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TELECOMMUNICATIONS AND NETWORK STRATEGY AND IMPLEMENTATION PLAN – PHASE II

The Finance and Administration Committee recommends the adoption of the recommendation contained in the following report, December 4, 2003, from the Commissioner of Finance:

1. RECOMMENDATIONS

It is recommended that:

1. Council approve the implementation of Phase II of the 2003 Telecommunications and Network Strategies as described in this report, subject to approval of funding included in the proposed 2004 Business Plan and Budget.

2. PURPOSE

This report provides Council with staff implementation plans for addressing the recommendations made in the Graycom Analysis "Telecommunications and Network Strategy and Implementation Plan – March 2003" report.

3. BACKGROUND

At its meeting of June 27, 2003, Regional Council received the report prepared by Graycom Analysis entitled "Telecommunications and Network Strategy and Implementation Plan for the Regional Municipality of York – March 6, 2003" (the TNS Report). The TNS Report was the outcome of a study conducted by Graycom Analysis. The purpose of this study was to review the alignment between present networks and the evolving needs of Regional departments for communications, and to propose a multi-year business solution.

The Corporate Technology Review Committee (CTRC) reviewed this report and their input was incorporated into its content. The CTRC supports the recommendations contained in this report.

Based upon this report, Council authorized staff to make refinements to the existing networks and strengthen existing telephone practices during 2003. In addition, staff were directed to bring forward this subsequent report addressing the multi-year implementation for the balance of the strategy recommended by Graycom prior to the 2004 Budget.

4. ANALYSIS AND OPTIONS

4.1 Summary of Proposed Actions

1. Reduce costs and improve customer service and network reliability by integrating the existing separate voice and data networks to a single Region-wide network using internet protocol and external support services for both voice and data.
2. Refer the remaining recommendations to a cross-functional multi-level staff committee to further develop buy-in and business cases in 2004.

4.2 Graycom's Recommendations

The following summarizes the high level recommendations made by Graycom (Detail action items have been omitted for brevity):

1. The Region "must evolve to an architecture for a converged voice and data network, including wireless integration, to meet the future needs of the departments". Convergence means running both voice and data services over a common network requiring only a single cable to each work station and a shared building access at each location. Wireless integration means eliminating cable within buildings where possible, and enabling cellular services to and from in-building voice services. A converged network enables new departmental requirements for functionality, it greatly simplifies staff moves and relocations, and does not require separate tools, staff and skills for voice and data network management and administration effort. In summary, converged networks lower the cost of meeting future growth requirements, are business driven, provide ease of management and low total cost of ownership for a reliable, scalable, open, flexible, multi-service, multi-location communications service.

2. As more departments implement call centres as a way of providing services to their customers, the Region must have the departments build and maintain a common database of program information and frequently asked questions.

   This recommendation supports recommendation 4 below and should be addressed as indicated with that item (see below).

3. The Region needs to implement common call centre tools to capture information that will enable service level reporting and transfer of call information between call centres and service providers.

   This recommendation supports recommendation 4 below and should be addressed as indicated with that item (see below).

4. The Region should implement a Region wide single point of contact Call Centre (SPOC) to assist first time callers and to handle general information queries. The SPOC will use the same call management tools as special purpose call centres and

access a common database of program information and frequently asked questions as referred to in recommendations 2 and 3 above. There will continue to be a need for the specialized call centres (i.e. Health Connection; Community Services & Housing Contact Centre) to address specific subject matter.

This vision will improve the efficiency of call handling and answering routine calls and increase customer service. Championing the business process change and funding requirements for a SPOC needs to be addressed outside the Information Technology sphere. It is, therefore, recommended that this item be referred to a cross-function multi-level staff committee for further development of commitment and a business case during 2004.

5. Establish multi portal technologies in the regional contact centre and provide access for citizens in their media of choice.

   The time frame envisioned for this initiative is four to five years out. It is recommended that due to the rapid pace of technology change that this will require three to four years for implementation.

4.3 Details of the Proposed 2004 Action Plan

4.3.1 Move to a fully converged Voice and Data infrastructure

A converged network runs voice and data over a single network and infrastructure rather than the present two networks. Phones may appear like traditional sets or be software enabled computers. Moving phones becomes a simple matter of plugging into an available jack; calls will find the device. Voice and computer device relocations and use are further enhanced by using wireless technologies for building infrastructure, where practical, in new and or upgraded installations. Another emerging technology that is enabled through use of wireless building infrastructures the use of cellular devices for both in building and remote use, with the advantage of a common voice mail box.

With the present technical resources available, ITS is unable to pursue a converged network while managing and supporting the current networks. The number of staff required, and the variety of skills needed to implement and manage a converged network, is beyond the present capabilities of the Region. Investment in new network management tools and equipment would also be required. It is therefore proposed that a vendor supplied and managed solution be investigated in 2004 through specification, issue and analysis of an RFP.

Details of costs and benefits will be determined through the RFP process. The cost of professional and legal services for contract preparation is an estimated to be $150,000. The cities of Mississauga and Hamilton have implemented converged Internet Protocol (IP) based voice and data networks. These networks were implemented in 2002 in the case of Mississauga, and 2003 in the case of Hamilton. In both cases, savings on voice services, excluding long distance, are over 50% at $700,000 annually and $1,500,000

annually for Mississauga and Hamilton respectively. Based on these examples, a 20% savings at York Region is reasonable. Such a savings would be in the $400,000-500,000 per year range. This savings is in “hard” costs.

The telecommunications and data network must now be considered essential infrastructure without which critical business operations and applications cannot be delivered. The implementation of the recommendations will ensure that the network provides the performance, reliability and availability to support the Region’s operations and enable more efficient operations. In addition, there will be the flexibility to quickly address changing requirements and growth. Many organizations, including the Cities of Mississauga and Hamilton, have implemented Voice Over Internet Protocol (VoIP) citing reduced cost of operations and support that provide early payback on the initial investment.

4.4 Business Drivers and Value

Specifically, the value of these changes is:

- Reduced risk of downtime impacting employee productivity and customer service.
- Reduced acquisition, implementation and support costs.

4.5 2003 Accomplishments

The actions from the Graycom Report authorized by Council at their June 27, 2003 meeting included 28 of 56 quick hit items. These actions have or will result in the following:

1. Technical Clean up of Voice Networks

This project ensures that all calls are correctly routed, potential for busy signals is reduced and calls use the least costly routing. During the investigation process, only minor changes were identified and these changes were made with minimal cost to accomplish five quick hit items. An additional quick hit item involving routing of calls to the 416 area code will be addressed this year with the implementation of the FCI Broadband Local Calling project.

2. Consolidate Voice Mail Systems

Preparatory work for this project is complete, with implementation awaiting the results of the Network Assessment project (see below) to ensure network capacity and reliability. Nine sites having local voice mail systems will be consolidated at either the Administrative Center (AC) or South Services Center (SSC). Two sites have been consolidated and two new sites activated (approximately 180 voice mail boxes) onto the AC voice mail system. The additional hardware components for the two main sites (AC and SSC) and upgrade of their voice mail software has been completed.

Activation and move of the voice mail boxes at the remaining five sites will take place in the first quarter of this year. Callers to the 11 locations will have access to a common automated staff voice directory. Staff at these locations will be able to have all their voice, email and fax messages accessed from a common mail box (unified messaging) if required, and internal support requirements will be reduced. In addition, the benefits of failover and disaster recovery initiatives between the AC and SSC will be extended to the other sites. The current systems require upgrading in April 2004 due to the non-support of the operating system as, capacity requirements and need to add unified messaging. The five year cost of the consolidated system will be $210,000 versus $396,000 to maintain the present systems. The five year savings will be $186,000.

3. Network Assessment

Selection of a vendor to provide a network assessment is complete, however this process has taken longer than expected. The project will, therefore, not be completed until the first quarter of this year. The cost of the assessment will be the budgeted $75,000. The assessment will ensure that future capacity upgrades are performed only when necessary, and that additional services can be safely accommodated. In addition, the information provided will be used to assist in the development of an RFP for moving to an externally managed combined voice and data network as proposed in this report, with a potential savings of at least $400,000 per year.

4. Telephone Directory Cleanup

The White and Blue pages have been updated. All advertised numbers on the Region's web pages have been identified and 20 numbers need further investigation. Some of the issues discovered are: incorrectly typed numbers, number rings but there is no answer and numbers not in service. All these issues have been corrected and validation of phone numbers in over 100 Regional brochures will be completed in the first quarter of this year.

5. Telephone, Voice Mail and Customer Service Training

Project and working teams have been created, "Pocket Reference" documents have been created and updates to the Intranet have been made to improve on "quick reference" material. Training material will be completed by September 2004 and delivery of the training will be completed by December 2005.

6. Evaluate our Redundant Link Between Administrative Centre and South Services Centre

This project is intended to determine if our current two fibre paths between AC and SSC are, in fact, redundant and pose minimal risk of failure. High-level network drawings from the Region's fibre network providers have been received. These are being assessed for points of risk based on where the fibre from these providers cross paths or run on the same road. Detailed fibre drawings will then be provided by the vendors for the areas of

risk. Once the evaluation is complete, the Region will understand whether there is a risk of a common failure of the network.

7. Voice Traffic Studies

This project analysed the Region's current voice traffic at each site for potential cost savings. The analysis has been completed, with the identification of $54,000 in annual savings. Voice network changes to implement these savings will be completed in January of this year.

5. FINANCIAL IMPLICATIONS

The 2004 cost of implementing the recommendations contained in this report is $150,000 for specification, issue and analysis of an RFP for a vendor supplied and managed converged voice and data network. This is included in the proposed 2004 Business Plan and Budget. Details of costs and benefits will be determined through this process. Potential "hard" savings are conservatively estimated to be between $400,000 and $500,000 annually, based on the experiences of both Mississauga and Hamilton.

6. LOCAL MUNICIPAL IMPACT

There is no municipal impact resulting from the implementation of the recommendations contained in this report.

7. CONCLUSION

The Graycom report provided plans to align network technology and technology services with the initiatives and future needs of departments to deliver quality, cost effective, customer service oriented programs. This report presents a common sense, low cost and risk approach to address the need for a flexible and reliable voice and data network.

The Senior Management Group has reviewed this report.