

ITEM 10
MANAGER'S REPORT NO. 22
COUNCIL MEETING 87/03/30

RE: 1987 STRATEGIC PLAN FOR INFORMATION MANAGEMENT

MUNICIPAL MANAGER'S RECOMMENDATION:

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

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TO: MUNICIPAL MANAGER 1987 MARCH 26

FROM: DIRECTOR ADMINISTRATIVE AND COMMUNITY SERVICES

SUBJECT: 1987 STRATEGIC PLAN FOR INFORMATION MANAGEMENT

RECOMMENDATION:

THAT the 1987 Strategic Plan for Information Management be adopted and implemented.

REPORT

SUMMARY

This report presents the results of the second review and updating of Burnaby's Strategic Plan for Information Management. The basic direction for the plan remains unchanged and is still based on the concept of an integrated mapping and business system that, in addition to giving the Corporation a powerful and efficient management tool. This keeps us among the most computerized municipal corporations in North America.

The Plan addresses the priorities for system development in the Corporation, and reassesses the equipment and software required to maximize the system's usefulness and efficiency. This report addresses the staffing and financing consequences of the 1987 Plan, and details the amounts which have been proposed in the 1987 Annual Budget, currently under discussion.

Background

In May of 1984, the Council approved a Strategic Plan for Information Management, a plan which had been developed by Robert Liley & Associates with a great deal of input from staff. That report set out, as its title implies, a strategy for the management of information in the Corporation, and addressed new approaches in hardware, software, applications of the computer, and staff organization.

Subsequently, in October of 1984, Council adopted a further set of recommendations from the Municipal Manager respecting implementation of the Strategic Plan for Information Management. More specifically, that second report approved the selection of Digital Equipment Corporation as the prime vendor of computer equipment and SYNERCOM as the vendor of mapping software, and authorized staff to proceed with the acquisition of equipment and software.

These hardware and software costs were funded from a capital account established in May, 1984, when a Tax Sale Monies Expenditure Bylaw in the amount of \$2.5 million dollars was brought down to begin the

purchase of computer equipment. In November, 1985, the Council adopted a recommendation that a bylaw be brought down in the amount of \$1.3 million dollars to appropriate monies from the Capital Reserves to fund the balance of capital needs for computer hardware and software to the end of 1988. Expenditures against that capital account to the end of 1986 are \$3,133,789.

Introduction

Considerable progress has been made in the implementation of the Strategic Plan through 1986. The cluster of main computers that serve municipal needs includes three Digital Equipment Corporation VAX 11/750 computers and one VAX 8500 which was added during 1986. The number of users of our services has increased dramatically from about 20 at the beginning of 1986 to over 200 by the end of 1986.

The primary emphasis of the Plan has been the development of new computer applications to provide users with an effective tool for information management. The Management Committee, the Computer Advisory Committee (representative of all departments in the Corporation) and a number of project teams have played key roles in that development process ensuring that systems being changed or developed provide maximum returns to their users. We have continued to offer the Union an opportunity to participate in the many committee meetings. The training program, instituted in 1985, has gained momentum over the past year as almost all members of our staff have participated in one or more computer related training programs.

The recommendation to install terminal devices for managers and supervisors, made in 1985, has proved most successful. Staff members at all levels of the organization have been gaining familiarity with the computer and will now be able to participate actively in suggesting improvements to our Plan for the benefit of the entire Corporation.

The purpose of this report is to present a summary of the 1987 Strategic Plan for Council's approval, highlighting the changes from the earlier Plan, presenting the organization and financial implications of the Plan and recommending a course of action for the year ahead.

The Strategic Plan itself, can be seen by the members of Council in the office of the Director Administrative & Community Services but because of its complexity we do not propose to make it a public document. An Executive Summary, however, has been prepared for the Council and other interested parties. A copy of that Executive Summary is included in the Council member's agenda packages.

The renovation of the 4th Floor Conference Room has provided the Corporation with a most effective tool for communicating to people using computers. Last year we were able to demonstrate to members of Council some of the equipment and system capabilities at that time. We intend to arrange within the next month for a further demonstration for Council members to update them on some of the achievements of the past year. Specifically the implementation of two major applications, General Accounting and Human Resource Management, will be of interest to Council members.

The New (1987) Strategic Plan for Information Management

A comparison between this Plan and the previous (1985) Plan can be summarized as follows:

- o Our primary objectives for information management remain basically unchanged;

- o The most significant change in the method for meeting our objectives is the suggested use of some microcomputers which can now be integrated successfully into the existing computer network;
- o While the expansion of the computer network to provide graphics devices to all departments has proceeded more slowly than expected, the total number of users at this time is far greater than originally anticipated;
- o While the overall costs to-date compare favorably with the 1985 Strategic Plan, we see the costs of equipment, outside services, contribution to Equipment Replacement Reserve and computer hardware and software maintenance over the next five years being higher than anticipated in 1985. This is largely because we expect to service many more users than was anticipated at that time.

Major Issues

There are a number of issues inherent in the 1987 Strategic Plan which require comment. Those are as follows:

1. Benefits

The most significant benefits to be realized in 1987 result from the implementation of new computer applications.

The General Accounting System, which was implemented on 1987 January 01, provides a more accessible and responsive accounting System than the Municipality has ever had in the past. The system will permit managers to monitor costs closely using on-line terminals to access the most recent accounting data.

The implementation of the new Human Resource Management System provides the Corporation with a more efficient method of managing personnel data and paying employees. The system permits ad hoc reporting from the personnel data base to produce both statistical and detailed reports as required. The new system provides the basis for many enhancements that will be implemented over the next few years including the possible decentralization of payroll input and direct deposit of employee cheques in the bank.

The Licence/Inspections/Permits System, to be implemented in stages in 1987, will streamline the process of managing applications and issuing permits. It will also be the first opportunity we have to illustrate the benefits of using the graphics system for certain business functions. These benefits, which are difficult to quantify in advance, are considered to be significant.

The Property Taxation System, which will be implemented later in 1987, will provide considerable increased functionality over the existing system running on the Sperry 90/30. We anticipate considerable benefits from the increased efficiency in processing tax related information.

Of course, during 1987, we will continue to realize substantial benefits from using computers for mapping, word processing and other office products. In addition to cost savings in these areas, there are substantial benefits from improved quality of the end product resulting in better service to the public.

2. Development Projects

New applications of computers to assist us in solving business problems represent both the greatest benefit and the greatest challenge to the Municipality in using computers. As more people become familiar with our system they will see new areas

where computers can help us provide a better service to the public. This will result in new applications that we have not envisaged even with this plan.

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Some development projects attempted through 1986 have been too large for us to complete successfully with our limited resources. Large projects have a significant impact not only on Information Services' staff but also on users.

The 1987 Strategic Plan recommends that we divide application development work into smaller projects and that implementation of applications be done in stages or on a pilot study basis wherever possible. We feel that smaller projects will be more manageable for our small development group. Users who have little experience with computer-based systems will benefit from seeing some functions implemented before they are asked to define the specifications of additional functions.

3. Expansion of the Graphics System

While the graphics software supplied by SYNERCOM Technology provides the functionality we need to manage spatial data, it is not easy for the casual user, who uses the system infrequently, to remember the necessary commands. Because of this, we have felt it unwise to introduce graphics inquiry to the casual user before installing a friendly menu for system access. For the present, the system continues to be used extensively and most effectively by experienced users in the Engineering and Planning departments.

The Plan recommends the development of a user-friendly front-end to the SYNERCOM software to maximize the benefits derived from the mapping data base.

4. Use of Microcomputers

Information Services has previously cautioned against the use of microcomputers for municipal business functions because many organizations who have used microcomputers extensively have suffered from a severe fragmentation of corporate data. This can result in communications problems within the organization where a high degree of interaction between departments in decision making and business processes is necessary.

Notwithstanding their potential for fragmentation, microcomputers are powerful tools which can be used to the benefit to the organization. We must exercise care in the selection of micro-computers to ensure that data processed on the micro can be easily transmitted to other users in the computer network. Any microcomputers installed must be completely compatible with our existing computer network.

One of the main advantages of microcomputers, which we should take advantage of, is the availability and cost of software. The potential market is so large that many packages have been developed on micro-computers that are either not available or considerably more expensive on larger computers.

5. Action Plan

The Strategic Plan is at the same time both a conceptual and practical document. The practical parts of it are most clearly summarized in section 6 the 1987 Strategic Plan. (Also section 6 of the 1987 Strategic Plan - Executive Summary).

The implementation plan is presented as an action plan for 1987 detailing information system activities and a long range timetable setting direction for the next five years. The plan has been prepared with considerable input from all departments as everyone in the organization has a significant role to play.

6. Audit

The 1987 Strategic Plan recommends that an audit of Information Services' functions be conducted during 1987 paying particular attention to ensuring the plan still provides a direction compatible with the business environment and is being implemented effectively. This being the third year since the original report was presented to Council, we feel that an independent and unbiased view of the directions taken and the methods employed would be useful at this time.

7. Capital Cost

The 1985 Strategic Plan forecasted that equipment costs to the end of 1988 would \$3,800,000. The growth of the computer network has been faster than originally anticipated such that the equipment expected to be purchased by the end of 1988 will now be in place by the end of 1987. The Computer Hardware and Software Capital Reserve from which all hardware purchases are funded, will therefore be exhausted by the end of 1987.

The 1987 Strategic Plan projects further equipment purchases between 1988 and 1991. Experience tells us that the more we use computers the more we recognize there are cost justifiable applications that have not yet been considered. It is important to point out, however, that all of these applications will be thoroughly evaluated before implementation and will be acquired only if staff are satisfied that there is a justified need and a reasonable benefit to flow from the acquisition. Periodic reports to Council on our progress in developing the system will come forward at the appropriate times. \$1.6 million is the projected maximum for enhancements to the hardware/software configuration in 1988. This figure includes all the possible enhancements that are documented in the Plan, some of which may not implemented.

By 1989, an increasing number of these purchases will be funded from the Equipment Replacement Reserve discussed below. The likely source of funds for hardware/software enhancements is the Capital Works Financing Fund.

The 1987 to 1991 capital budget will reflect the capital expenditure program outlined in the 1987 Strategic Plan.

8. Non-recurring Development Costs

At the time the decision was made to implement the original Strategic Plan for Information Management, a special reserve was established for funding the non-recurring development costs associated with the implementation. From that reserve are funded costs for such expenditures as training, additional staff to supplement project members working on new applications, application package acquisitions and special consulting services. We estimated in 1985 that this reserve would be depleted by the end of 1986. In fact, the balance of the reserve at the end of 1986 was \$524,000. However, the anticipated expenditures through 1987 exceed this amount by \$781,000 which has been included in the 1987 Annual budget which is presently being prepared for consideration by the Municipal Council.

9. Renovations and Furniture Costs

In 1985, the Council approved the creation of a separate reserve for renovations and furniture items associated with the implementation of the 1984 Strategic Plan. This reserve was intended to fund the costs associated with adapting the work

place in such a manner as to address the "Ergonomics of the New Computer Technology". This has been a concern of both management and CUPE Local 23, and has resulted in significant changes in the traditional office setting.

The renovations initially identified as being required in the Municipal Hall have now been completed. Furniture designed for the new computer equipment has now been installed in the Municipal Hall, West Building and Justice Building. Some additional furniture will be needed but is to be budgeted separately by each individual department.

An additional \$100,000 has been included in the 1987 Annual budget to accommodate furniture needs in remote areas such as the Works Yard, Service Centre and Recreation Centres.

10. Replacement Reserves

In our report to Council of 1985 November 20, we suggested that the Corporation should give careful consideration to the need for replacement of existing computer hardware and software within the next five to six years. It was concluded that beginning in 1986 we start contributing to a reserve for the replacement of computer hardware and software following much the same methodology used in building reserves for the replacement of vehicles.

An initial contribution of \$392,318 in 1986 was funded by a transfer from Engineering and Parks Equipment Reserve surpluses. This amount was calculated on the basis of replacement values for equipment purchased to the end of 1985, assuming a six year amortization. Starting in 1987 the contribution to the Equipment Replacement Reserve is reflected in the Information Services budget.

This reserve includes a provision for the replacement of the Burnaby Public Library's computer equipment, estimated to become necessary in the 1989.

Summary of Financial Impacts of the 1987 Strategic Plan

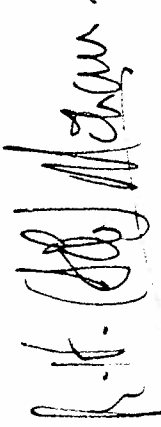
The Corporation of Burnaby has made significant progress in a relatively short period of time toward realizing its goal of a fully computerized working/service environment. Overall expenditures have been less than was forecast to this point, in the first and most recent Strategic Plans. They will be higher than forecast in 1987 and will likely level off at close to this level (as opposed to dropping noticeably as was forecast, perhaps unrealistically, in the earlier plans). As a result, MIS will not impose additional pressure on the tax draw beyond 1987 levels. Quantified benefits have exceeded costs to date and are projected to do so in the future. All new applications/expenditures will be specifically cost justified and will not proceed unless net benefits are determined. Acceptance and pursuit of this 1987 Strategic Plan will keep Burnaby at the forefront in the development and use of integrated computing systems in a Municipal environment.

Organizational Changes

In early March, the MIS Department was joined by Ron Taylor in the position of Assistant Director. This brought the Department to within one position of a full complement of staff. However, Rob Macmillan has now accepted a significant position with a new employer and has resigned as Information Services Director effective March 27, 1987. Recruiting a replacement is well underway and it is hoped to have a

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new Director in place by mid-May. Rob has been Information Services Director from the inception of the first strategic plan through the finalization of this latest plan and he has rendered an invaluable service to the Corporation in the 2 1/2 years as Director. The Corporation wishes him well in his new position.



Robert H. Moncur
Director Administrative & Community Services

cc: Information Services Director
Director Engineering
Director Finance
Director Planning & Building Inspection
Director Recreation & Cultural Services

