

ITEM 8
MANAGER'S REPORT NO. 70
COUNCIL MEETING 89/10/30

RE: HRMS EVALUATION REPORT OF BRIAN MULLEN

MUNICIPAL MANAGER'S RECOMMENDATION:

1. THAT the recommendations of the Director Administrative & Community Services be adopted.

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1989 October 25

TO: MUNICIPAL MANAGER

FROM: DIRECTOR ADMINISTRATIVE &
COMMUNITY SERVICES

SUBJECT: HRMS EVALUATION REPORT OF BRIAN MULLEN

PURPOSE: TO PROVIDE COUNCIL WITH STAFF'S VIEWS ON MR. MULLEN'S HRMS
EVALUATION REPORT

RECOMMENDATION:

1. THAT Council accept Mr. Mullen's report on the HRMS in completion of his consulting contract.
2. THAT Council direct staff to continue to work to improve, but not rewrite, the existing HRMS until such time as a viable replacement system can be installed.

SUMMARY

Toward the end of 1988, Council became aware of significant concerns regarding Burnaby's HRMS, a "package" system bought from Information Associates in 1984 and extensively modified to suit Burnaby's needs. Council moved quickly to hire Brian Mullen to review the system and he reported on February 6, 1989. He concluded the system was "obsolete when it was purchased" and that "the system is unreliable". He suggested a thorough review of alternative courses of action and on February 27, 1989, Council hired him to carry out that review.

That review is complete and Mr. Mullen has evaluated four alternatives:

1. Stay with the current system in the short run (2-3 years) while continuing to make improvements to it to increase its reliability.
2. Replace the existing HRMS with the best integrated Payroll/Personnel package that can be found.

123

3. Replace HRMS with a municipal Payroll/Personnel software package.

4. Undertake an inhouse rewrite of the entire system over a period of up to four years to completely replace the old software.

He has ranked the alternatives in the order given here and staff would agree that despite its many flaws, our best current option is to retain the current System in the short run. Coincident with and flowing from Mr. Mullen's review, changes have been made to the System to increase its reliability. Further positive changes can and will be made. None of this however resolves the "obsolescence" of the System and continues to make its replacement inevitable. However, no effective alternative is readily available and we can "make do" for some time while higher priority systems (such as Parks Registration, Licenses Inspections Permits) are pursued and to allow possible new packages to come on the market. Further, not rushing into a change at this time will allow for an overall review of Burnaby's computing activities to be completed culminating in a new Strategic Plan for Electronic Systems in Burnaby.

REPORT

HISTORY

In 1984 with the assistance of an external consultant, Burnaby prepared a Strategic Plan for Information Management. This Plan was adopted by Council on 1984 May 07. It committed Burnaby to moving all of its central computing to a Digital Equipment Corporation (DEC) hardware "platform". It also launched Burnaby into the acquisition and/or development of a number of software systems one of the first of which was for payroll/personnel purposes (a Human Resources Management System - HRMS). Again, with the assistance of an external consultant, it was decided to acquire a "package" system and Information Associates (IA) was the recommended vendor. It was known at the outset that certain modifications (customization) would be necessary to fit the package to Burnaby's needs.

Getting the package running to suit Burnaby's needs took much longer and cost considerably more than was originally expected. A first payroll was not run on the new system until early 1987. While all payrolls have been met since that time and useful personnel information has been recorded and generated, it has not been without considerable difficulty. The system aborted frequently, used huge amounts of disk space and running time, required significant maintenance resources, and still did not deliver all that was expected of it (see Appendix I). When Council became aware of these problems in late 1988, they moved to have them investigated.

ITEM	8
MANAGER'S REPORT NO.	70
COUNCIL MEETING	89/10/30

HRMS AUDIT

Mr. Brian Mullen of I.S.P. information systems planning corp. was contracted to do an audit of the Burnaby HRMS with a plan to evaluate and recommend alternative courses of action. His report was considered by Council on February 6, 1989 along with a companion report from the then Municipal Manager. Council accepted Mr. Mullen's conclusion that the HRMS system was flawed and that alternatives should be evaluated. On February 27, 1989 Council hired Mr. Mullen "to undertake a review of the alternatives open to Burnaby to provide Burnaby with an up to date HRMS that is integrated and consistent with other Burnaby computer systems, such contract not to exceed a cost of \$40,000 and to be completed by September 1, 1989". Further, Mr. Mullen was asked "to rank all of the alternatives he identifies based on a cost/benefit analysis of each alternative".

HRMS EVALUATION REPORT

Mr. Mullen has completed his evaluation and a copy of his summary report is available from the Mayor or the Municipal Clerk. Essentially he has identified four broad alternatives and has ranked them thusly:

1. Continue with the existing system. (Do the minimum required).
2. Replace the existing HRMS with the best integrated Personnel/Payroll package that can be found.
3. Replace HRMS with a municipal Personnel/Payroll software package.
4. Undertake an incremental rewrite of HRMS over a period of up to four years. Completely new software will replace the old software.

Although one might at first be surprised with a recommendation to stay with a "flawed" system, Mr. Mullen's analysis supports this conclusion, together with his observations that "the HRMS package has stabilized" and "HRMS maintenance/enhancement has been reduced from three people in 1988 to one person, saving Burnaby over \$100,000 per year. Payroll overtime has been reduced, saving \$30,000 per year". In essence, staff have now worked with the System for long enough to be able to understand it and correct its worst faults so that it now runs reasonably well. Furthermore, no enhancements have been undertaken even though the current system does not meet all users needs and no enhancements are contemplated to be done.

In dollar terms, Mr. Mullen points out "There is not a good business case for HRMS replacement. Cost of any replacement will range between \$500,000 and \$800,000. Savings are between \$100,000 and \$150,000 per year". Specifically, Mr. Mullen indicates the following for each of the four alternatives:

	1. Continue	2. Stand alone Package	3. Municipal Package	4. Inhouse Rewrite
Acquisition/Implementation	-	+\$500,000	+\$500,000	+\$750,000
Ongoing Operating	+\$400,000	+\$300,000	+\$300,000	+\$300,000



It can be seen that although operating costs are higher for staying with the current (improved) system, they are not so much higher as to justify a half to 3/4 million dollar investment. Such an investment might only be justified if the current system was completely unworkable or subject to complete collapse. It is not.

125

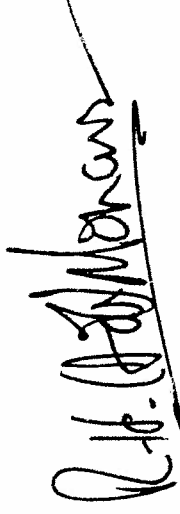
Mr. Mullen makes a number of points in favor of staying with the current system. Generally, he argues "deferring the replacement of HRMS will increase the number of options and reduce the level of risk". He notes that delaying replacement will allow time:

- to complete the systems audit
- to revise the strategic plan
- to complete higher priority projects
- for staff to become more familiar with 4th generation languages
- for IA to release new versions of their software
- for NISSI to try converting their software to run on DEC equipment
- to manage user expectations
- to do more analysis before replacement
- to enhance communications between MIS and users
- to assess packages and the willingness of vendors to customize them to fit Burnaby's needs

All of these advantages outweigh the disadvantages of higher maintenance costs and a slightly higher risk of system failure.

CONCLUSION

Burnaby's HRMSystem was expensive, flawed, and did not meet expectations. However, recent efforts have corrected major problems such that the System meets major user needs at a moderate operating cost and without high risk of failure. It is a system that must be replaced but that replacement need not occur immediately and in fact there are some significant advantages to waiting at least a couple of years. The eventual solution to the HRMS problem will have to fit within Burnaby's overall Strategic Plan for Information Systems and that plan needs to be updated following an overall system review. That review should now be carried out and the existing HRMSystem utilized in the meantime based on maintenance as necessary, and improvements as cost-justified but with no commitment of resources to rewriting the system at this time. When adequate funds have been "saved" and set aside, replacement can begin.



Robert H. Moncur
Director Administrative
& Community Services

cc: Director Finance
Information Services Director
Personnel Director

ITEM

8

MANAGER'S REPORT NO. 70

COUNCIL MEETING 89/10/30

APPENDIX I

IA EXPECTATIONS VERSUS ACTUAL

The original requirements for the HRMS software were quite lengthy. The most important of those expectations were that it would pay the staff in accordance with our collective agreements, that it would allow the tracking of employees through various assignments and reflect automatically the progressions through the job step structure. These functions have been, in essence, achieved. However, there were a variety of additional functions and capabilities which caused the Corporation to select the I.A. software over various competitors. It is in meeting these requirements that the I.A. software fell short of expectations. These drawbacks have been extensively described during the course of the last few months. They can be briefly summarised as follows:

EXPECTATIONS

Payroll calculations should be correct and the system should meet B.C. law.

ACTUAL

Many problems have been encountered and continue to be. For example:
The income tax calculation has been incorrect for B.C. several times until manually corrected. UIC was calculated incorrectly and still is in one particular circumstance needing manual correction.
By B.C. legislation different hourly rates must be printed on the pay stub and were not when the system was installed.

Ad hoc reporting would be easily handled.

The ad hoc reporting capability is so complex that it can only be used by very well trained people. It can take many hours of time for a report to be created.

Assignments would be handled correctly (a major selling point of the system).

When an assignment (job) is changed in the middle of a pay period, adjustments must be made manually. Labour time entered after an assignment has ended causes manual adjustments to be made. The year end process was not expected to have to include a resetting of all employees' assignments.

Manual cheques would work as portrayed.

The manual cheque process was so difficult and inadequate that it had to be rewritten.

That the system would do everything that the sales people and training people said it would do.

It does do almost everything it was said to do except that it doesn't do everything correctly or the way Burnaby had expected or needed. The sales and training people didn't always specify exactly how to do some of the things they were questioned on and, unfortunately, it wasn't pursued by the staff involved.

127

The system is not at a crisis point in that its major operational inadequacies have been addressed in the last few months. A major failure would not appear to be imminent. The system is expensive and difficult to maintain, has high operational costs and will not in the long term meet the Corporation's needs nor integrate with other systems. Thus the difficulty is less a decision whether to reconstruct this system than it is of when.

To begin work immediately would either seriously delay the development of other systems which offer substantial financial or other benefits to the Corporation or require total data processing expenditures above a prudent level. Yet, it is equally obvious that reconstruction must take place.

A prudent solution would be to make provision in the Information Services Development budget over the next four years to set aside the funds required for reconstruction. By this approach planned development projects will not be adversely affected during the next four years. At the end of that time there will be sufficient funds available for reconstruction again without adversely affecting development of systems during the fifth and subsequent years. More specifically, with the changes made as a result of Council's review (smoother running, no enhancements, minimum maintenance), the Corporation is able to save over \$100,000 annually compared to what the system would have cost if operated as it was. Setting aside these funds (not transferring them to other development priorities) together with the interest they may earn should see an adequate amount accumulated at the end of four years (or less) to pay the costs of reconstruction or installing a "package" solution.