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To be listed on the Community
 Services Agenda, 4 Mar 99

DATE 16 February 1999

TO/DEST. Co-ordinator
 Community Services Committee

FROM/EXP. Chief Administrative Officer
 Commissioner, Social Services

SUBJECT/OBJET **DECISION SUPPORT SYSTEM (DSS) UPDATE:
 NEW DIRECTION AND IMPACTS**

PURPOSE

The purpose of this report is to provide the Community Services Committee with an update on the Decision Support System (DSS), the Social Services technology system that supports the Improving Client Service initiative. The report will be on the Corporate Services and Economic Development (CS&ED) Committee Agenda of 2 Mar 99.

This report will also discuss the challenges faced by Social Services in developing such a large and complex information system, especially as Provincial legislative changes were made and as the Year 2000 approaches. The report outlines the new directions Social Services has taken in managing its technology needs to ensure a high level of client service, appropriate staff technology support and to mitigate further technology costs.

BACKGROUND

The Improving Client Services (ICS) initiative began in 1994 and its objective was to improve how Social Services delivered services to clients by focussing on client employment outcomes. The initiative was comprised of two major activities: Business Process Reengineering (BPR) and information systems development and was funded through an \$8M capital authority. BPR was the review of all processes within Social Services in order to streamline them and redesign them for increased efficiency and effectiveness. Numerous challenges related to the complexity of the services being provided, the technology, new legislation, business practices and Year 2000 were faced over the project's time span.

The BPR activity occurred in the first years of the project and yielded, first, a renewed intake and eligibility determination process, and second a new service delivery model. The new service delivery model is based on the concept of supporting a client to achieve self-sufficiency. The model recognizes that the definition of self-sufficiency will vary for clients as they move towards their outcome. The model differentiates between two major pathways, an employment pathway and an assured support pathway. The employment pathway will support 80% of Social Services client through job seeking, preparing for work and skill development. The assured support pathway ensures basic financial assistance for those clients where self-sufficiency would not be anticipated or would be a long term goal.

Business practices to implement the new service delivery model, called Managing Towards Outcomes, had to be completely revised. A major work effort was required to review policies, procedures and practices and ensure adequate staff training.

The information system development activity followed and the Decision Support System (DSS) project was initiated in early 1996. It was conceived as a generic electronic tool to be utilized by all Social Services personnel. Its conceptual strength was based on a set of universal functions such as scheduling, file tracking, printing, managing work-in-progress and file ownership. This toolset would bring Social Services from a predominantly paper environment to a computerized environment.

Decisions on the choice of development software were taken according to our contractor's (Price WaterhouseCoopers) recommendation but prior to the time when the Corporation established a corporate standard. (Since that time Oracle/Powerbuilder have become the corporate standard.) The Amdahl ObjectStar application development tool was selected for the DSS because it was considered "best of breed" to translate complex business requirements into a user friendly software application. This was supported by industry experience where ObjectStar had been used to develop system prototypes, build screens quickly and deliver a working system faster than the traditional application development tools.

Since that time, ObjectStar has not lived up to its "best of breed" qualification and has not had the market penetration expected. This in turn has made Objectstar resources quite rare and expensive. In addition, ObjectStar performance and availability have been quite disappointing.

In May 1998, new legislation, the Ontario Works Act and the Ontario Disability Support Program Act, was proclaimed. This was a major change and impacted the functionality of the technological tools being developed. In addition, the Province launched its Business Transformation Project (BTP) which would redefine the provincial social services delivery model and the technological tools for service delivery. This was significant since the Ontario Works legislation, stated that OW delivery agents would be required to use this provincial system. Therefore the timeframe within which the DSS would have a useful life to Social Services was limited. The results of the Provincial systems development activities are expected to be available to service delivery agents by year 2001 or later.

Year 2000 issues also had to be considered to replace the automated financial systems that interacted with Provincial systems and Corporate systems. These systems were separate from the DSS development. They were based on mainframe applications that would not exist after January 1 2000. The Record Services and Verify Payments (RSVP) project was initiated in 1997, as part of the Y2K solution, to address these issues.

Decision Support System - On-Going Assessment And Decisions

Phase I of the decision support tool was delivered in 1996 by the Contractor. This phase was comprised of four processes: inform client, register applicant and provide information, determine eligibility and verify information. The software application was implemented in district offices in October of that year. Numerous “bugs” were identified over the months after the release of the application. Day to day operations became in fact the testing environment. The contractor continued to work on the system to resolve these problems and after much additional work, the application became stable. The experience with Phase I indicated to Social Services that more testing was required prior to the implementation of the next release, the case management function.

In December 1997, the technical contractor, Price/Waterhouse/Coopers delivered the Phase II software product which had been tested for technical issues. It was now to be tested by Social Services for user acceptance with an expected implementation in the spring of 1998. The contractors testing environment that replicated two district offices was handed-off to Social Services to accomplish this work. Functionality gaps and “bugs” were identified and corrected. By June 1, 1998 it was felt that the application could be implemented across five district offices.

Upon actual usage in the field by up to 150 front-line staff, the Phase II system proved to be very unstable and performed poorly. The project team was unable to make the system stay up and running. Numerous technical bugs were discovered in the development software Objectstar. The software vendor (Amdahl) was involved in trying to resolve the most serious bugs. For example, when trying to access client information, users would see their screen freeze and would be unable to continue their work. The vendor was unable to fix the problem.

Ongoing attempts to resolve the system bugs while the DSS was in production greatly strained staff and had a negative impact on client service. In July 1998, Social Services felt it necessary to obtain the services of independent resources to review the technical aspects of the DSS. Their report concluded that there were important technical shortcomings with the software application.

In August 1998, Price/Waterhouse/Coopers, as the party responsible for the design and building of the application according to user functional requirements, developed, at Social Services’ specific request, a plan to address the poor technical performance of the DSS. The vendor provided to the Commissioner dates that the stability of DSS would be fixed. These committed dates were not met and none of the original plan dates were achieved.

In October 1998 it was estimated that the technical re-working of the DSS and bug fixes to have the DSS perform as it was originally designed would require approximately 500+ days of development effort. To totally fix DSS would have taken up to five months at a cost of approximately \$488,000. This included all recommended performance enhancements and bug fixes to support 175 users.

Social Services management was not confident that the work would be successful. In November 1998 an independent System Review was contracted out to analyze the technical feasibility, associated cost and timing verification to complete the development and testing of selected system functionality.

On December 2nd this independent review recommended that the DSS be retired from production in view of the cost of work to be completed, the time factor that was now seriously jeopardizing the useful life of the application and the probability of success. The recommendation was approved and implemented.

RSVP - Decisions

Since mid 1997, the RSVP project has been initiated in order to replace old Social Services financial systems that interact with Provincial systems and Corporate systems and provide a solution that is year 2000 compliant. This work was separate from the DSS development work. Over the course of the RSVP project's documentation phase, an assessment of how much work would have to be performed in the Objectstar platform of DSS, and how much in the Oracle/Powerbuilder platform of RSVP was made. This assessment was required since the DSS and RSVP would interface with each other. The objective was to minimize the Objectstar requirement since Oracle/Powerbuilder had become the Corporate and industry wide standard. In addition Objectstar resources were becoming harder to obtain and retain. As this assessment was made, flags were raised about the technical difficulties of interfacing with DSS and the poor performance and stability of the application. These flags precipitated the onset of the first technical independent review described in the section above.

As the DSS issues were being addressed, the RSVP project presented an opportunity to Social Services. RSVP could not only consolidate the financial systems, it could also rewrite the DSS functionality in Oracle/Powerbuilder and meet its Y2K timeframe and budget. This was possible since the costs of retaining Objectstar resources as well as the on-going costs of license and maintenance fees were quite high compared to Oracle/Powerbuilder. By eliminating the need for Objectstar resources, licenses and maintenance costs by the end of 1999, the cost of converting DSS into Oracle/Powerbuilder would be offset. This would move Social Services away from the troublesome Objectstar application while capitalizing on its business process re-engineering activities and user requirement investment. It would also provide Social Services with a system that would have a useful life well into the year 2000 and beyond.

Social Services Senior Management approved this direction in June 1998. This meant that the DSS in Objectstar would only be required until the end of 1999.

As the performance of the DSS continued to be inadequate, the useful life span of the DSS was getting shorter and shorter. By December 2nd, 1998 the only viable decision was to retire the DSS and focus the development work on RSVP to ensure its success.

Next Steps

Social Services will now be positioned to focus its undivided attention and support to the new RSVP system. The RSVP Project is a Year 2000 initiative to convert the applications on the mainframe system for the billing functions of the Department. It also includes scheduling of appointments, intake, eligibility and placement for Regional programs, file tracking, work in progress, transfers and assignment balancing, printing of various letters and forms, client history, verification of payments and management reporting. It will be the cornerstone for the Regional assistance programs (Child Care, Essential Health and Support Services, Homemaking and Residential Services etc.) and approving payment for these services. These requirements are outside the Genesis SAP/R3 application for corporate financial systems.

The project is being developed using an Oracle database and PowerBuilder user interface which is the Corporate and Provincial standard. This is a successful and stable product for which many resources are available. The system will interface with the Provincial Comprehensive Income Maintenance System (CIMS), Caseworker Technology (CWT), Ontario Works Technology and the new Corporate accounting system scheduled to be released in April 1999.

The Decision Support System was removed from the district office computers on December 23rd. A transition workgroup has been formed to ensure that Social Services continues to provide integrated services and co-ordinated case planning. Other systems and manual processes will be utilized to ensure that clients receive employment and financial support in a timely and efficient manner. This is being accomplished in a phased approach with longer term strategies to transition towards the introduction of RSVP in the fall of 1999. At this time, these strategies have had success and staff are working better with paper and other supports than with a faulty system.

Benefits Of The DSS Process

The DSS experience has been challenging, nevertheless valuable products have resulted from it. For example, the Business Process Reengineering activity yielded a new service delivery model and enabled Social Services to re-define its business systems requirements consistent with changes in Provincial legislation and systems direction. The new service delivery model is more client centred and employment focused. In addition the staff in the field are increasingly comfortable with the use of automated systems since they had little or no experience with computers prior to this initiative. Valuable lessons have been learned in the development and introduction of automated tools into the working production environment.

FINANCIAL IMPLICATIONS

The capital expenditure of \$8M for business process reengineering and information systems development included:

- \$3.1M for business process reengineering, staff training, and
- \$3.4M for software application development (including: Phase I development consultants, development software licences, Phase II development consultants);
- 1.0M for computing and communications infrastructure and equipment leases (including: facilities for server rooms, high speed lines, line 560-6000, ISD support);
- \$600,000 remains in the capital authority.

Of the \$3.4M for software application development, it is estimated that 15% of the expenditures are a cost avoidance for the RSVP project. In addition, \$1.2 M was used for the Phase I of DSS which was in use for close to two years. The \$3.1 M for business process reengineering and staff training has produced expected results and the \$1.0M for computing and communications infrastructure has been successfully completed and is still required.

CONCLUSION

Through these challenging times, Social Services has been able to refocus its technology strategy to ensure that Social Services staff have the tools they need to do their work efficiently and effectively and meet client needs.

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