceived to deteriorate quite substantially from the levels achieved in the first meeting to a neutral level. Meeting efficiency similarly deteriorated with scores generally reflecting the mid-point between the agree and disagree poles.

Table 8.2 Questions, Scales and Mean Scores from Stable Loan Meeting 2

Question	Var.	Scales	Week 2
The language of the meeting prevented your participation	C1	1 Strongly Agree; 5 Strongly Disagree	3.9
You found it hard to understand others	C2	1 Strongly Agree; 5 Strongly Disagree	4.0
You experienced problems expressing yourself	C3	1 Strongly Agree; 5 Strongly Disagree	3.9
You were reluctant to put forward ideas	C4	1 Strongly Agree; 5 Strongly Disagree	3.9
The discussion was meaningful or meaningless	D1	1 Very Meaningful; 5 Very Meaningless	2.9
The discussion was appropriate or inappropriate	D2	1 Very Appropriate; 5 Very Inappropriate	3.1
The discussion was open or closed	D3	1 Very Open; 5 Very Closed	3.0
The discussion was imaginative or unimaginative	D4	1 Very Imaginative; 5 Very Unimaginative	3.3
To what extent was the meeting result oriented?	E1	1 Strongly Result Oriented; 5 Weakly RO	3.3
The time in the meeting was used efficiently	E2	1 Strongly Agree; 5 Strongly Disagree	2.7
The issues in the meeting were discussed thoroughly	E3	1 Strongly Agree; 5 Strongly Disagree	3.1
What percentage of time was devoted to serious discussion?	E4	0% - 100%	48
Some group members tried to intimidate others	S1	1 Strongly Agree; 5 Strongly Disagree	3.7
Some group members tried to influence others	S2	1 Strongly Agree; 5 Strongly Disagree	3.7
You felt inhibited from participating due to the behaviour of other group members	S3	1 Strongly Agree; 5 Strongly Disagree	3.6
You experienced pressure to conform to a viewpoint	S4	1 Strongly Agree; 5 Strongly Disagree	3.0
Other members appeared willing to answer questions	T1	1 Strongly Agree; 5 Strongly Disagree	2.9
Members worked together as a team	T2	1 Strongly Agree; 5 Strongly Disagree	2.7
Members had sufficient access to the information they needed so as to participate in the meeting	T3	1 Strongly Agree; 5 Strongly Disagree	2.1
You felt that you played a useful role in the meeting	CR1	1 Strongly Agree; 5 Strongly Disagree	2.6
How would you rate your overall satisfaction with the meeting?	CR2	1 Strongly Satisfied; 5 Strongly Dissatisfied	3.3
To what extent was consensus achieved in the meeting?	CR3	1 Strongly Achieved; 5 Weakly Achieved	3.1
How comfortable did you feel using the technology?	Tech1	1 Very Comfortable; 5 Very Uncomfortable	2.3
To what extent did the technology hinder or facilitate your participation?	Tech2	1 Strongly Hindered; 5 Strongly Facilitated	3.4

The percentage of time devoted to serious discussion, however, was perceived as increasing by approximately a fifth. Where the status effects construct is concerned, the team members disagreed that they had been intimidated, influenced or inhibited, but on the issue of experiencing pressure to conform they were ambivalent, the mean score being neither agree nor disagree. A similar ambivalence was exhibited for the willingness of other team members to answer questions and to work as a team, though they agreed that they had sufficient access to the information they required to participate in the meeting. Where the team members' attitude towards the technology was concerned, they continued to feel comfortable with it, but it seemed to facilitate their participation to a lesser extent than in the first meeting. The three criterion variables all exhibited diminished scores, team members indicating, for example, that they were weakly dissatisfied with the meeting.

This data is worrying as it indicates that while team members seem to be more willing to participate and continue not to feel threatened in their participation, the quality of that participation, the direction of the meeting and the ability of the members to work as a team all show a rather indifferent kind of response, with scores close to neutral predominating.

Although the impressions are not negative as such, they do reflect the poor motivation that we have already observed in the way that team members choose to participate. Where the team work issue is concerned, the data suggests that the CIO has brought together several different people from different divisions and expects them to work together. Since they do not work together in the normal course of their duties, however, and their involvement in the billing process review is at best poorly motivated and occasional, it is not entirely surprising that they should have ambivalent views about their ability to work together as a team, nor indeed that they should not have a very high opinion of the discussion quality.

In Chapter Seven, we commented that it is not believed feasible to improve the scores of the criterion variables directly as they themselves depend on the meeting processes going well. Some of these meeting processes, it would now appear, are in turn suffering due to the lack of motivation to participate actively in the project and this is therefore one key to the improvement of the meetings as a whole. The dominance of the CIO in meetings certainly did not help in this process, in that

he did not genuinely stimulate the motivation that was the fundamental step to achieve.

8.5 Week Three (February 16th-22nd)

8.5.1 Planning

Late in week two, the CIO emailed⁵ the researcher to inform him that the third meeting would have to be postponed a week as many team members were too busy to attend. As a result of the request for information about software errors from Ventana Corporation, it was suggested that the software should be upgraded to version 1.1d. The upgrade version was downloaded from the Ventana website (www.ventana.com) and set up on the Stable Loan server. At the same time as this upgrade was performed, Stable Loan was migrating its operations to the Windows 95 environment. Brian, the Technical Manager at Stable Loan, suggested that the software upgrade from Windows 3.1 to Windows 95 might affect the stability of the GSS software running on the PCs in the Training Room.

The CIO recommended that in this third meeting, the team members should be asked to vote on the ideas generated during the previous week concerning the objectives of the new billing process. The CIO later admitted that he had created fifteen of the seventeen items himself, though it is unknown how many of the eighty three comments were generated by him.

8.5.2 Execution

All team members were present for this meeting except Sonny who had an unexpected last minute engagement. This meant that he had no time to ask a colleague to replace him. The instability that the technicians had warned of occurred within seconds of starting the team members in the GSS. It took the researcher ten minutes to get the Vote tool to run without errors, but one station had a repeated database error and in the end only five out of six team members were able to vote. Nine items scored 3.8 or above, on a 1-5 scale where 1 = strongly disagree and 5 = strongly agree. The team members had been requested to agree/disagree with the importance of each item as a component of the billing process. The eight least

⁵ Email is widely used in Stable Loan and by the CIO in particular.

agreed upon items were transferred to the Categoriser tool for further discussion, but the software crashed once again when this activity was started. The CIO was dissatisfied with this situation and asked the researcher to try to resolve the problems immediately.

Whilst the researcher was so engaged, the CIO used a whiteboard to present a data flow diagram of the current billing process, as he saw it, from the materials submitted by the team members concerning the billing process in their respective departments. He then explained how he believed it possible to reduce the number of steps involved in the billing process from twelve to three, going through the new process with each team member (i.e. departmental representative) in turn, to see how their departments would manage under the new scheme. After several rounds of productive discussion and debate, it became apparent that it would be more appropriate to have four steps rather than three, all present agreeing to this suggestion.

At the end of meeting, the CIO indicated that he would start to create a draft document of the material created so far, including what he had discussed with the team on the whiteboard. This information would be written up into the Categoriser tool and the team members would be invited to add their comments to it. He would view their comments on a daily basis and make changes as necessary so as to update the draft. He made it clear that for this process to work it was essential that the team members be prepared to participate, responding to his draft and commenting on it. No questionnaire was handed out in week three on the CIO's request and for reasons explained in 8.5.3 below.

8.5.3 Feedback from the CIO

The CIO emphasised the importance of Sonny's membership of the team, commenting that he is a person who can be relied on to produce new and innovative ideas. He reiterated his unwillingness to push all his own ideas through, and noted that he relied on Sonny to support him; later he made similar comments about Vance. He recognised that his willingness to make the process a participative and democratic one could be confounded given the other team members' lack of interest to participate. Belinda, for example, had hardly contributed anything to the process since it started. It transpired that the main reason for making her a member of the

team was to keep her informed since any changes in the billing process would be likely to have a significant impact on her job function.

The CIO felt generally satisfied with this meeting given its productivity concerning the development of the new billing process, despite software problems. He was not altogether sympathetic about software related difficulties, yet nor was he overly worried. He was generally of the view that the software should just work and it was not his business to make that happen. If problems existed, he expected the researcher to be able to solve them.

A third point raised by the CIO was the design of the questionnaire used to collect feedback from the meeting attendees. He found that the scales used were not useful and also found it onerous to answer the same questions, over and over again, each successive week. He requested the researcher to consider how the questionnaire might be modified so as to permit the measuring of the items on a more comparative basis, i.e. directly comparing the current week's activities with the previous week's. In consequence, the researcher redesigned part of the questionnaire - this is discussed in 8.5.6 below.

8.5.4 Reflections

To a considerable extent in the week before the third meeting, the GSS was used by the CIO as a personal information distribution system - email, but with a very big difference, as it permits all ideas to be anonymous and hence not 'belong' to any one person. The CIO used this to his advantage, disseminating his own ideas to the team, with the team not knowing who wrote those ideas. This use of the GSS created the illusion of participation when in fact there was little. Although Stable Loan was a hierarchically organised firm, unreceptive to change, and therefore unlikely to appreciate this form of structured information dissemination, the CIO employed the GSS to his advantage. The team members, meanwhile, perhaps accustomed to a more bureaucratic style of management, seemed unwilling to avail themselves of the opportunity to participate.

8.5.5 Week Three Activities

During week three, the CIO, as promised, developed a draft version of the characteristics of the new billing process. The first version was developed on the Monday evening (February 17th). The following day, some fourteen comments and

responses from the CIO were generated. This new information was incorporated into the second draft the same evening. Five comments and responses on the second draft were generated at the end of the week and at the start of the next week. The third version of the draft was titled "Ideal Billing Process" and was created on the Thursday evening. Four comments and responses were generated the following morning. One of these comments requested that the ideal billing process be represented as a flow diagram so as to make it easier to see how a typical bill might be generated and then move through the system. The final version of the draft was generated on Friday evening and received no comments until the following week's meeting. This final version was titled "Ideal Billing Process - draft for discussion at next meeting" (see Appendix 8.3).

8.5.6 Lessons Learned

During this week, the reliability of the system was poor, due in part to the migration to Windows 95 and in part to the failure to standardise the GSS at version 1.1d - some PCs in the Training Room were still running 1.1c. The urgent need to standardise the software environment was evident and demanded action.

In order to address the CIO's request (see 8.5.4) about the questionnaire design, several refinements were introduced to the layout and scales used. The redesigned instrument simplified the process of examining relative performance from week to week as it explicitly asked respondents to compare the current meeting's activities with those of previous meetings. The demographic questions were dropped from the questionnaire altogether as this data was neither expected to change nor was it very useful for understanding the processes of meetings. Most of the scales used were revised from 5-point to 3-point - see below - and the wording of some questions had to change to make the English syntax meaningful, though the constructs measured are arguably the same. Some examples of redesigned questions follow. The full version of the redesigned instrument can be found in Appendix 8.4.

Compared to previous meetings of the billing process review group, do you feel that:

Your ability to participate in the meeting (3, C1)

Improved *Stayed about the same* *Deteriorated*

The willingness of other members to answer questions when asked (12, T1)

Increased *Stayed about the same* *Decreased*

Compared to previous meetings of the billing process review group, how do you feel about using the technology? (24)

More Comfortable *As comfortable* *Less comfortable*

8.6 Week Four (February 23rd-March 1st)

8.6.1 Planning

As discussed in 8.5.5 above, a number of iterations in the development of an ideal billing process (IBP) had been performed during the previous week. The CIO hoped to go through this IBP with all team members and check that they approved of its contents. The CIO was concerned not only that there had been a reduction in participation on-line during the week, but that at least half of the comments generated were his own, i.e. answers to questions or clarifications. He knew that several members could not have asked more than a single question and so it was doubtful whether they had any inkling of what was going on. It was therefore necessary to use the Monday face-to-face meeting to ensure that they did know. This discussion would also usefully serve the function of reminding team members about the purpose of the review process, since in earlier meetings they had seemed unaware of its importance. The problem of poor motivation could then be addressed before refocusing the discussion on issues central to the whole review process.

The criticality of the IBP was that a version of it would shortly be presented to the SRG as an interim report and the CIO had to be able to confirm that representatives from all affected departments had discussed the material and agreed to this final version. This discussion, together with a document flow diagram of the new billing process were to be the major components of the week four meeting.

8.6.2 Execution

Once again, Sonny was unable to be present for this meeting and he did not appoint a replacement. It turned out that no one had read the fourth version of the IBP, so

the CIO first instructed everyone to read through it on line. He then went through the whole document point by point to stimulate discussion and ultimately obtain agreement. Some team members did have points to clarify, but after forty five minutes agreement was reached. Other than reading the IBP on line, this process was entirely verbal and no information was submitted to the GSS. During this process, the telephone rang with a call for Rachel who had a noisy ten-minute conversation, to the irritation of the other team members.

The CIO then started to go through the document flow chart that he had prepared in advance on the whiteboard so as to answer the question raised the previous week about document flow. He became entrapped in a fruitless debate with two of the local managers who objected to his suggestion to rename some administrative groups. After ten minutes of debate with neither side giving way, he conceded defeat.

At this point the researcher intervened and suggested that there was an element of cross-cultural confusion underlying the debate, hence its fruitlessness. The CIO did not request the researcher to explain this but glared at him, before proceeding through the document flow process at a speed reduced by the frequent questions from team members who raised many queries. This process continued for a further ninety minutes until it was finally complete. Although the GSS had been little used in this meeting, the researcher decided nonetheless that it would be appropriate to collect feedback from the team members since the vast majority of the questions (all except those that refer specifically to technology) are relevant to meetings irrespective of the use of GSS. This was the first occasion when the modified version of the questionnaire was used. The results collected are discussed in 8.6.3 below.

8.6.3 Feedback from the CIO and Reflections

The CIO apologised for the length of the meeting, but explained again how it was necessary to ensure that all team members agreed to the IBP if he was to present a solid report to the SRG which would meet later that week. He also requested that the researcher never contradict him in front of the team in future. It turned out that the researcher's intervention was misinterpreted by the CIO who thought that his natural prerogative to lead the meeting was being challenged and that the researcher was telling him how he should think. The CIO admitted that he did not suffer fools gladly,

nor would he readily tolerate fruitless and contradictory arguments. As a well-informed, if opinionated, person he insisted on his right to attempt to persuade others of the veracity of his views using vigorous debate and argument. Such debates were at times heated, but the researcher had to be careful not to confuse such 'debate' with 'intolerance' of others' equally valid views. Nevertheless, the CIO's behaviour might be interpreted as intolerant, arrogant or even chauvinistic by the other members of the team.

The CIO realised that not all members might appreciate his style, but so long as he was leading meetings, that was the style he would naturally employ. This raised cultural issues, since the interactive style of the CIO was very 'Western', with a strong focus on open debate and discussion. Some other team members who were not 'Western' might have preferred an alternative interactive style that was less conflicting and involved more of a *forged consensus* of ideas (cf. Watson et al.'s (1994) comments on the development of consensus in Singapore).

The GSS was scarcely used at all in this meeting, yet its use was essential in the iterative draft development during the previous week. The non-participation of some team members was clearly a problem, since it was very hard to gauge how much of the material had actually been generated by them and how familiar they were with the issues discussed. Furthermore, the underlying reasons contributing to this lack of participation were as yet unknown - when questioned, the team members only cited lack of time, though this in itself implied that the billing process review was allocated a low priority compared to other work that the team members had to undertake.

The questionnaire data using the modified scales presents an altogether different picture of the team members impressions of the meeting. The data now shows much more clearly (see Table 8.3) how some items have improved compared to the previous week, while others have stayed about the same and still others have deteriorated.

Thus, the ability of team members to participate in the meeting appears to have improved, as has their understanding of the comments from other members, whilst their ability and willingness to express themselves and put forward ideas has remained unchanged. Where the discussion quality construct is concerned, all four items are seen as having improved.

Table 8.3 Questions, Scales and Mean Scores from Stable Loan Meeting 4

Question	Scale	Var.	Week 4
Your ability to participate in the meeting	1 Improved; 2 Stayed about the same; 3 Deteriorated	C1	1.6
Your understanding of the comments from other members	1 Improved; 2 Stayed about the same; 3 Deteriorated	C2	1.8
Your ability to express yourself	1 Improved; 2 Stayed about the same; 3 Deteriorated	C3	2.0
Your willingness to put forward ideas	1 Increased; 2 Stayed about the same; 3 Decreased	C4	2.0
The meaningfulness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	D1	1.2
The appropriateness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	D2	1.4
The openness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	D3	1.4
The imaginativeness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	D4	1.4
To what extent was the meeting result oriented?	1 Strongly Result Oriented; 5 Weakly Result Oriented	E1	1.8
The time in the meeting was used	1 More efficiently; 2 As efficiently; 3 Less efficiently	E2	1.6
Ideas were discussed	1 More thoroughly; 2 As thoroughly; 3 Less thoroughly	E3	1.6
What percentage of time was devoted to serious discussion?	0% - 100%	E4	74
The extent to which some members tried to intimidate others	1 Increased; 2 Stayed about the same; 3 Decreased	S1	1.2
The extent to which some members tried to influence others	1 Increased; 2 Stayed about the same; 3 Decreased	S2	1.2
The extent to which you felt inhibited from participating	1 Increased; 2 Stayed about the same; 3 Decreased	S3	2.0
The pressure you experienced to conform to a viewpoint	1 Increased; 2 Stayed about the same; 3 Decreased	S4	1.8
The willingness of other members to answer questions	1 Increased; 2 Stayed about the same; 3 Decreased	T1	1.4
The extent to which members worked as a team	1 Increased; 2 Stayed about the same; 3 Decreased	T2	1.4
The extent to which members had access to information	1 Increased; 2 Stayed about the same; 3 Decreased	T3	1.4
The role you played in this meeting was	1 More useful; 2 About the same; 3 Less useful	CR1	1.6
How would you rate your overall satisfaction?	1 Strongly satisfied; 5 Strongly dissatisfied	CR2	2.0
To what extent was consensus achieved?	1 Strongly achieved; 5 Weakly achieved	CR3	3.0
How do you feel about using the technology?	1 More comfortable; 2 As comfortable; 3 Less comfortable	Tech1	1.8
Do you feel that the technology facilitated your participation?	1 Facilitated more; 2 No difference; 3 Facilitated less	Tech2	2.2

Similarly, the time in the meeting was perceived as being used slightly more efficiently and thoroughly, while the meeting itself was believed to be fairly strongly result oriented. A much higher percentage of time was perceived as spent on serious discussion when compared to the earlier meetings. On the negative side, the intimidation and influence of team members by others was perceived to increase. This did not lead to a change in their perception of being inhibited from participating, though there was a slight increase in pressure to conform. All three of the teamwork items indicate improvements. The team members felt that the role they played in the meeting was more useful, while their satisfaction was on the stronger side, though consensus was still only moderately achieved.

It is useful to interpret this data in the light of the fact that the GSS was scarcely used in this meeting at all. While the meeting has not involved any experimental control group, and hence we cannot make comparisons with team members who did use a GSS, it is apparent that the low level of intimidation reported in weeks one and two, where GSS was used, has changed with a marked increase in intimidation in week four. This corresponds closely with the progress of this meeting, which was led and controlled by the CIO.

This increased intimidation is associated with an increase in influence, and a slight increase in conformance pressure, but significantly these two factors do not seem to have increased the extent to which team members felt inhibited from participating. This implies that the two factors may be perceived, yet also managed, by the team members. There is at times, nonetheless, still a certain separation of perception - "Yes, I am able and willing to participate" - from action (it doesn't happen).

8.6.4 Week Four Activities

No 'homework' was set for this week. However on the Friday (February 28th), the researcher had a detailed discussion with the CIO on the progress that was being made. The CIO hoped to use the week five face-to-face meeting to go over the final version of the IBP document and once again iron out any problems. After that, he wished to revote on the seventeen items that had led to the original development of the document in order to see how much consensus existed after the previous week's discussions. It was intended that this anonymous vote should establish to what extent the verbal (public) consensus he had succeeded in winning was also reflected

in a private consensus. If it turned out that there was still disagreement, it would then be necessary to thrash it out.

A second issue that he wished to raise concerned the implementation and physical design of the new billing process. He observed the difficulties involved in communicating these system concepts to the other team members - they were not familiar with the language of systems design and BPR, hence much of it was incomprehensible jargon to them. He proposed that an overview of the implementation issues be considered first, with more detailed aspects later on. The new billing process document identified four stages that would have to be implemented. These were to be discussed in turn.

A third issue raised in this discussion concerned the need to develop a methodology for using software in process reviews - this activity was an extension of the second project objective (see 8.1). The researcher suggested that he contact each of the team members individually so as to collect feedback and perceptions about the process of the review thus far. This would be a mid-process informal and semi-structured interview that would establish what they had liked or disliked about the process so far, what they would like to see more of, how they viewed the role of the researcher, and so on. Much of the learning and discussing that had taken place up to this time had been between the researcher and the CIO, with the other team members involved to a very limited extent. The CIO suggested that the team members were more willing to contribute and criticise than before, yet were not really proactive in this respect. This was partly a result of deficient knowledge, and partly culture.

8.6.5 Interviews with Team Members

The interviews conducted were essentially unstructured and informal, some face-to-face, some on the telephone. During these interviews, the team members were asked a number of questions, though not in any particular order, viz.:

How do you feel about the technology itself?

How do you feel about the meeting processes?

How do you feel about the management of the technology?

How do you feel about the management of the meeting processes?

How do you feel about the involvement of the researcher in the process ?

How do you feel about your own role in the process?

Are the important issues being addressed?

Is the scope of the review wide or deep enough?

In reality, these questions linked into one another so it was not necessary to ask the questions one by one. Some the team members volunteered extra information that related to these questions and others that they felt were important. In the paragraphs below, the views are amalgamated for the sake of conciseness, and organised by topic, not team member.

8.6.5.1 Technology

The general perception was that the software was user-friendly and helpful. However, it would not be possible for the users to have a meeting without both technical and process support. Conceivably one person could perform both activities, but it would not be appropriate for the project leader (in this case the CIO) to run the software as this would increase his potential dominance of the team. A significant advantage of the software is that it can be used at any time/place and it does not hurry you to say something - you can think about what you want to say, then make your contributions in your own time. As it enables many people to get involved, it is likely to be a useful component of future process reviews. All team members were also concerned about the stability of the software - it is frustrating for them when they cannot use it due to system failures.

8.6.5.2 Process

There were few comments about the process of the review. More attention was paid to the anonymity of contributions. All team members indicated that they could see the benefits of anonymity, i.e. free and unbiased idea generation, yet also indicated that it did not influence their willingness to participate and in fact expressed the opinion that identified ideas might make the discussions more meaningful. Several members said that they could identify the CIO's comments - his style of writing and argument was clear to them. The male team members felt that no matter what encouragement was given, the female members would be unwilling to contribute significantly. One suggested that they would typically only contribute an idea if they knew it to be 100% true, and given the nature of the task this would seldom be the case.

A second aspect of the process relates to culture. A male expatriate member suggested that the technology should have greater value in a culture like Hong Kong where intimidation is a more powerful force on people's contributions than, for example, in Europe. This point was supported by two of the local members, who noted that in mixed culture or mixed first language (i.e. English and Cantonese) meetings, it was usually the Westerners who tended to dominate. It was also explained that in Hong Kong, decisions tended to be made by committees rather than individuals. In order to help the more reticent members of a committee bring out their ideas, the GSS could play a powerful role.

8.6.5.3 Scope of the Review

Several of the team members had comments to make about the scope of the review process. One felt that the scope was too limited in that it was appropriate for the end-users, but inappropriate for clients and customers. Although the clients had deliberately been omitted from the team, it was asserted that their views should nonetheless be taken into account in the review so as to produce a final document that would cater to their needs. It was also suggested that the current review was not radical enough in the changes it was making. One team member wanted to see an entirely automatic system immediately and was convinced that it was possible as he had seen a similar system in an accounting firm in the UK. The CIO commented later, however, that to rush into such a fully automated system without having first re-engineered the underlying processes would be at best fool-hardy. Other members were concerned that the scope was too ideal in what it intended to include in the final billing process, and that the CIO was pushing too hard for his own version of what the scope should cover and hence the consensus the team should try to reach.

8.6.5.4 Role of the CIO

The general perception of the CIO was that he was a good project leader, but he was too authoritative and autocratic at times. No one claimed to be inhibited by the CIO's style of interaction (confirming data we collected previously), yet they did think that if he was more neutral or had less vested interest in the outcomes, a decision more acceptable to all might be reached. A neutral convenor, moreover, might be able to encourage the female managers to contribute more than they had done so far. It was suggested that the researcher might be able to help in this respect,

intervening occasionally. The technical ability of the CIO was also questioned, the thought being expressed that while he was competent, he was not at the cutting edge of available and appropriate technology. While the CIO was not thought to be afraid of change, he might be afraid of losing power or control. Several team members expressed their awareness of the CIO's frustration with the lack of participation from team members, but suggested that the CIO was not culturally familiar with the people he was working with, or alternatively, did not respect their cultural differences - this in turn aggravated the frustration.

8.6.5.5 Role of the Researcher

The views on the role of the researcher were split between those who believed that he should primarily act as a technician and those who felt that he should be involved more in the review process. Two of the latter held that the researcher's neutrality and lack of vested interest should enable him to steer a middle course between the various opposing sides, though it was conceded that the agreement of the CIO would be necessary if this was to work properly. Two of the former felt that as the researcher did not understand the mechanics of the billing process, it was inappropriate for him to get involved in content issues.

8.6.5.6 Attitudes of the Team Members during the Interview

The male team members generally had a lot to say for themselves, not simply answering questions but following through to provide extra information about issues that they believed were related. To the question "Is there anything else you think is relevant?", all three had several more suggestions to make. Where the female team members were concerned, however, quite a different story was painted. While they were willing to answer questions, they often did so tersely with a minimum of detail. On some occasions, the researcher had to lead them towards answers in order to get them to respond and they invariably agreed with those suggested answers. Belinda was not interviewed at all since she scarcely participated in the meetings. The researcher did talk to her informally after a meeting on one occasion where she said that she understood what was being discussed, but had no feedback of her own to give.

8.6.6 Lessons Learned

In previous weeks, difficulties were experienced with the motivational levels of the participants and these did not diminish. While a lot of information may be present on the GSS, few of the team members appeared to read it and hence they had to spend time doing so during the face-to-face meetings. This rendered the on-line, distributed meeting that was supposed to take place during the week less than completely useful. The role of anonymity in the discussions was unusual, since while team members expressed the opinion that it might have theoretical benefits, they personally did not need the protection that it offered. The perceived advantage that the GSS offered in a distributed mode was the lack of pressure on team members to participate at a particular time. Furthermore, it enabled them to re-examine what they had written before submitting it. The CIO for his part was not willing to risk the possibility that the level of participation would reduce still further if anonymity was disabled, and therefore decided not to do so. The role of the researcher was raised during these interviews and some team members suggested that the researcher take on a more prominent role.

8.7 Week Five (March 2nd-8th)

8.7.1 Planning

The planning for the week five meeting was conducted at the end of the previous week - going over the final version of the IBP, re-voting on the seventeen items used to create the IBP, and then considering implementation issues. The CIO saw no need to make any changes to those plans.

8.7.2 Execution

Vance was not present for this meeting, but he did appoint a colleague to stand in for him. This meeting was plagued by software problems. The GSS was very unstable and crashed frequently with database errors that required constant repairing. Since the GSS was largely unavailable, the CIO photocopied the final version of the IBP for all members and conducted the meeting with reference to this hard copy version. David had a number of queries and clarifications to make. It transpired that he had run into trouble with his contact partner about the content of the document and now

wanted to back-track and remove some items from it. Seventy-five minutes into the meeting, the software was stabilised sufficiently for all six team members present to participate in a vote on the seventeen items that related to the new billing process. Agreement (scores of 3.67 or above, where 5 = strongly agree) was achieved for thirteen of the items. For the other four (with scores ranging from 2.50 (weakly disagree) to 3.30 (weakly agree)), the CIO verbally discussed the issues involved with team members in an attempt to create consensus. However, he was unsuccessful in this. The vote results show that there was a high standard deviation (1.52-1.86) for these four items as the positions of the team members were rather polarised.

Moving onwards, the CIO suggested that the team members think about two forms of solution - a short term view that would incorporate what was immediately achievable over the first six months and a longer term view that would incorporate a more detailed solution over a one to two year period. Since time was short the CIO suggested that he start to create solution components in the Categoriser for the short-term plan during the week and he requested the team members to comment on these plans. The questionnaire was distributed at the end of this meeting and collected the following week. Although the meeting had suffered considerably from software failures, this was not seen as a reason not to collect data - on the contrary, the opinions of the team members were valuable for all situations.

8.7.3 Reflections

The major issue here related to the software stability. While the GSS had been upgraded again from 1.1d to 1.1dSP2 (a debugged version) one week before, it was still not stable. The continuous problems had several sources. Firstly, as we have commented before, the Training Room environment was unstable and inexplicable errors occurred. Furthermore, the Windows 95 operating system had still not been standardised across the organisation. This meant that some PCs were running Windows 3.1 while others were running Windows 95. Furthermore, the number of PCs in the Training Room was insufficient for the needs of the review team, hence additional PCs had to be brought in at short notice, networked and set up to run the GSS.

Table 8.4 Questions, Scales and Mean Scores from Stable Loan Meeting 5

Question	Scale	Var.	Week 5
Your ability to participate in the meeting	1 Improved; 2 Stayed about the same; 3 Deteriorated	C1	2.0
Your understanding of the comments from other members	1 Improved; 2 Stayed about the same; 3 Deteriorated	C2	1.4
Your ability to express yourself	1 Improved; 2 Stayed about the same; 3 Deteriorated	C3	2.0
Your willingness to put forward ideas	1 Increased; 2 Stayed about the same; 3 Decreased	C4	2.0
The meaningfulness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	D1	1.0
The appropriateness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	D2	1.4
The openness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	D3	1.7
The imaginativeness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	D4	1.9
To what extent was the meeting result oriented?	1 Strongly Result Oriented; 5 Weakly Result Oriented	E1	2.3
The time in the meeting was used	1 More efficiently; 2 As efficiently; 3 Less efficiently	E2	1.4
Ideas were discussed	1 More thoroughly; 2 As thoroughly; 3 Less thoroughly	E3	1.3
What percentage of time was devoted to serious discussion?	0% - 100%	E4	75
The extent to which some members tried to intimidate others	1 Increased; 2 Stayed about the same; 3 Decreased	S1	2.4
The extent to which some members tried to influence others	1 Increased; 2 Stayed about the same; 3 Decreased	S2	2.0
The extent to which you felt inhibited from participating	1 Increased; 2 Stayed about the same; 3 Decreased	S3	1.9
The pressure you experienced to conform to a viewpoint	1 Increased; 2 Stayed about the same; 3 Decreased	S4	2.0
The willingness of other members to answer questions	1 Increased; 2 Stayed about the same; 3 Decreased	T1	1.9
The extent to which members worked as a team	1 Increased; 2 Stayed about the same; 3 Decreased	T2	1.7
The extent to which members had access to information	1 Increased; 2 Stayed about the same; 3 Decreased	T3	1.4
The role you played in this meeting was	1 More useful; 2 About the same; 3 Less useful	CR1	1.6
How would you rate your overall satisfaction?	1 Strongly satisfied; 5 Strongly dissatisfied	CR2	2.4
To what extent was consensus achieved?	1 Strongly achieved; 5 Weakly achieved	CR3	2.0
How do you feel about using the technology?	1 More comfortable; 2 As comfortable; 3 Less comfortable	Tech1	2.3
Do you feel that the technology facilitated your participation?	1 Facilitated more; 2 No difference; 3 Facilitated less	Tech2	2.0

Although such set-up procedures should have been carried out well in advance of the meeting, all too often this did not happen and on some occasions the Training Room was booked for the session immediately before the review team's meeting. This made it very difficult to start meetings on time and to get all the software set up and functioning correctly.

The questionnaire data for this meeting (see Table 8.4 above) is somewhat remarkable for the fact that the failure of the software to function correctly does not appear to have substantially impaired the experience of the team members. Thus, the communication variables show either improvement or at least no deterioration, while the quality of discussion variables all show improvements - markedly so for the 'meaningfulness' of the discussions. The efficiency variables also show improvements, with 75% of the meeting time thought to be spent on serious discussion, and similar improvements are shown for the teamwork variables. Where status effects are concerned, the negative feedback received in week four is now partly countered by indications that the intimidation decreased, though the influence and conformance pressure remain about the same, as does the extent to which team members felt inhibited from participating. Not surprisingly, the team members felt less comfortable with the technology but did not feel that the degree to which it facilitated their interaction changed. The role that the team members felt that they played in the meeting was slightly more useful, while satisfaction was slight and the amount of consensus achieved was higher than in previous meetings.

All these positive results were perceived despite the failure of the technology, or perhaps indirectly because of it since the lack of the technology for much of the meeting necessitated substantial face-to-face discussion. This suggested that the technology is not perceived by the team members as inherently useful - equally 'good' meetings can result when the technology is not available. Higher consensus may be due to the fact that the meeting was very target focused - getting agreement on the final version of the IBP and voting on the new billing process items - consensus was achieved for most of these. There is no direct implication that the GSS is useless, but that its use must fit the task - as for example in the vote.

8.8 Week Six (March 16th-22nd)

8.8.1 Monday Meeting Activities and Reflections

The week six meeting was delayed a week as the CIO was inundated with work and was unable to commit himself to a meeting of the billing process review team. The CIO planned to go through the new billing process once again with team members since he had been required to make further revisions after the SRG meeting. This meeting was spent entirely in verbal communication with no substantive use of the GSS. As in the previous week, the team members had a large number of clarifications to make. This reflected two facts: the CIO had pushed his own agenda through the anonymity of the system and the team members realised that what they had collectively agreed to was about to become policy; the team members seldom read or questioned the information on-line and so always brought their queries to face-to-face meetings. David and Vance browsed through some on-line information which the CIO had recently input, but the GSS was not used for any other purpose. The CIO later apologised for not using the GSS and for wasting the time of the researcher who had come for no apparent purpose. The questionnaire was not distributed at the end of this meeting.

8.8.2 Week Six Discussions and Activities

On the Thursday of week six (March 20th), the researcher telephoned the CIO and had a detailed discussion on the progress of the project. He also raised the matter of the role of the researcher in response to the views of some of the team members (see 8.6.5.5), who had suggested that the researcher should actively intervene in the processes, as well as in consideration of the use made of his time. The CIO agreed that the researcher's time was not being used efficiently or effectively, that the researcher should be able to provide much more input, and therefore warmly supported the suggestion that the researcher could intervene with an alternative perspective. The researcher suggested that in order to tap the team members' vested interests to a greater extent, they should be asked to consider the barriers to the adoption of the new billing process in their own departments. It was thought that an understanding of these barriers would facilitate the implementation process. An alternative, and more positive, perspective to this would be to examine the measures

that could be employed to ease the acceptance of the new billing process in the various departments.

The meeting for the following week was delayed to Wednesday, March 26th with an hour-long planning session to precede it. This meeting was later cancelled as the Training Room was double booked and as the team members failed to give any comments in the GSS on the CIO's ideas concerning implementation. The meeting was then re-scheduled for the following Wednesday, April 2nd. At the same time, the researcher agreed to write an introduction to the next meeting in the form of a proposal to elicit the team members' feelings about the methodology used to tackle the billing process, including the possible use of the GSS. The intention was that the methodology could be to some extent formalised and so used for future process reviews in Stable Loan, of which it was expected there would be many.

8.9 Week Seven (March 30th-April 5th)

8.9.1 Planning

After the telephone conversation described in 8.8.2 above, the researcher drafted a proposal (see Appendix 8.5), subsequently approved by the CIO, for what came to be known as the methodology for process reviews. The researcher contacted all the team members and explained that in future he expected to take a more central role in the activities. He also pointed out that the team had the function of reviewing not only the billing process, but also, and equally importantly, the methodology to be used by Stable Loan for future reviews. The researcher attempted to convey the idea that the importance of the methodology lay in the learning that could be gained through it, since this could guide later work.

As we have commented above on numerous occasions, it was often hard to persuade the team members to make contributions to the discussion - on-line or off-line. On this occasion, the team members were explicitly encouraged to participate and criticise, so as to stimulate discussion. An attempt was made to ensure that the team members perceived the value of the review process to the organisation, while at the same time they gleaned rich experiences of how a review could be conducted through their membership of the review team. In order to make the use of the GSS

relevant to the team members, this task was designed to be rich in questions that required substantial idea generation. These questions included:

- What are the key components and activities of a review?
- Which tools are most suitable to support these activities?
- Should discussions take place in a face-to-face or in a distributed setting?
- What are the critical success factors for each stage of the process?
- Which of these stages need to take place in sequence and which in parallel?
- Which people should be involved in the review process:
 - those who are involved,
 - those who will be affected,
 - outside consultants,
 - those without vested or personal interests?
- Finally, what is the best way to implement a new process? and,
- What barriers to that implementation might exist and how could these be overcome?

This document was emailed to all team members in advance of the meeting and was also available on the GSS throughout the remainder of the project. The team members were encouraged to read it before coming to the meeting, and also to think about ideas to contribute.

8.9.2 Execution

The researcher started the meeting (where all team members were present) with an introduction that reminded them about their purpose and the need for a learning context in which to consider the review procedures to the benefit of all stakeholders including team members, departments and the firm. The CIO commented that he wished as far as possible to stay out of the running of this meeting, which was why the researcher was involved.

The team members were then invited to brainstorm the key elements of a typical review using the Categoriser. When twenty ideas had been produced, the 'show categories' feature was turned on in order to permit organisation of the data. The process was led by the researcher, though with reference to the CIO. The CIO was at first unwilling to be too involved, but his reticence soon evaporated and his

usual enthusiasm emerged. A number of categories were suggested and approved, but they were also modified as the process progressed and subdivided in one case when it was thought that a category was too broad. The team members were then asked in a round-robin fashion (designed to avoid domination by a few people) to allocate the 20-odd ideas to categories as thought appropriate. A few ideas were deleted at this stage as inappropriate for inclusion, but the vast majority were allocated to one of the six categories, though one idea was allocated to two categories. In addition four extra categories were added, even though no ideas yet existed that would be appropriate to include there, since they appeared to be essential parts of any review, albeit not yet considered. The ten categories were: Scope; Team Composition and Roles; Understanding the Existing Process; Existing Problems; Identify Solutions; Evaluate Alternative Solutions; Proposed Solution; Implementation; Post-Implementation Review; Continuous Process Improvement.

At this point, the team members were requested to continue going through the categories, entering ideas and comments. They did so for thirty minutes and brought the total number of ideas to thirty three. Particular focus was paid to the Team Membership issue, which attracted twelve ideas. After this idea generation, the meeting closed as the CIO needed to talk to the team about other matters. However, it was agreed by the team members that they would continue to generate more ideas during the week leading to the next meeting, especially on those four topics that had not yet received any items or comments. The questionnaire was handed out at the end of this meeting and is discussed below in 8.9.4.

8.9.3 Week Seven Activities

Two days after the meeting described in 8.9.2, the researcher visited Stable Loan to follow up on progress made. On this occasion, the GSS crashed and one activity required repairing. It was apparent that the Team Membership discussion was becoming complex, so the items were copied to a new Categoriser activity called Team Membership and split into three categories: team membership, meeting rules/issues, and characteristics of team members. The remaining items from the Wednesday meeting were copied to a Group Outliner session in response to a request from the CIO who wanted to be able to see all relevant information on a screen at one time (the Group Outliner permits this if judicious use is made of collapse and expand controls). The data was organised so that for each idea, there

were two sub-ideas - issues and critical success factors. The team members were then emailed details of the reorganisation of the data and its new location in the Group Outliner, and requested to reconsider the ideas and comments generated two days previously during the Wednesday meeting and to add any more if necessary. They were also requested to consider what would be the critical success factors for each of the topics. These could be entered as comments. They were reminded that the last four items that had been added had not yet received any comments and thus it would be useful to think about those. An on-line set of instructions on what to do was provided and the team members were requested to use the Group Outliner (or Categoriser for Team Membership issues) for all their input.

8.9.4 Reflections

The rationale behind the change of procedure in week seven was the perceived need to involve the team members to a greater extent in the process and to inspire them to participate. For this reason, a learning context was suggested, i.e. where they would learn but also help the firm to learn by sharing their knowledge. The researcher took a more personal and direct interest in the running of the meeting, attempting to encourage participation while reinforcing the notion that the team members were valued contributors to the process. In this respect, the researcher moved away from the solely *technical* facilitation he had undertaken previously and started to become involved in process *and* content facilitation - as agreed upon with the CIO in week six. As a result of this development of role, he consciously attempted to reduce the informational and normative influence wielded by the CIO over the other team members.

The result of this new approach was much improved participation from the team members, as well as some proactive idea generation that had not been seen since the week one meeting where the initial ideas about the billing process review had been suggested. Many relevant ideas were generated about the various methodological issues. No one person could dominate the process as, for example, the researcher invited each team member in turn to help categorise the ideas. Furthermore, by exerting direct control over the meeting, the researcher was able to adopt a more personable style of dialogue with the team members. This contrasted with the CIO who seldom employed a friendly, sympathetic or collegial manner when encouraging the team members to participate. Very often, he simply asked them to

ensure that they contributed to the online GSS process, added comments or read the materials that he distributed through the system. There was little effort to make them feel respected and valued members of the process. The researcher's lack of vested interest in the outcome of the discussions also greatly eased this process.

On balance, this new process worked well, though the intervention of the researcher to achieve it was evident. This confirmed the importance of an independent process *and* content researcher who has no vested interest in a solution nor can be subjected to conformance pressure.

Analysis of the data collected after the week seven meeting (see Table 8.5 below) shows that while the team member perceptions of the communication variables remain about the same, the quality of discussion continued to improve. The result orientation of the meeting was seen as neutral (initial discussion and idea generation had not been result focused by the researcher in this meeting), while time was seen as being efficiently used and issues discussed thoroughly. The percentage of time perceived as spent on serious discussion increased to 81% - a very high figure not seen in any previous meetings. The extent to which team members felt intimidated and influenced both decreased (the CIO was less involved in a managerial role in this meeting), while the level of inhibition experienced stayed about the same. Only the pressure to conform increased slightly. This may be a product of structured brainstorming, with only truly 'no holds barred' brainstorming minimising perceived pressure to conform.

The teamwork variables all exhibit positive scores, except that the access to information was not seen as improving. The technology was seen in a more comfortable light and also as facilitating the discussions more. This was not surprising given that the GSS worked without a hitch in this meeting. Overall, the team members felt that they played a marginally less useful role, while their satisfaction was slight and the degree of consensus achieved was also slight. These impressions may be due to their weaker sense of result orientation, i.e. not knowing where the discussion was heading.

From this data, and from our own observations, it would seem that if the GSS can be used in a very deliberate manner for a task which it supports well - brainstorming and voting are two examples - then its use can enable significant gains to be achieved. We observe that the scores for the criterion variables are not very positive. We believe that our earlier suspicions regarding the accurate

measurement of these constructs (particularly consensus and satisfaction) have been realised here, i.e. that much more careful measurement is necessary with multiple items contributing towards relevant constructs. We discuss this further in 8.13.

8.10 Week Eight (April 6th-12th)

8.10.1 Discussions and Reflections

No meetings were held in week eight, but the researcher had a detailed face-to-face discussion with the CIO about the progress of the project. To the researcher's surprise, the CIO expressed considerable frustration what he saw as the non-responsiveness of the other team members, despite the obvious achievements of the week seven meeting. The CIO also commented that in his view most of the comments generated by others were just reactions to his own (at times provocative) statements. He freely admitted that he submitted outrageous ideas so as to see what he could get away with. This admission was worrying since the CIO evidently had an all too cynical view of the value of the meetings and was prepared to manipulate the technology so as to achieve his own goals, while still maintaining that the decisions reached would come from the group as a whole.

The researcher decided that he would make direct contact with the other team members, note the continued lack of participation, and try to elicit reasons for this. A key issue for the next meeting could then be participation, i.e. what necessary motivation is required to get people to participate, itself an obviously essential component of the review process.

Table 8.5 Questions, Scales and Mean Scores from Stable Loan Meeting 7

Question	Scale	Var.	Week 7
Your ability to participate in the meeting	1 Improved; 2 Stayed about the same; 3 Deteriorated	C1	2.2
Your understanding of the comments from other members	1 Improved; 2 Stayed about the same; 3 Deteriorated	C2	2.0
Your ability to express yourself	1 Improved; 2 Stayed about the same; 3 Deteriorated	C3	2.0
Your willingness to put forward ideas	1 Increased; 2 Stayed about the same; 3 Decreased	C4	2.0
The meaningfulness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	D1	1.2
The appropriateness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	D2	1.4
The openness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	D3	1.4
The imaginativeness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	D4	1.6
To what extent was the meeting result oriented?	1 Strongly Result Oriented; 5 Weakly Result Oriented	E1	2.8
The time in the meeting was used	1 More efficiently; 2 As efficiently; 3 Less efficiently	E2	2.0
Ideas were discussed	1 More thoroughly; 2 As thoroughly; 3 Less thoroughly	E3	1.8
What percentage of time was devoted to serious discussion?	0% - 100%	E4	81
The extent to which some members tried to intimidate others	1 Increased; 2 Stayed about the same; 3 Decreased	S1	2.4
The extent to which some members tried to influence others	1 Increased; 2 Stayed about the same; 3 Decreased	S2	2.4
The extent to which you felt inhibited from participating	1 Increased; 2 Stayed about the same; 3 Decreased	S3	2.0
The pressure you experienced to conform to a viewpoint	1 Increased; 2 Stayed about the same; 3 Decreased	S4	1.8
The willingness of other members to answer questions	1 Increased; 2 Stayed about the same; 3 Decreased	T1	1.6
The extent to which members worked as a team	1 Increased; 2 Stayed about the same; 3 Decreased	T2	1.6
The extent to which members had access to information	1 Increased; 2 Stayed about the same; 3 Decreased	T3	2.0
The role you played in this meeting was	1 More useful; 2 About the same; 3 Less useful	CR1	2.2
How would you rate your overall satisfaction?	1 Strongly satisfied; 5 Strongly dissatisfied	CR2	2.4
To what extent was consensus achieved?	1 Strongly achieved; 5 Weakly achieved	CR3	2.6
How do you feel about using the technology?	1 More comfortable; 2 As comfortable; 3 Less comfortable	Tech1	1.8
Do you feel that the technology facilitated your participation?	1 Facilitated more; 2 No difference; 3 Facilitated less	Tech2	1.8

The reason for contacting the team members directly was that the formality ensured that they would give some kind of answer, whereas email they could ignore. The CIO made the wry suggestion that some members might have an autodelete for his email, since they seldom replied to his email requests and suggestions. He speculated that emails coming from the researcher might not meet with such antipathy. The CIO also expressed annoyance with the contradictions inherent in the behaviour of the other team members. Specifically, he cited the fact that they said that the GSS software was useful and valuable, yet failed to use it; equally they agreed that the review process was important and acknowledged that their own participation was necessary, yet still failed to participate. He knew that they were all busy with other work and so would cite time as the key problem. The only solution to such a response, the researcher suggested, would be to ask them how they could give this project a higher priority.

8.11 Week Nine (April 13th-19th)

8.11.1 Introduction

After the discussions of the previous week, the researcher contacted the team members. As the CIO expected, time did turn out to be the major limiting factor for them: end of year deadlines were looming and although the team members expressed willingness to continue, they wanted to finish their end of year activities first. Some team members sensed that the team had contributed all that it could for the billing process review, indeed that the review had been in progress for far too long already. Where the methodology for process reviews was concerned, they felt that they still had some input to make. For reasons of confidentiality, the researcher decided in advance not to query the team members regarding the CIO's accusations of double standards. There was no doubt that the team members were busy with other work to which they allocated a higher priority. Since none of the team members (except Belinda) were subordinate to the CIO, he could not exert any positional control over how they prioritised their work. Indeed, as we have observed, he could not even 'require' them to work at all, counting rather on their own internal motivation to do so.

8.11.2 Execution

As on previous occasions, earlier users of the Training Room had rearranged the layout and there was a shortage of three PCs. This caused a fifteen minute delay in proceedings. The researcher reviewed what had been accomplished in the first methodology for process reviews meeting some two weeks previously, and what had happened since. The CIO observed that little participation had occurred in the last twelve days and expressed his understanding that they were all very busy with end-of-year issues. He asked when their deadlines fell, and these were established as lying in the next two weeks. On this basis, it was resolved that no meetings would be scheduled before May 1st.

However, the team members were asked to keep in contact with the topic, even if only for two minutes per day. Sonny was particularly insistent that it was possible to find time each day, but three of the others indicated that they did not want to be distracted by the project. In order to keep the team in touch with the way in which the information was currently organised, the researcher explained how data had been moved to the Group Outliner tool and quickly ran through the use of the tool for the team members. All team members asked questions and had initial problems, but these were soon solved. All were happy with the operation of this tool, appreciating its capability to support multiple levels of work. They spent thirty minutes using this tool, bringing the total number of ideas to forty five with thirty four comments. On the suggestion of the CIO, the team tried to work out some protocols for the use of the tool. The key principle was that comments should not be used except where necessary. Rather, steps and sub-steps and sub-sub-steps should be created, so that all information could be seen on a single screen. The attention of the team members was also drawn to the last four steps that had only received four comments so far. The meeting finished early at 11:45 as team members were too busy to stay long and no future meeting date was set. The researcher requested the team members to complete the questionnaire, but they were very unwilling to do so and hurried away to their own work.

8.12 Week Ten (May 26th-June 1st)

8.12.1 Planning

The week ten meeting of the project was planned for several dates, each of which was abandoned when the CIO found that he was too busy to set aside sufficient time for preparation. Finally, the researcher pushed for a meeting on Wednesday 28th May, six weeks after the week nine meeting. The CIO thanked the researcher for pushing him, acknowledging that the lack of progress was unfortunate and promised to get the team to attend. He also accepted the researcher's evaluation that the team members had accomplished as much as they could be expected to do for the billing process review in so far as the use of the GSS was concerned. It was planned that the CIO should spend a short time summarising the current state of the billing process review. The researcher would then run the rest of the meeting and try to ensure that the methodology for process reviews would be completed. The CIO was requested to ensure that the Training Room was properly equipped in advance of the meeting so that it could start on time.

8.12.2 Execution

As requested, the Training Room was operational when the researcher arrived and the GSS was working smoothly. Unfortunately the meeting was 17 minutes late starting as many members arrived late, Rachel calling in at 11:10 to request permission not to come at all. The request was curtly refused by the CIO who was clearly agitated by her attitude. Sonny had a meeting with a senior partner and was unable to attend - as on previous occasions, he was not substituted. Vance had left the firm and was replaced by Francis (see 8.1). The CIO started off by talking about the billing process as planned and requested feedback on how the new billing process should be implemented. No feedback was forthcoming from members, so the CIO continued. Each question that he asked was met with silence, so the researcher decided to intervene and change the mode of discussion, asking members whether they felt that they had a useful role to play in the discussion and whether they would like to be involved in future process reviews. When no one answered the question, the researcher picked on individual members - and received the answer that they did value being involved, had the motivation to participate, and

would like to be involved in future. The researcher then moved this discussion to the problems that had been encountered in the team so far, i.e. with people coming late to meetings, people not participating during the online meetings, people not seeming to have the necessary commitment as team members. In this manner, the researcher attempted to broach the issues raised earlier by the CIO (see 8.10.1).

Francis then pointed out the various difficulties they all had with respect to these issues and suggested that if a more participative approach was to work, then they would need tight deadlines: since all their other work was deadlined, it tended to take priority over work that was not. It was true that the billing process review work had not been deadlined by the CIO, i.e. with dates and times specified to accomplish specific tasks. The team members acknowledged that the pressure to participate during face-to-face meetings was much higher and they were therefore forced to contribute at those times. They still felt that the distributed on-line meeting was a valuable tool, but that enforcement of deadlines would help it to work. In addition, it would be preferable if meetings could be held earlier in the morning, at 09:00, since then earlier activities would not interfere.

After this long verbal discussion, all team members present and the researcher perceived that a considerable degree of consensus had been achieved on key process issues, even if neither the review process itself, nor the methodology, had moved forwards. However, in order to facilitate these two activities, the CIO promised to draft an implementation plan for the former, which he would ask other team members to review and comment on. For the methodology task, the researcher reminded members which activities had taken place during the previous meeting and suggested a number of tasks that needed completing, specifically: considering in greater depth the last four of nine steps in the methodology; writing up all the steps that would take place in a process review; and also writing up the key team-related issues in reviews. These tasks should not be undertaken by the CIO alone but by all the team members, since they had all been involved in the discussions. To clarify the point about team-related issues, the researcher gave a few examples, including: motivation, sense of involvement, willingness to join the team, and so on.

Alexandra at this juncture revealed that she had not been a volunteer to join the existing billing process review team, as the CIO had originally intended, but had been required to do so by her boss. She also described a number of problems connected with the team membership issues. Since she was concerned about the

team membership issues, and had directly felt affected by them through her involuntary membership of the team, the researcher suggested that she might like to consider taking responsibility for the writing up of the team membership issues. The intention was not to force her to undertake the action against her will, but to encourage her to get involved with a task it seemed she had an interest in. However, her enthusiasm for talking about the subject immediately waned and she questioned "Do I have a choice?".

The answer to this question was clearly "Yes, you do have a choice" but the very act of asking the question epitomised the team members' agreement of the need to participate, but unwillingness to do so. A long discussion about participation ensued, wherein it was pointed out that any documents produced would be the joint responsibility of all team members, even though one of them would have to start writing each document. Furthermore, each team member should be involved in the writing up of some part of the outputs of the methodology review. Finally, it was agreed that Alexandra and Rachel would write up the team membership issues into a draft paper that would be circulated to the team by June 13th, while David and Francis would do the same for the steps in the billing process review by the same date. In addition, all members would spend the next two days entering more ideas and comments about the last four items in the billing process review that had received little attention so far. The CIO, meanwhile, would concentrate on the billing process review document itself. The next meeting was set for June 17th at 09:00.

8.12.3 Postscript: Week Eleven - Follow up to Week Ten Homework

In week eleven, a brief meeting (without the GSS) was held in the Board Room of Stable Loan (the Training Room was being demolished as part of a renovation plan). The homework set at the end of the week ten meeting, i.e. requiring the two pairs of team members to produce materials relating to the team membership issues (see Appendix 8.6), the steps of a process review (see Appendix 8.7), and the CIO's paper on the final billing process review document (see Appendix 8.8), was presented to the whole team. David and Francis presented their work first as Francis had to leave early to attend another meeting. The amount of work completed by the two pairs of team members was very sketchy and inadequate. The CIO, who had received copies of the reports in advance, and the researcher discussed this pathetic response before the meeting and had agreed that substantial further detail would

have to be elicited from the team members. The team members, for their part, had evidently not given serious thought to the topics. This was very disappointing, but, in view of previous contributions, not altogether surprising. However, the CIO had expected more from Francis who had shown himself to be an able communicator in previous work he had done. The CIO, the researcher and Sonny dominated the discussion in this meeting and made many suggestions about how these two documents could be improved. Sonny, who had been absent in week ten, was attached to the review process steps sub-group with David and Francis, since he had many concerns about these steps.

A key issue that emerged from the discussion that was entirely new to the researcher and consequently changed his understanding of the entire case and its many problems concerned 'chargeable time'. All employees of Stable Loan have their performance measured in terms of the amount of time they spend on activities that earn money from customers - chargeable time. Indeed, this chargeable time is central to the billing process as only such time can be billed - an obvious irony as time spent on the billing process review itself (a review designed to improve the process) was not chargeable. Time spent on activities that do not relate directly to customers is largely ignored, no matter how productive or useful it may be. This, the CIO opined, in conjunction with the perception that it was his job to undertake the various reviews, were probably the main reasons for poor motivation to spend time participating in the project. This view was confirmed by the team members present.

Given the present set of circumstances, similar problems could be envisaged for all future reviews. If this was to change, the attitude/policy of the partners of the firm regarding time charging would also have to change. This point was echoed by several other team members as well as the CIO, who said that he would take the matter up with the partners. An *active* executive sponsor who saw how much valuable work the team was performing would be able to argue that this time spent should be counted in a more equitable manner than is currently the case. The billing process review project did have an executive sponsor, but he had not attended any previous meetings and so had only remained in contact with the team's discussions through the CIO.

The researcher contacted the executive sponsor after this meeting and was assured that the firm did value the time spent by team members on the project. However, the sincerity of this assurance was certainly questionable and the

researcher's questions about the roles of chargeable time and non-chargeable time were not addressed.

8.12.4 Reflections and Lessons Learned

Although the week ten meeting was conducted almost entirely without the use of the GSS (and without GSS at all in week eleven), both proved nonetheless to be of value, charting the way forwards for the billing process review team and future review teams at Stable Loan. The lack of progress in earlier weeks with distributed meetings was clearly a major problem and one that demanded a solution. The researcher decided early on in the week ten meeting that it would be essential to attempt to establish once again the true feelings of the team members towards the technology and also towards their more general involvement in the team. It was realised that this was a sensitive issue, yet, as the researcher remarked to the CIO before the meeting, "no matter how much investment you put into technology and software and processes and techniques, it will all fail if the people don't perform according to expectations. If they are poorly motivated, or don't feel that they are doing something useful or just want to avoid participating or taking responsibility, then it will not work". Hence, establishing the true feelings of the people is paramount.

This has serious implications both for this research and for any other meeting. We did not attempt to establish those 'true feelings' initially. Had we done so, the problems we later experienced (which had very little to do with the technology and a lot to do with the team members' perception of why they were involved in the project (and how it might affect their earnings)) might have been either avoided or at least managed rather better. For example, it could have been pointed out to the firm that unless there were changes in corporate values (regarding chargeable time), it would be unlikely that any project that made demands on employee time without reward would succeed.

The expectations that the researcher initially had regarding all aspects of the project were primarily informed by the CIO - a not altogether reliable source of information as it turned out. Indeed, it was indicative of the CIO's lack of awareness of issues critical to the project's success that he did not mention the importance of deadlines or chargeable time at the start of the project and attempt to set deadlines and manage the whole issue of chargeable time. Ignoring both of these elements of

the corporate culture was foolhardy, as the culture was clearly going to be stronger than the CIO's requests. When questioned later about his apparent obliviousness to the importance of chargeable time, the CIO glibly remarked (by email), "For me personally, chargeable hours are not of importance as I do not do client work. Although I knew that chargeability is used as a measure of performance for client service providers, I did not fully appreciate the influence that it has". This clearly indicates just how distant he had become from the realities of his firm's working culture.

Had the researcher been involved to a greater extent in *process* support at an earlier stage, his alternative perspective might have led to the identification of these issues - and possible solutions. As it turned out, the researcher's concept of his own role in the team evolved with time and it was only at a relatively late stage in the project that he was able to identify with this alternative role for himself. Furthermore, the CIO later affirmed that he had realised by the middle of the project that he was wearing too many hats and so had too many vested interests. He would, in fact, have preferred the researcher to take on a broader role earlier in the project. However, this possibility was not discussed until week six - clearly a failure to communicate occurred. The researcher's separation from involvement in meeting process and content also acted to diminish his capacity for *research*, in that he did not see it as his responsibility to intervene until mid-way through the project. Simple technical facilitation did not effect improvements in motivation, since, as we have discussed above, the motivation was not technically dependent.

Having established that the team members did value being involved but wanted a more rigid structure with deadlines to be imposed so as to ensure that they did participate and get things done, it did not prove too difficult to set deadlines in week ten for activities. However, a caveat of deadlines lay in the CIO's lack of positional power to enforce them, none of the team members being directly subordinate to him. Furthermore, the quality of output from team members, as revealed in week eleven, was still very questionable. After the week eleven meeting, the CIO commented that if a significant improvement in quality was not achieved in the week twelve meeting (scheduled for three weeks later), he would abandon the entire process and write up the documents himself. He acknowledged that this would be "giving in" to the inertia of the team and to their original perception that it was in any case his job to do the re-engineering work, but his own deadlines meant that he

had little choice. In the event, the quality of work did improve markedly and the CIO did not need to complete the work himself, though by this time the researcher had left the project. The documents were thus produced as intended by the team members.

Where the instrument was concerned, the CIO still felt that it was of limited use after initial meetings, since it became hard to compare meetings when they were separated by long gaps. Furthermore, once the team was settled in and more or less consistent in its membership, the process characteristics changed little. Levels of consensus, satisfaction or efficiency might vary across meetings, yet, he believed, this would not be very useful information on an on-going basis. It was more useful to ask "why?" and "how?" questions of the team members so as to get a richer feel for the process (as described in 8.6.5) and to use this richer information to drive future meetings. In practice, it is better to have both sources of information as they complement one another. However, further refinement of the instrument may be required for future groups.

8.13 Reflections: Action Research in Action?

In this final section, we explore what we have experienced, observed and learned throughout this case from the perspective of the action research that has guided us. Reviewing the complexities and intricacies of the case - particularly those involving the key actors - it is certain that the action research methodology has been under strain at times. Therefore, we must evaluate what are the fundamental criteria for action research to work in a case of this type.

Rather than conduct a repetitive, week-by-week review of the case picking out key points, we focus instead on a small number of critical components - critical to this case and central to action research, viz.: motivation and participation of the various actors; the role of the researcher; the role of the technology; and methods used to collect data. We will return to these issues in Chapter Nine when we reassess the model proposed in Chapter Four in the light of all four cases.

8.13.1 Motivation and Participation

A characteristic of the entire case was the difficulty the researcher and the CIO had in persuading the team members to participate in the project. This participation took

three principle forms - contributing in face-to-face meetings, contributing in distributed meetings and preparing documents for the other team members. Where the former two of these activities are concerned, prior research into group work (as described in Chapter Two) led the researcher to believe that the use of an anonymous communication technology that would permit the team members to contribute without their identity being revealed would be an attractive feature of the project and serve to encourage active participation. Unfortunately, the provision of anonymity did not appear to encourage communication, primarily due to a lack of motivation to participate. The team members reported that the anonymity was useful on occasions, but was neither essential to nor a guarantor of their participation. This lack of motivation was in turn caused by significantly higher level factors, the most significant of which was the nature of the system the firm used to pay its employees. The key component of this system was a concept known as 'chargeable time'. The researcher did not become aware of the existence of this system until the very end of the project, by which time it was too late to do anything about it. A second factor that influenced the motivation of participants was the use of deadlines in the firm to prioritise work. In this project, the CIO did not explicitly set any deadlines, with the consequence that all project related work was given a very low importance weighting by the team members.

When we examine the data that we collected through the questionnaires (see Tables 8.6 and 8.7 for a comparative presentation of the data from weeks one & two, and four, five & seven respectively), we see that while the perceived levels of intimidation, influence and conformance pressure fluctuated, the extent to which team members felt inhibited from participating was initially low and remained unchanged throughout the project. This suggests that they did not feel unwilling to participate (whether the technology was working or not, whether they felt pressured to conform or not, and so on), even if that participation did not actually happen.

Item C4 in the instrument (measuring reluctance to participate), also confirms this analysis as team members initially disagreed that they were reluctant, then maintained that their impression did not change in subsequent weeks (i.e. continued to disagree). Informal interviews with the team members also supported this finding that they were willing to participate and did value being involved. We can only explain this enigma by referring to the twin factors of chargeable time (the billing process review time was not chargeable) and deadlines (work for the billing process

review was never deadlined except in week ten), which combined to ensure that sub-optimal levels of participation occurred. This analysis was confirmed by the team members, and therefore indicates that if similar review projects are to work any better in this firm in the future, a solution to those twin problems will have to be found. Setting deadlines would not be difficult, but changing the corporate culture to incorporate a more flexible arrangement for measuring work productivity would be more problematic. The reassurances of the project's executive sponsor did little to convince the researcher that the firm valued in real terms the time spent on the project work.

Apart from these fundamental issues of participation, another aspect concerns the quality of the participation. The CIO, as a well-informed manager who wanted to employ Business Process Reengineering within the firm to improve its billing processes, realised from the start (see 8.1) that radical change would be needed to effect those improvements. He must also have realised that in order to do this, the team members would have to be innovative in their thinking and take an active role in the process of change (see Hammer and Champy, 1993). However, he did not appear to consider the capability of the team members for innovative thought. Only on a few occasions (notably weeks one and seven) did real proactive and innovative idea generation and discussion take place. At other times, there was a strong tendency for the team members merely to react to the CIO's ideas.

One more feature of the project that relates to participation (and indirectly to motivation) is the existence of an executive sponsor. The CIO observed in week eleven that the project had lacked an active executive sponsor. However, his vision of such a person was someone who could drop in on meetings from time to time so as to monitor progress and instil in the team members the sense that they were performing a vital task for the organisation.

Table 8.6 Questions, Scales and Mean Scores for Weeks 1-2

Var	Question for Weeks 1 and 2	Scales for Weeks 1 and 2	Week 1	Week 2
C1	The language of the meeting prevented your participation	1 Strongly Agree; 5 Strongly Disagree	4.4	3.9
C2	You found it hard to understand others	1 Strongly Agree; 5 Strongly Disagree	4.3	4.0
C3	You experienced problems expressing yourself	1 Strongly Agree; 5 Strongly Disagree	3.3	3.9
C4	You were reluctant to put forward ideas	1 Strongly Agree; 5 Strongly Disagree	3.4	3.9
D1	The discussion was meaningful or meaningless	1 Very Meaningful; 5 Very Meaningless	2.3	2.9
D2	The discussion was appropriate or inappropriate	1 Very Appropriate; 5 Very Inappropriate	2.0	3.1
D3	The discussion was open or closed	1 Very Open; 5 Very Closed	1.9	3.0
D4	The discussion was imaginative or unimaginative	1 Very Imaginative; 5 Very Unimaginative	2.6	3.3
E1	To what extent was the meeting result oriented?	1 Strongly Result Oriented; 5 Weakly RO	2.4	3.3
E2	The time in the meeting was used efficiently	1 Strongly Agree; 5 Strongly Disagree	2.4	2.7
E3	The issues in the meeting were discussed thoroughly	1 Strongly Agree; 5 Strongly Disagree	3.0	3.1
E4	What percentage of time was devoted to serious discussion?	0% - 100%	41	48
S1	Some group members tried to intimidate others	1 Strongly Agree; 5 Strongly Disagree	4.0	3.7
S2	Some group members tried to influence others	1 Strongly Agree; 5 Strongly Disagree	3.3	3.7
S3	You felt inhibited from participating due to the behaviour of other group members	1 Strongly Agree; 5 Strongly Disagree	4.1	3.6
S4	You experienced pressure to conform to a viewpoint	1 Strongly Agree; 5 Strongly Disagree	3.9	3.0
T1	Other members appeared willing to answer questions	1 Strongly Agree; 5 Strongly Disagree	2.6	2.9
T2	Members worked together as a team	1 Strongly Agree; 5 Strongly Disagree	2.9	2.7
T3	Members had sufficient access to the information they needed so as to participate in the meeting	1 Strongly Agree; 5 Strongly Disagree	2.4	2.1
CR1	You felt that you played a useful role in the meeting	1 Strongly Agree; 5 Strongly Disagree	2.0	2.6
CR2	How would you rate your overall satisfaction?	1 Strongly Satisfied; 5 Strongly Dissatisfied	2.4	3.3
CR3	To what extent was consensus achieved in the meeting?	1 Strongly Achieved; 5 Weakly Achieved	2.6	3.1
Tech1	How comfortable do you feel using the technology?	1 Very Comfortable; 5 Very Uncomfortable	1.9	2.3
Tech2	To what extent did the technology hinder or facilitate your participation?	1 Strongly Hindered; 5 Strongly Facilitated	4.0	3.4

Table 8.7 Questions, Scales and Mean Scores for Weeks 4, 5 and 7

Var	Questions for Weeks 4, 5 and 7	Scales for Weeks 4, 5 and 7	Week 4	Week 5	Week 7
C1	Your ability to participate in the meeting	1 Improved; 2 Stayed about the same; 3 Deteriorated	1.6	2.0	2.2
C2	Your understanding of the comments from other members	1 Improved; 2 Stayed about the same; 3 Deteriorated	1.8	1.4	2.0
C3	Your ability to express yourself	1 Improved; 2 Stayed about the same; 3 Deteriorated	2.0	2.0	2.0
C4	Your willingness to put forward ideas	1 Increased; 2 Stayed about the same; 3 Decreased	2.0	2.0	2.0
D1	The meaningfulness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	1.2	1.0	1.2
D2	The appropriateness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	1.4	1.4	1.4
D3	The openness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	1.4	1.7	1.4
D4	The imaginativeness of the discussions	1 Improved; 2 Stayed about the same; 3 Deteriorated	1.4	1.9	1.6
E1	To what extent was the meeting oriented?	1 Strongly Result Oriented; 5 Weakly Result Oriented	1.8	2.3	2.8
E2	The time in the meeting was used	1 More efficiently; 2 As efficiently; 3 Less efficiently	1.6	1.4	2.0
E3	Ideas were discussed	1 More thoroughly; 2 As thoroughly; 3 Less thoroughly	1.6	1.3	1.8
E4	What percentage of time was devoted to serious discussion?	0% - 100%	74	75	81
S1	The extent to which some members tried to intimidate others	1 Increased; 2 Stayed about the same; 3 Decreased	1.2	2.4	2.4
S2	The extent to which some members tried to influence others	1 Increased; 2 Stayed about the same; 3 Decreased	1.2	2.0	2.4
S3	The extent to which you felt inhibited from participating	1 Increased; 2 Stayed about the same; 3 Decreased	2.0	1.9	2.0
S4	The pressure you experienced to conform to a viewpoint	1 Increased; 2 Stayed about the same; 3 Decreased	1.8	2.0	1.8
T1	The willingness of other members to answer questions	1 Increased; 2 Stayed about the same; 3 Decreased	1.4	1.9	1.6
T2	The extent to which members worked as a team	1 Increased; 2 Stayed about the same; 3 Decreased	1.4	1.7	1.6
T3	The extent to which members had access to information	1 Increased; 2 Stayed about the same; 3 Decreased	1.4	1.4	2.0
CR1	The role you played in this meeting was	1 More useful; 2 About the same; 3 Less useful	1.6	1.6	2.2
CR2	How would you rate your overall satisfaction?	1 Strongly satisfied; 5 Strongly dissatisfied	2.0	2.4	2.4
CR3	To what extent was consensus achieved?	1 Strongly achieved; 5 Weakly achieved	3.0	2.0	2.6
Tech1	How do you feel about using the technology?	1 More comfortable; 2 As comfortable; 3 Less comfortable	1.8	2.3	1.8
Tech2	Do you feel that the technology facilitated your participation?	1 Facilitated more; 2 No difference; 3 Facilitated less	2.2	2.0	1.8

This is more akin to the 'policeman' mode of executive sponsor - someone who is requested to apply just a little pressure to ensure that the project keeps moving and that the team members pull their weight. No matter how much assurance that the executive sponsor (or the CIO) could give that this was not the case, the team members would, in all probability feel much more pressured, intimidated and influenced (and perhaps also inhibited) in the presence of such a person. Indeed, it was for these very same reasons that the CIO chose not to have an executive sponsor physically present (cf. Monge et al., 1985) when the project was initialised, yet at the end of the project he questioned this decision.

While an executive sponsor is acknowledged to be an important actor in Business Process Reengineering projects (Hammer and Champy, 1993), his role does not usually include the relatively trivial 'dropping in on meetings'. Rather, he can be expected to act on behalf of the team at a higher level of the organisation. He should be able to ensure that the work of the team is appreciated, its decisions or suggestions are taken seriously and are implemented, resources made available, pressure from other managers reduced, and perhaps even the corporate culture modified so as to ensure that the team gets credit for its work (and in turn is able to devote quality time to the work). This type of executive sponsor would have been valuable indeed and the project work might have progressed much more effectively and efficiently had the critical issue of chargeable time been addressed much earlier.

As far as action research was concerned, the lack of participation did at times threaten the suitability of the methodology. If the CIO had been forced to do it all by himself, we could not have maintained that action research was taking place - that needed the whole team. The lessons that we learned about the team in respect of their motivation and participation were very slow in coming - much too slow - making it hard to develop a solution. One reason for this slow learning relates to the way in which we collected data from the participants. We shall discuss this in more detail in 8.13.4 below.

8.13.2 Role of the Researcher

The role of the researcher at the start of the project was to set up and run the GSS software. The CIO and the researcher discussed how the software could be used to best effect for any given meeting, but the researcher primarily confined himself to GSS application issues. This was problematic in that the researcher was unaware

that his input on process and content issues would be appreciated by the CIO. In later weeks, as the researcher's perception of his own role evolved, and encouraged by the opinions of some team members that he should be involved to a greater extent in meeting process discussions, the researcher suggested to the CIO that he take a more proactive approach. A key element in the team members' rationale for their suggestion was that the researcher did not have vested interests in the review process and hence was in a better position to play the role of neutral mediator, balancing the views of the team members and the CIO. Furthermore, this would make much better use of the researcher's time, i.e. not restricting his involvement purely to technical issues. The CIO, who had already noted that poor use was being made of the researcher's time on a number of occasions, strongly supported the suggestion. From week seven onwards, the researcher ran meetings for the team, providing support for technology, process and content issues.

This arrangement proved most satisfactory as the researcher was able to elicit key opinions from team members, most notably by adopting a more personal approach. In the week ten meeting, for example, the CIO was unable to persuade the team members to tell him how they thought the new billing process should be implemented. Therefore, the researcher employed a tangential approach to encourage them to participate, questioning how deeply they felt involved in the project, how useful they thought they were to the project, how much interest they had to participate, and why they seemed reluctant to participate during the week in the distributed meetings. He received much more positive feedback from this approach and established that while they were willing to participate in the project, their ability to do so was severely constrained by the many deadlines that their superiors imposed on their work. A similar line of questioning in week eleven led to the revelations about chargeable time.

The role of the researcher developed over the course of the project in accordance with the needs of the team. Arguably, the action research would have benefited more had the researcher been involved to a much greater extent much earlier. This is a key lesson to come from this case. When the researcher was responsible for more than just technical issues, he felt that he had a more holistic view of the project and that his role was correspondingly more valuable. His ability to conduct action research was also enhanced because he was free to collect data in those ways *he* deemed suitable, and then to act upon his analysis of that data, rather

than (as happened in the first few weeks) relying principally on the CIO. Indeed, we would argue that the researcher was mistaken in not taking up process and content responsibilities *ab initio*, leading the team, minimising the various effects of the CIO, establishing and attempting to overcome the true reasons for the poor participation from the start. Such an argument, however, must be placed in the context of the Stable Loan case, where the researcher and the CIO failed to communicate on these very relevant issues at an early stage. Such initial communication we now believe to be the most vital element in the pre-planning of a project.

8.13.3 Role of the Technology

Where the use of GSS was concerned, the team agreed that it was more useful in initial phases of discussions, and these to a large extent took place during the first few weeks of a review, where the focus was the generation, discussion and evaluation of ideas, not the development of documents or of consensus about fine points of detail. The methodology for process reviews was intentionally cast in a learning framework, where members were part of a learning process - for the team and for the firm. This was intended to be a positive framework that would encourage participation. In the first meeting (week seven), proactive participation did take place. The evidence we have suggests technology was most usefully employed in those situations where the specific task type corresponded closely to those we discuss above.

The most distinctive feature of the technology in this case (apart from its uncanny knack of crashing at inopportune moments) was the anonymity provided to team members. As explained in 8.13.1, anonymity was originally thought to be a positive feature that would encourage participation. However, it had a darker side as the CIO was able to shield his many contributions to the discussions behind it, giving them a form of quasi-team authorship. It was certainly notable that the CIO contributed far more to all discussions than other participants. Since all contributions were anonymous, the CIO could also avoid criticisms of domination.

To some extent, the other team members were able to see through this subterfuge, but the overt manipulation of the technology by the CIO was worrying in an action research context, where mutual learning and sharing should be more important than the manifestation of hidden agendas. The avowed willingness of the team members to participate with or without anonymity, though they were never

given the opportunity to try the latter as it was vetoed by the CIO (ostensibly fearing even lower participation), leads us to believe that if anonymity is not seen as essential for the successful progress of a project (or meeting), then its use should be very carefully considered. In this case, one suspects that the team might have accomplished more without it. Apart from the low scores we recorded for inhibition, team members were seldom slow to disagree publicly and verbally with one another (but mostly with the CIO) during meetings. This willingness suggests that the value of anonymity is over rated.

8.13.4 Data Collection Techniques

The instrument we described in Chapter Four and have used in our four cases has been our most consistently used data collection device. In general it has shown itself to be suitable for all the situations we have encountered. In the Stable Loan case, we made further refinements to the scale design in week three so as to meet our need to measure whether processes had been perceived to improve or deteriorate since the previous meeting.

Although the use of the instrument was agreed at the outset of the project by the CIO, he was as powerless as the researcher to enforce completion of questionnaires by team members, who at times refused to do so. The long gaps between meetings in the second half of the project also made it harder for accurate comparisons to be made, with the questionnaire not being completed after week seven.

While we still believe the instrument to be useful, especially in initial stages of a project or immediately after a major new task has been introduced (for example the methodology for process reviews), it is essential to employ other data collection methods such as observation and interviews. Triangulation of data is much more practical when there are multiple sources, since these sources often complement one another, not simply depicting the same information from different perspectives. Indeed, action research as a methodology demands multiple sources of data (cf. Table 3.3 in Chapter Three).

In 4.9.1 we described how we included the consensus and satisfaction criterion variables in the instrument. We recognise, however, that it is imperfect to measure them through single item questions - they are constructs in their own right and should be measured as such. This will be discussed further in Chapter Nine.

An interesting methodological finding that this analysis of the data collection methods reveals is the inadequacy of most single-method data collection devices. An instrument, on the other hand, that included all necessary questions would be impossibly long - it is not feasible or sensible to develop such an instrument, nor to ask anyone to complete it. This has implications for research that employs a purely quantitative approach to data collection, as some items or constructs can only be measured qualitatively - by talking, observing, reflecting and learning; not by counting. The most obvious and important example of such a construct in this case is motivation. Motivation was, we believe, the key to success in this project - yet our instrument really did not try to tap into motivational issues, let alone the higher level factors that would influence motivation.

It is true that we could redesign the instrument to take account of this weakness, but in another case it could be another 'unknown' construct that would be problematic. Adopting a rigid 'measure by counting' approach to finding these problems would be at best tortuous, if not impossible. The qualitative, interpretative approach is vital here.