

V.8. Outsourcing Project for Telecommunications Services

V.8. OUTSOURCING PROJECT FOR TELECOMMUNICATIONS SERVICES

1. INTRODUCTION

On July 9th 2007, the City of Montréal (the City) issued three calls for tenders with the goal of selecting one or more suppliers that could provide data transmission, landline telephone and cellular telephone services. The major contracts for these services were to expire in the fall of 2008.

These three calls for tenders were also intended to generate significant savings for the City.

The City had previously awarded a five-year contract to TELUS for activities related to the operation of its telecommunications network and Bell Canada had been the supplier of Centrex-type landline telephony for a number of years.

The City stated in the technical specifications used in the calls for tenders for landline telephony and data transmission services that it owned a private telecommunications network which it had developed over the past 20 years.

Because of the strategic importance that the telecommunications sector (data and voice) assumes in providing services to the public, the City sought a versatile, stable, reliable core network that would support shared services.

The City thus envisioned merging its service delivery channels, with an eye to migrating to VoIP telephony. To this end, it intended to entrust the management, operation and development of its telecommunications network to an outside supplier.

The City also sought a supplier that could take over its existing assets (for example, its telecommunications network and associated equipment, such as the switching equipment and servers supporting network operations), replace or upgrade them as needed and deliver the expected quality of service.

The City's objective in short was to select one or more suppliers that could provide landline telephone services, including migration to VoIP telephony, and data transmission services at the

lowest cost and with the expected levels of service, based on a [translation] “per-jack service” model.

According to the proposed scenario, the City would retain ownership of its assets at the end of the contract but would entrust the responsibility of designing the network to the supplier, provided that the latter delivered the requested service levels.

The specifications stated that the services should be available for the former suburban boroughs, the boroughs of the former City of Montréal, the reconstituted municipalities, the Service de police de la Ville de Montréal (SPVM), the Service de sécurité incendie de Montréal (SSIM) and the various municipal and paramunicipal bodies. It was, however, stipulated that the contracts resulting from the calls for tenders would only pertain to the central departments, including the SPVM, the SSIM and the boroughs of the former City of Montréal.

During its meeting of January 31st 2008, the agglomeration council awarded the contracts for data transmission and landline telephony to TELUS Québec (TELUS) for periods of 10 years and 7 years, respectively. It also awarded a four-year contract for cellular telephony to Bell Mobility.

Table 1—Authorized Expenses Included in the Resolution

Firm	Contract	Amount (including taxes)	20% contingency reserve (including taxes)	Total (including taxes)
TELUS Québec	Data transmission (10 years)	\$47,483,284	\$9,496,656	\$56,979,940
TELUS Québec	Landline telephony (7 years)	\$35,000,790	\$7,000,158	\$42,000,948
Bell Mobility	Cellular telephony (4 years)	\$7,486,818	\$1,497,364	\$8,984,182
	Total	\$89,970,892	\$17,994,178	\$107,965,070

In March 2008, the Direction des systèmes d’information (DSI), which is now part of the Service des immeubles et des systèmes d’information, launched the Centre d’expertise en télécommunications (CET). Its primary function was to manage these contracts and ensure a smooth transition to the new telecommunications services.

In addition to the CET and the DSI, the following stakeholders were involved in various phases of the project:

- the Direction de l'approvisionnement of the Direction générale;
- the Division du droit contractuel of the Service des affaires juridiques et de l'évaluation foncière;
- the Service des finances.

2. AUDIT SCOPE

Our mission initially focused on the management of outsourcing resulting from the telecommunications service contracts that were awarded, as well as the policies, controls, guidelines and monitoring procedures that had been instituted.

However, since the outsourcing was not yet being effectively managed when our work began, we fell somewhat behind schedule in examining the project's status, analyzing the causes of the delay and identifying the challenges associated with the operational phase, which was to begin in 2011.

In addition, the discovery of fraudulent billings by several companies providing alternate services to the DSI led us to examine the process for purchasing telecommunications services, which is the subject of this audit.

In accordance with the practices of the general auditor's office, we performed our audit based on those documents available to the City and information obtained from its employees. Consequently, we did not consult TELUS's staff during this audit.

We conducted the audit from October 2009 to February 2010. This report does not accordingly reflect events subsequent to the latter date.

We used the City's policies and directives as well as best industry practices as our evaluation criteria.

After assessing the risks and issues related to the cellular telephony portion of the project, we decided to exclude it from the scope of our audit.

We will begin by presenting an overview of the current project status in the next section. Afterwards, we will review the chronological sequence of events that led to the awarding of the

contracts, highlighting certain problems that arose at each step. Finally, we will discuss the current and future issues that these problems have caused, together with our recommendations for addressing them.

3. FINDINGS AND RECOMMENDATIONS

3.1. ACCOUNT OF THE PRESENT SITUATION

3.1.1. DELAYS IN COMPLETING THE PROJECT

3.1.1.A. Background and Findings

The winning bidder for the landline telephony contract was obliged to take control of this service once the Centrex telephone contract expired on October 31st 2008. The bidder that won the data transmission contract was required to assume responsibility for that service on November 30th 2008.

A transition period had been scheduled following the approval of the two agreements for landline telephony and data transmission before the actual start of service delivery. This would allow TELUS to perform a due diligence on city-held information that had not been available to TELUS when it prepared its bid. If the authenticated information differed substantially from the information that the City had provided, TELUS could request a concomitant adjustment to its proposed unit prices. As a result, it would have been necessary to negotiate an amendment and submit it to the appropriate authorities.

Each agreement also stipulated that TELUS would draft a detailed transition plan within 45 days. In this plan, TELUS was to present its strategy and methods, as well as the management and governance processes that would be instituted to control and monitor the transition rigorously. TELUS was to state the risks associated with the transition and their impact on service delivery and the overall schedule. TELUS was also responsible for the risks associated with the proposed transition plan and for the measures needed to manage them.

According to the schedule presented in the executive summary for the two contract awards, the period for taking charge of landline telephony and data transmission services was to conclude at the end of 2008.

Furthermore, according to the landline telephony specifications, TELUS was to carry out the migration to VoIP telephony in accordance with the terms stated in the price chart. The specifications did, however, mention that the company could reach an agreement with the City to alter the plan for migration to VoIP telephony.

FINDING

We nonetheless found that the transition plans for taking charge of landline telephony and data transmission are still incomplete, although the contracts were awarded over two years ago.

FINDING

At the time of our audit, approximately 11% of the Centrex telephone lines and 20% of the network jacks for data transmission had been migrated. We also found that migration to VoIP telephony had not been started.

3.1.2. FINANCIAL CONDITION OF THE PROJECT

3.1.2.A. Background and Findings

As shown above in Table 1, the total amount of authorized expenses for the three contracts stands at \$108 million, including a 20% contingency reserve for the delivery of additional goods and services.

The amounts allocated in the agreements are maximum amounts and they apply to the full duration of the contracts. Any changes to these financial allowances that prove necessary must be addressed in an addendum.

The executive summary for the contract awards stated that the effort to outsource telecommunications services was among the objectives targeted in the city-wide review of activities, services, operations and programs (RASOP). One of these objectives was to optimize use of the City's telecommunications networks. **To this end, the executive summary specified that these contract awards would result in savings of some \$50 million over a 10-year period.**

According to the executive summary, the main cost savings would involve landline telephony services and were largely predicated on the use of VoIP telephony, which was to begin gradually in the first year following the contract awards.

FINDING

As we shall discuss in greater detail in Section 3.4.3 of this report, our review of current project cost forecasts for data transmission and landline telephony revealed that the budgetary allowance initially provided by the municipal authorities, including the contingency reserve for delivering additional goods and services, has for all practical purposes been exhausted.

3.1.3. LIST OF UNRESOLVED ISSUES BETWEEN THE CITY AND TELUS

3.1.3.A. Background and Findings

Several factors have contributed to the delay in carrying out the transition plans. To iron out the issues encountered and stimulate progress towards completing the plans, a joint problem-solving committee was established, with the task of recommending solutions to disagreements between the City and TELUS.

FINDING

At the time of our audit, 13 issues had been identified and were still under discussion, including especially the:

- **need for clarification pertaining to the “per-jack service” model and the dedicated lines;**
- **inclusion of the SPVM under the data transmission contract;**
- **need for clarification on the active port model;**
- **management of the project’s security aspect;**
- **third-party billings.**

It should be noted that the resolution of these issues could have major consequences on the project’s financial framework.

We will discuss the project’s history in the following section to achieve a better understanding of the various factors that have led to the current issues.

3.2. PROJECT HISTORY

3.2.1. STRATEGIC TELECOMMUNICATIONS PLAN

3.2.1.A. Background and Findings

In 2003, the executive summary for the contract awards stated that the DSI, formerly known as the Direction des technologies de l'information (DTI) of the Service des affaires corporatives, gave CGI a contract to prepare a strategic telecommunications plan.

The contract awarded to CGI required several deliverables, the most important of which are listed below:

- taking an inventory of:
 - all telecommunications assets and functions used by the City,
 - service contracts and internal resources dedicated to telecommunications functions,
 - current telecommunications expenditures and the value of assets in use;
- designing the City's master plan for telecommunications over the short, medium and long terms;
- comparing the City's various options for acquiring telecommunications solutions;
- preparing specifications for acquiring the required telecommunications resources.

For each proposed acquisition option, CGI was also required to evaluate the nature of the technological and financial risks that the City would have to assume.

The process was conducted in six phases over a two-year period, from June 2003 to June 2005:

1. Start-upJune 2003
2. Inventory of features October 2003
3. Identification of future needs October 2003
4. Strategic directions June 2004
5. Purchasing scenarios January 2005
6. Specifications..... June 2005

After completing its inventory of telecommunications assets, functions and needs in May 2004, CGI issued its diagnostic report, which highlighted the following findings:

- the network's limited capacity to support an expanding range of applications;
- an insufficient level of reliability for critical corporate applications;

- a high degree of obsolescence in the network and related equipment;
- the inability of the current network to provide remote access to data.

In addition, CGI recommended the following strategic directions, namely to:

- provide sufficient capacity to meet new business needs;
- ensure the availability of critical corporate applications;
- plan network updates and the associated investments;
- deploy remote data access over the entire territory;
- benefit from economies of scale by adopting a unified planning approach;
- institute a security framework to ensure data confidentiality, integrity and availability;
- establish an annual revision cycle for the plan.

At the conclusion of its work in June 2005, CGI submitted proposed specifications for use in the next call for tenders. These specifications covered all of the following services: data networks, landline and wireless telephony, security and call centres. CGI confirmed the aforementioned strategic directions in these specifications and proposed the [translation] “user-planner” method of acquisition, which involves transferring the telecommunications services and their operation, including ownership of the assets, to the winning bidder. Under this method, the City would retain its planning and tactical management roles.

One year later, in May 2006, the DSI presented the chair of the executive committee with conclusions from the process involved in drafting the strategic plan and recommended an acquisition process that will be discussed in Section 3.2.3.

Pursuant to its contract, CGI completed the six designated phases for drafting a strategic telecommunications plan and recommending the best acquisition method. The conclusions of each phase were included in presentation materials submitted to the DSI.

FINDING

No formal strategic plan was drafted or subsequently adopted by the municipal authorities. Furthermore, we found that the strategic directions referred to in the executive summary were only distributed to a limited number of DSI employees. These directions had not been updated when the specifications of the call for tenders were adopted, neither had they been subjected to a risk analysis that would assess the consequences of the selected outsourcing method and possible mitigating measures.

3.2.2. DRAFTING OF SPECIFICATIONS

3.2.2.A. Background and Findings

In August 2005, the DSI consulted the Gartner firm to determine whether the specifications proposed by CGI complied with best industry practices. Based on its study, Gartner recommended that the specifications be revised and that an outsourcing approach be adopted in which the City would be responsible for defining its needs and expressing them in terms of service levels, rather than merely retaining the right to have a say on network solutions.

According to the information obtained, a contract worker under the supervision of a DSI manager was responsible for amending the specifications. A second contract worker assisted with the preparation of a set of specifications whereby the contract would go to the lowest compliant bidder and with the subsequent drafting of three sets of specifications.

FINDING

In fact, the responsibility for preparing the specifications that had led to these three calls for tenders was for all practical purposes limited to this team of three people.

FINDING

Moreover, key city experts in telecommunications and computer security were hardly consulted, if at all. In one case, they were even excluded from the project.

As a result, various needs were not considered or remained ill-defined when the specifications were drafted. Here are a few examples:

- the landline telephony specifications stated that the City owned all of its Centrex telephone sets and all of the telephone cables in its buildings, which proved to be untrue;
- the City did not have a complete inventory of the services that it received from its former landline telephony supplier;
- the City did not have a complete, up-to-date inventory of its Centrex lines, telephone jacks and network (Ethernet) jacks;
- the data transmission specifications stated that only the (PC) workstations used network jacks, whereas a great many peripherals (such as printers and photocopiers) used network jacks as well. These specifications excluded one of the City's main security systems under the pretext that it ran on an independent network, while it actually relied partly on the data transmission network.

Furthermore, it had already been decided even prior to the date set for the opening of the bids that any major change to the information provided to potential bidders or to the requirements stated in the tender documentation would require the writing of an addendum.

FINDING

In this regard, we found that potential bidders raised many questions after receiving the two tender documents, forcing the Direction de l'approvisionnement to issue several addenda. We also noticed that multiple inventory statements were sent to the bidders during this period. Moreover, some of these statements were revised¹ and had to be sent again.

FINDING

During our audit, we also observed that the landline telephony specifications required bidders to take into consideration the new "311" call centre, which would serve as a single point of contact for all requests from the public. Through an addendum, however, this call centre was excluded from the specifications without any explanation or notification to those in charge. Moreover, this exclusion was extended to all other municipal call centres in operation (such as the DSI help desk).

FINDING

According to the specifications, the management of the SPVM's data transmission network should have been entrusted to the designated supplier. The SPVM objected, however on grounds of its high security standards. According to information obtained from the SPVM's head of telecommunications, the SPVM objected on several occasions to outsourcing the management of its network. The head of telecommunications also told us that many changes were made to the specifications in the weeks preceding the calls for tenders, although they were never submitted to him for verification.

¹ See Section 3.6.4. of this report.

3.2.3. ACQUISITION PROCESS

3.2.3.A. Background and Findings

Different directions were considered throughout the process that led to the three calls for tenders. Note that the opinion of the Division du droit contractuel was sought at various stages of the acquisition process.

First, CGI prepared specifications for acquiring the telecommunications resources. At this point, the selected procurement strategy was to go to the market with a single call for tenders that included all resources and to use the tender weighting and assessment system.

During the summer of 2006, according to the information we obtained, the DSI recommended retaining the single call for tenders but using the lowest qualified bidder as the basis of selection. The specifications prepared by CGI were not used in the tender process.

FINDING

However, during a presentation in the fall of 2006 to the chair of the executive committee, the director general and the director of the Service des affaires corporatives, the fundamental directions set forth in the strategic plan (i.e. awarding all telecommunications services to a single supplier through a single call for tenders) were challenged.

FINDING

During a subsequent presentation, the DSI asserted that issuing multiple calls for tenders would require revising the specifications and would delay completion of the tender process. The DSI was also of the opinion that operational logistics would be more complex, since there would be several contracts to manage. It also believed that the selection of more than one supplier would further complicate the project because of the perceived need to manage the relationships between the various suppliers, who are often competitors.

In parallel, within the scope of the city-wide review of activities, services, operations and programs (RASOP), the IT committee recognized the project to outsource telecommunications as a potential source of major savings and recommended that a call for tenders be issued as soon as possible.

Finally, according to the information we obtained, city management decided during the spring of 2007 to split the specifications and conduct three calls for tenders.

The foregoing situation with respect to the acquisition process resulted in the following issues:

- The decision to split the specifications into three calls for tenders, combined with the upcoming expiration of two major service contracts (telephony and network operation), created a situation that lent itself to the drafting of specifications that were difficult to interpret and that could therefore lead to some confusion.
- The DSI's commitment to optimizing telecommunications services within the framework of the city-wide review of activities, services, operations and programs (RASOP), which should have yielded major savings, helped to increase the pressure to issue a call for tenders as quickly as possible.
- The specifications stated that the City wanted a model that would enable it to pass on the costs of telecommunications services to the business units according to a shared service centre (SSC) model. Yet the fact that the billing model had not been adequately defined in the specifications led to differing understandings of this need by the City and TELUS.
- The objective of the specifications was to select a supplier capable of providing the desired services according to a "per-jack service" model. However, the fact that the "per-jack service" concept had not been defined in the specifications prevented the City and TELUS from agreeing on a joint definition of this concept. At the time of our audit, this item was one of the unresolved issues between the City and TELUS.
- According to the desired objective, the choice of solutions was left to the supplier who would, however, become responsible for meeting service levels. Although the specifications suggested that service levels were result-oriented, they introduced factors pertaining to solutions that the winning bidder would have to implement.

Among these factors, we noted the statement that *[translation]* "the bidder shall assume that each LAN port shall require 32 Kbps MAN per port. This arbitrary figure establishes common assumptions for comparison purposes". Indicating this type of value went against the very objective of the specifications, as it absolved the supplier of responsibility for service levels to be achieved. Furthermore, the inclusion in a single set of specifications of factors

imposing obligations in terms of solutions and results could lead to conflicts and disputes between the parties. At the time of our audit, this item was one of the unresolved issues between the City and TELUS.

- More than two years after the contracts were awarded, a lack of understanding persists between the needs that the SPVM expressed and those stated in the data transmission specifications.
- In the data transmission specifications, the supplier was required to replace all of the equipment that had been in use for more than five years. To satisfy this requirement, TELUS proposed replacing the City's switching equipment with hardware that did not correspond with the City's established practices. However, we found that this requirement was not mentioned in the specifications, nor was it raised by the committee during the technical compliance analysis.

Furthermore, we were informed that the SPVM's telecommunications network was subject to security policies from its partners, including the Royal Canadian Mounted Police and the Sûreté du Québec. However, the equipment that TELUS proposed did not correspond with the long-established practices of the SPVM.

3.2.4. ANALYSIS OF BIDS

3.2.4.A. Background and Findings

Analysis of the bids is a two-part process consisting of an administrative and a technical analysis. This is the stage at which criteria for acceptability and compliance, if defined in the tender documents, are verified to determine any non-compliant bids to be rejected.

After opening the bids, the Direction de l'approvisionnement performs an analysis of administrative compliance for each bid received. Several factors in particular are verified, such as:

- the price list (multiplication, addition and applicable taxes);
- the bid form (signature and original copy);
- the inclusion of a bid security that must correspond with the tender document requirements with respect to its form, period of validity and value.

Only bids deemed compliant in the course of this administrative analysis are to be submitted for technical analysis. Although the project leader is responsible for this analysis, it is conducted under the aegis of the Direction de l'approvisionnement. In this case, the DSI was responsible for conducting the technical compliance analysis.

According to the information we obtained, the technical compliance assessment begins with the lowest bid whenever the contract is to be awarded to the lowest qualified bidder. If that bid is declared technically compliant, the process ends without assessing the compliance of the other bids.

With regard to the compliance of bids, Section 2.1.15 of the specifications stipulated that *[translation] "for the purposes of compliance, for every clause marked with an *, the bidder must specifically identify in its bid the solutions that it proposes for meeting the City's requirements relative to the clause in question and any sub-clauses thereof, under penalty of rejection of the bid"*.

FINDING

In this regard, we found that the bidders were not required to demonstrate their technical compliance with all clauses in the specifications. Owing to this omission, the technical assessment committee was not required to verify each bidder's compliance with respect to these clauses (such as the clauses in Section 4 of the specifications, pertaining to management of inventory, service levels and billing).

The aforementioned situation with respect to analysis of the bids caused the following problems:

- the City had set out the criteria for eligibility and compliance that it intended to apply to determine the bids' compliance in the case of the two calls for tenders. However, although the City asked the suppliers to submit a price for service according to the "per-jack service" model, we found that TELUS added a rate based on a "per-port model" to the price chart in its bid for the data transmission component;
- TELUS's addition of this rate altered the terms of the tender documents because the bidders had been asked to propose a maximum monthly price for each of the items on the price chart, which was to include all costs, charges, professional fees and royalties, etc., required for delivering the service. By adding this item to the price chart, TELUS introduced \$500 in non-recurrent fixed charges for the installation of new ports, which would also apply when TELUS initially took over all of the City's existing ports;

- the port concept introduced by TELUS relates to a model involving the management of network equipment, in this case switches. The City, however, wanted a “per-jack model”, involving the management of network (Ethernet) jacks;
- through our work we found that the DSI never verified the bidders’ understanding of what “per-jack service” meant or asked them to explain how they interpreted the term;
- preventing the technical committee from examining the billing clause relieved the committee of its responsibility for ensuring that TELUS was able to produce a bill in accordance with the “per-jack service” model. At the time of our audit, however, TELUS still had not submitted a billing model that met the City’s requirements;
- this finding also applies to the clause pertaining to the management of service levels. In this case, the committee was not required to ensure that TELUS would be able to generate the reports needed to verify fulfilment of the service levels and that those reports would be available from a secure Web site. At the time of our audit, these reports still were not available.

3.2.5. TECHNICAL COMPLIANCE

3.2.5.A. Background and Findings

As previously noted, a committee had been tasked with analyzing the technical compliance of the bids for telephone services and data transmission.

FINDING

The committee’s report stated in both cases [translation] “that the TELUS bid had been reviewed and appeared to be compliant with the requirements set forth in the specifications”. The committee reported, however, that TELUS had issued comments on several occasions after accepting the requirements and was developing scenarios that could lead to confusion. The committee recommended confirming that TELUS fully accepted the requirements in the specifications and that it would deliver the services in accordance with the specifications at-hand and not on the basis of its own scenarios. For both reports, the committee attached a list of the clarifications to be obtained.

After receiving these recommendations, the Direction de l’approvisionnement, together with the Division du droit contractuel, requested TELUS to participate in two meetings—one on landline telephony, the other on data transmission—to obtain these clarifications. When the agreements between the City and TELUS were subsequently drafted, the clarifications that had been

obtained were recorded in an appendix prepared by the Division du droit contractuel for each of the two agreements.

In the notes that it prepared in advance of the clarification meetings, the Direction de l'approvisionnement finally stated that *[translation]* "the points at which you would offer cost savings to the City if you were awarded the two contracts will be discussed, since the City remains at liberty to negotiate a lower price with the lowest qualified bidder".

This situation regarding the issue of technical compliance caused the following problems:

- In the course of our work, we were unable to determine that the City had requested a lower price based on TELUS's comment that *[translation]* "should TELUS be selected in the calls for tenders for landline telephony services and data transmission services, a pooling of the resources listed in these two specifications would enable TELUS to offer the City of Montréal much more attractive prices for these activities".
- Based on our work, we found that the committee also recommended that other items be clarified, although these items were not clarified with TELUS. The following are among the most important items that the committee recommended:
 - To obtain confirmation from TELUS that TELUS was responsible for supplying the survival kits². At the time of our audit, however, the item concerning the terms for the survival kits was one of the unresolved issues between the City and TELUS.
 - *[Translation]* "[T]o obtain confirmation from TELUS that it understood the City's requirements for the issue of the CMDB (database of inventories and configurations) and would fulfil them". In this respect, the specifications provided that the supplier had to maintain an up-to-date CMDB that the City could access in real time.

TELUS still has not provided the City's representatives with the required access to the CMDB. This situation stems from the fact that TELUS has never been required to demonstrate (prove) that it met the requirements, despite the committee's recommendation in this regard.

² UPS equipment that can supply back-up power in the event of a power failure.

3.2.6. FINANCIAL ANALYSIS

3.2.6.A. Background and Findings

When the contracts were awarded, the agglomeration council, in conjunction with the Service des finances, recommended that the DSI review the financing and the budgetary allocation of these three contracts to:

- reap their expected gains;
- apportion investment and operation costs over the coming years;
- find the best financial solution for financing the entire project.

We should recall that the project to outsource telecommunications service had been identified as a major source of cost savings for the City as part of the city-wide review of activities, services, operations and programs (RASOP). The project's executive summary furthermore stipulated that awarding the three contracts would yield cost savings on the order of \$50 million over a 10-year period.

The designated model for billing the various business units should have been set up as follows:

- The existing account assignment model would be maintained for telephony;
- As appears in Table 2, the data transmission costs currently assumed by the DSI would be transferred to the business units according to the user pays principle, once Centrex telephony was migrated to VoIP telephony, without impact on their budget funds.

Table 2—Cost Transfers Assumed by the DSI

	Centrex telephony*	IP telephony*
Line	\$28.13	\$8.50
Voicemail	\$0.00	\$0.20
Data port	<u>\$0.00</u>	<u>\$19.00</u>
Total	\$28.13	\$27.70

* Monthly cost.

FINDING

During our meetings with representatives of the Direction des opérations budgétaires (DOB) of the Service des finances, we were informed that the DOB had been under pressure to conclude its work as quickly as possible because of the anticipated size of the savings and the impending expiration of the two large service contracts (telephony and network operations).

FINDING

We were also informed that no financing package had been prepared before the contracts were awarded and that the \$50 million savings estimate was unsubstantiated. Furthermore, there were no funds allocated to the CET's operating expenses in the initial project budget.

FINDING

Our analysis of the documents which we were provided revealed that the DOB had expressed reservations with respect to statements in the executive summary prepared by the DSI, the standard-bearer for this issue. The cited items indicated that:

- the average savings of \$5 million per year had been based on a 10-year reference period, whereas the three agreements had durations of 10, 7, and 4 years;
- the savings forecast had been [translation] "estimated" based on information supplied by the DSI;
- the file revealed neither a source for, nor an allocation of, the appropriations;
- the current budget process would not allow for the recovery of savings resulting from the establishment of new agreements in the boroughs. In particular, the City could not recover savings from the boroughs, as it could from the central departments.

FINDING

Additionally, we found that the DOB, despite openly expressing its serious concerns, had nevertheless issued a favourable opinion of the recommendation to award the contracts. Ultimately, the DOB's work on this case ended in November 2008, although the requirements in the council's resolution had not been met.

The above situation with respect to the financial analysis caused the following problems:

- In the absence of a financial framework at the time the contracts were awarded, the City could not have considered the possibility of funding the equipment supplied by TELUS under the two contracts. However, the City, with its very attractive borrowing rate, could have secured lower prices;
- The discussions between the Service des finances and the DSI reached an impasse because the DSI had not been able to:
 - Reconstruct the details of the annual telecommunications expenses used in the executive summary to justify savings of \$50 million, thereby casting doubt upon the expected gains,
 - Find the best financial solution for financing the overall project, including allocation of data transmission costs to the business units;
- The information used to establish the amount of savings listed in the executive summary did not take into account the contingency reserve of \$18 million (or 20%), including taxes. The municipal authorities were accordingly advised that savings would be \$50 million when in fact the figure was closer to \$32 million.

3.2.7. CENTRE D'EXPERTISE EN TELECOMMUNICATIONS (CET)

3.2.7.A. Background and Findings

As previously noted, the DSI established the CET with the mission of conducting strategic planning, overseeing service levels, managing contracts and optimizing telecommunications services.

According to the documents obtained, the CET is expected to become *[translation]* “a program consisting of multitalented resources that can simultaneously demonstrate and exercise the following skills:

- *contract management;*
- *project management;*
- *change management;*
- *communications management;*
- *technological watch;*
- *specialization in monitoring service level agreements (SLA);*
- *specialization in benchmarking”.*

The DSI asked the firm Secor to develop an appropriate organizational model for the CET. In its final report, dated June 12th 2008, Secor emphasized the need for an evolving team that would:

- switch from a resource-management to a results-management mode;
- be able to ensure compliance with the service level agreements (SLAs) and costs set out in the contract;
- be able to issue appropriate second expert opinions on the solutions recommended by TELUS.

Secor also recommended that the CET, as manager of outsourcing, be set up to maintain its role of [translation] “exerting leverage” over the outsourcer. It also suggested a change-management strategy to adopt in response to the transitional challenge represented by the implementation of a project of that type.

Once TELUS had taken control, therefore, the CET’s work was to be limited to ensuring that:

- the services were being rendered properly, according to the service level agreements (SLAs).
- bills matched the rates stipulated in the contract.
- the solutions recommended by TELUS corresponded with the City’s needs and interests (technological watch).

During its first few months, the CET was staffed by nine people, the great majority of whom were outside consultants. Nonetheless, after the *en masse* departure of contract resources in December 2008 and the departure of several members of the DSI’s management team, the new DSI management team was compelled to set up a new staff for the CET.

At the time of our audit, the CET’s staff consisted of 25 people, all of them internal and most working on the transition of services to TELUS. The City’s hiring freeze caused a delay of almost 12 weeks before the CET obtained permission to fill 12 of the positions on its staff.

The above situation concerning the CET highlighted resistance to change with respect to Secor’s mission.

To remedy this situation, Secor recommended that change occur through the establishment of a new organization, the hiring of personnel with the additional qualifications required and the gradual transfer of existing staff to that organization with a training plan, where appropriate. To this end, change-management and human resources management teams would be involved throughout the transition process.

FINDING

We found that Secor's recommendations have still not resulted in a formal action plan, as we shall show in Section 3.5.1 of this report.

3.2.8. DUE DILIGENCE

3.2.8.A. Background and Findings

Two months after being awarded the contracts, TELUS submitted a document containing the transition plan and the report on changes in discrepancies, which is usually known as the due diligence report.

The DSI, however, rejected this report. The main reason for the DSI's negative response was that TELUS was requesting adjustments that would entail additional costs to the City of some \$11 million. Moreover, contrary to the established process, TELUS was requesting a monetary adjustment per [translation] "port", whereas it had been agreed that only the unit prices submitted could be changed.

After the due diligence report was rejected, an effort was launched to clarify issues between TELUS and the DSI. This initiative resulted in TELUS's filing a revised version of the due diligence report on July 3rd 2008, which was approved by the DSI on July 9th 2008.

FINDING

With respect to the due diligence report approved by the DSI, we found that TELUS had not requested any adjustment to the proposed unit prices. However, the report did refer to the discovery of digital lines, which resulted in a monthly surcharge of \$8.33 per line and a reduction in the number of VoIP telephones.

Furthermore, the DSI did not approach the Direction de l'approvisionnement for its approval until negotiations had concluded.

FINDING

The Direction de l'approvisionnement, which did not take part in the negotiations, brought the following two points to the DSI's attention:

- the City had correctly notified the bidders of the existence of digital lines and was questioning the validity of the \$8.33 monthly per line surcharge that TELUS was seeking;
- the reduction in the number of VoIP telephones would have an effect on the City's total bill, and any major discrepancy between the forecast rollout of VoIP technology and the number of lines actually installed would have a budgetary impact.

FINDING

Despite the points that were raised, the DSI nonetheless signed the due diligence report without obtaining the approval of the Direction de l'approvisionnement.

FINDING

Moreover, despite the fact that several items had a financial impact on the project costs, the due diligence report provided no overall cost assessment to the City.

The situation discussed above regarding the due diligence report caused the following problems:

- Two outside consultants defended the City's interests during the issue clarification process. Although these consultants kept the head of the CET well informed, they did not have all of the information required, since they lacked an in-depth knowledge of the case and of the City's activities and internal workings;
- The consultant that took part in drafting the specifications and who had acted until that point as the project's principal contractor had been dismissed shortly before the negotiations;
- Our work led us to observe that several items mentioned in the due diligence report have a financial impact on the project cost. The following are among the most important:
 - The call centre and auto-attendant solutions that could distribute calls were excluded from the proposal, for both Centrex and VoIP telephony,
 - A \$500 fee for taking over each existing port applied when TELUS initially took charge of the network,

- A \$500 fee applied for each additional port in excess of the upper limit of active ports established in the due diligence report,
- A monthly surcharge of \$8.33 per line was billed to the City after the discovery of some 3,000 digital analogue lines,
- The Evergreen program to update the equipment covered only 500 switches over five years, whereas due diligence had set this number at more than 790. If the SPVM's switches, which were not considered during due diligence, are included, this number exceeds 1,100;
- After due diligence, the then-director of the DSI estimated that the anticipated savings of \$50 million would have to be revised downward to \$40 million. According to the director, this reduction was attributable to the following factors:
 - A reduction in the number of Centrex lines to be converted to VoIP telephony,
 - Costs associated with the discovery of the digital lines,
 - Costs associated with the increase in the number of ports that the winning bidder would have to support,
 - The cost of improvements required to municipal facilities.

3.2.9. MIGRATION OF THE TELECOMMUNICATIONS SYSTEM

3.2.9.A. Background and Findings

Summary transition plans for the migration from Centrex landline telephony to data transmission and VoIP telephony were accepted at the management committee meeting on June 20th 2008, with TELUS and DSI representatives attending.

Under these plans, TELUS would conduct pre-visits to approximately 250 sites housing telecommunications infrastructure and to approximately 112 additional landline telephony sites. These visits were intended to prepare the facilities to accommodate new equipment, to enhance certain switches as needed and to bring the sites' electrical facilities up to standard.

TELUS, however, had to upgrade the telecommunications rooms. However, contrary to the information provided by the City during the tender process, it was the City, not TELUS, that assumed the cost of more than \$306,000, including taxes, to upgrade the facilities.

The pre-visits occurred over a period much longer than had been anticipated, however, because of TELUS's difficulties accessing the sites. These problems were partly due to a lack of planning. At the same time, in October 2008, TELUS replaced its project director.

FINDING

As stipulated in the contract, TELUS had to take over the Centrex telephone services on November 1st 2008. Difficult negotiations with the former supplier, however, delayed resale³ of the City's telephone lines, leading to complications in the processing of requests for changes, additions and moves (CAMs) for the City's telephone services.

During the November 6th 2008 meeting between the CET and TELUS, the City expressed its reservations about the project. These concerns were magnified by the problems that occurred after the resale. The CET therefore requested a plan for corrective action, which TELUS produced on November 13th 2008.

In a letter to TELUS dated November 7th 2008, the DSI's representative stated that the City would continue to deal with its former supplier until the conclusion of the resale agreement and that all bills received from its former supplier would be charged against the amounts that the City had to pay to TELUS. The agreement for the resale of the City's Centrex lines was finally concluded between Bell and TELUS in November 2008.

After receiving TELUS's plan for upgrading and taking charge of the data transmission network as of December 1st 2008, the new acting director of the DSI requested in a letter dated November 21st 2008 that TELUS submit a new plan for corrective action to replace the one received on November 13th, which had been deemed unacceptable.

Furthermore, after the discovery of anomalies in the management of general agreements at the DSI and the departure of the consultants in charge of deploying contracts at the CET, the DSI sent TELUS a request for a moratorium to suspend the project for three months so that:

- TELUS could catch up;
- The CET could rebuild its team, which was composed almost exclusively of outside consultants.

On December 24th 2008, in reply to the request for a moratorium, TELUS's vice president, public and parapublic markets invoked the terms of the agreement and sent the City a notice of delay.

³ Resale is the sale by a supplier of a telecommunications service—in this case, telephone lines—to another supplier of telecommunications services.

After receiving the notice of delay, the acting director of the DSI outlined the situation during a meeting with the director general on January 12th 2009. An assessment of various options for breaking the deadlock was also made at that meeting.

In January 2009, after the DSI appointed a new project head, the City and TELUS held meetings to define a joint remedial plan.

FINDING

Nonetheless, the delay in the migration plans and the fact that TELUS was still completing the landline telephony resale created heavy pressure to initiate the migrations as soon as possible. Under these circumstances, the proofs of concept were limited to the migration of the site at 465 Saint-Jean Street.

FINDING

Once the site was ready, the other migrations began. However, after the emergence of technical problems that occasionally resulted in service interruptions or operational failures, the migration of Centrex telephony was suspended on August 5th 2009.

At the time of the suspension, approximately 11% of the Centrex-type lines had been migrated.

After this halt, a meeting between DSI management and TELUS was held on August 26th 2009 to clarify the situation and encourage resumption of the work. An exchange of correspondence then ensued between the City and TELUS on expected results following this meeting.

The situation for data transmission was similar: migration had begun but was also suspended on September 18th 2009. At the time migration was halted, 20% of the network jacks had been migrated.

In October 2009, the City and TELUS held a meeting to create a new game plan. This meeting led to the establishment of a joint issue-solving committee. During our audit, we obtained a list of the 13 issues that the committee was to address, some of which have already been mentioned in this report.

In addition, the DSI announced a second phase of migration of the Centrex telephone lines to TELUS on February 24th 2010. According to the release issued on this subject, this second phase was expected to end on June 30th 2010. Finally, a third and last phase would be initiated.

We were also advised that the data transmission migrations were scheduled to resume on April 6th 2010.

According to the information obtained, however, the migration of [translation] “sensitive” sites, such as the SPVM and the SSIM, would not be performed until TELUS had supplied, and the City’s management had approved, the required analyses of risks and impact.

According to the information obtained, no date has yet been set for the migration to VoIP telephony.

This situation concerning the takeover of the telecommunications system caused the following problems:

- According to the person in charge of migration for the City, migration was suspended after various technical problems and issues of verification, organization and project monitoring were observed that affected the work of users or prevented the delivery of high-quality services;
- The underlying reasons for the suspension of migration were numerous. Among the most prominent was the absence of analyses of risks and impact that would have resulted in more attention to “sensitive” sites. In this respect, a migration project should not only address technical matters but also take into account the continuity of the City’s services and operations. These problems also stemmed from the lack of a complete inventory of the equipment and features that the City used;
- Following these events, it was evident that the City did not wish to continue with the migration until the prerequisites had been met. Among the most important preconditions were these:
 - TELUS’s taking charge of security aspects,
 - Analyses of risks and impact incorporated into the migration plans,
 - A project plan meeting the City’s expectations;
- Since no analysis of risks and impact had yet been produced, the City requested that analyses pertaining to landline telephony and data transmission be performed for the SPVM, the SSIM and some of the City’s critical sites. TELUS produced these analyses, but the City has not yet received the additional information that it requested from TELUS;

- As for the project plan, the City once again asked TELUS, as outsourcer, to provide a project organization manual (POM) covering the entire project, including a detailed list of all activities, resources and expertise required and the implementation timetable;
- Because of the delay in migration, the former suppliers continued to deliver services to the City as before. In the absence of a contract with these suppliers, the City has been obliged to pay for the services rendered so as not to lose service, especially for landline telephony but more specifically for data transmission, although this responsibility falls to TELUS.

Moreover, with regard to the project's history, we made recommendations for some of the problems mentioned above in our prior reports and the City took action accordingly. Also note in particular the *Cadre de gestion des projets et des programmes*, which was in the approval process at the time of our audit. In principle, this framework should have reduced the risk of more problems like these during future projects or programs. We shall examine this framework during our future audits.

3.3. INDICATIONS OF IRREGULARITIES DURING THE PURCHASING PROCESS

3.3.A. Background and Findings

We have examined the process for purchasing telecommunications services, paying special attention to the warning signs of possible departures from the applicable laws and regulations, of conflicts of interest and of irregularities. Specifically, some parties involved in the frauds mentioned in the "Audit Scope" section of this report also played leading roles in the process for purchasing the services in question.

Our audit included in particular a review of the tender documents, the bids and the information obtained during the City's investigations of the aforementioned frauds, as well as other measures that we deemed necessary under the circumstances. Otherwise, we did not meet the representatives of the parties concerned or any of the aforementioned parties that were no longer employed by the City or under contract to the City at the time of our audit.

FINDING

Our review revealed serious indications of irregularities surrounding the process of awarding the telecommunications service contracts that are the subject of this audit. Under the circumstances, and in consideration of the limited investigative powers vested in the City's general auditor, we have notified the police of this matter in accordance with the *Cities and Towns Act* and have offered them our full cooperation. To avoid interfering with any police investigation, we shall abstain from commenting further on this matter.

3.4. ISSUES OF IMMEDIATE CONCERN

3.4.A. Background and findings

Our analysis of the facts presented in Section 3.2.2, concerning the history of the project, has exposed a number of problems and issues. The following are among the most significant:

- no strategic plan for telecommunications was ever drafted or approved by the municipal authorities;
- the strategic directions for telecommunications have been only disclosed to a limited number of DSI employees, have not been updated and have not been subjected to any risk analysis;
- the purchasing strategy and the specifications have been modified several times;
- key stakeholders have hardly been consulted, if at all;
- a number of needs were not considered or were ill-defined when the specifications were being drafted;
- the decision to split the specifications into three calls for tenders created a situation that lent itself to the writing of specifications that were hard to interpret and that could lead to some confusion;
- the DSI's commitment to achieving major savings within the framework of the city-wide review of activities, services, operations and programs (RASOP) contributed to the decision to issue calls for tenders as quickly as possible;
- more than two years after the contracts were awarded, there are still disagreements on the needs expressed by the SPVM;
- although the City had requested a price for services based on the "per-jack service" model, TELUS proceeded to provide a rate based on a "per-port" model;
- the DSI neither verified the bidders' understanding of what "per-jack service" meant nor asked them to explain how they interpreted the term;

- the comments of the Direction des opérations budgétaires of the Service des finances, which expressed a number of reservations concerning the decision to award the contracts, were removed from the decision file without the consent of the DOB;
- no financing package was prepared before the contracts were awarded, and the estimate of \$50 million in savings was unsubstantiated;
- approximately 11% of the Centrex-type lines and 20% of the network jacks for data transmission had been migrated;
- no migration toward VoIP telephony was performed, and no date for this migration has been determined to date.

Furthermore, on February 24th 2010, the DSI announced a second phase for migrating the Centrex telephone lines to TELUS and another phase for data transmission that was scheduled for April 6th 2010.

We shall address issues that particularly caught our attention in this section, by describing their impact on the project and, in some cases, consequences for the project's financial structure.

We shall also present recommendations arising from our audit in this section.

3.4.1. PRIORITIZATION OF OUTSOURCING OBJECTIVES

3.4.1.A. Background and Findings

FINDING

We found that the objectives and the issues related to the outsourcing of telecommunications services are interpreted and prioritized differently by the various groups of stakeholders. Specifically, the people that we consulted have different opinions on the philosophy of outsourcing and therefore do not agree on the respective roles and responsibilities of the City and the winning bidder. These differences are creating some confusion about the ways to resolve current issues.

First of all, let us emphasize that the drafting of a strategic plan for telecommunications is at the root of the desire to outsource telecommunications services. As previously noted, this plan, to which the recommendation for outsourcing refers, was never formally adopted, was never distributed to the stakeholders, has not been updated since 2006 and has not been monitored. In other words, everyone can rightly or wrongly find arguments to support his or her understanding of the issues and their solutions.

This lack of a formal plan was exacerbated by the departure of resources that contributed to its design and to the drafting of the specifications. This factor has left a huge hole in the organization's collective memory. Indeed, we had trouble obtaining, and even reconstructing, all of the information that we deemed relevant to an understanding of the reasons behind the contract documents. Thus, it comes as no surprise that the current stakeholders have also had trouble developing a clear vision of the objectives and impact of the outsourcing strategy, especially since the DSI's management team, concerned as it is with rebuilding the CET's staff, has not been able to devote much attention to managing change among the stakeholders.

Second, the retention in each call for tenders of strictly operational and day-to-day aspects related to services and of much more strategic aspects related to the development of the networks has created problems of interpretation between the obligations of results and the obligations of means imposed upon the winning bidder and in light of the prerogatives that the City intends to retain.

This problem was raised by Gartner in its analysis of the preliminary tender documents in 2005 and has been confirmed by the experts whom we asked to analyze the current contracts. It has inevitably led to discrepancies in the various stakeholders' understanding of the priorities to set for the performance indicated in the contract documents, the winning bidder's margin of manoeuvre with respect to resources available to it and the role that the municipal authorities should play in managing and supervising the contracts.

Divergent positions and interpretations of the objectives of these outsourcing contracts and the two parties' responsibilities have emerged ever since the due diligence was performed. Efforts have been made over the past few months to structure these discussions and drive them forward. The respective teams have been reorganized, a mixed issue-solving committee has been established and a more propitious atmosphere for discussions has prevailed. Nonetheless, two years after these contracts were awarded, these difficulties of interpretation persist.

Without a clear vision of the objectives of the outsourcing contracts and their priority level, the issues that were identified by the two parties are likely to continue or, at best, be resolved inconsistently.

3.4.1.B. Recommendations

We recommend that the Direction générale determine which outsourcing objectives shall be prioritized.

We further recommend that the Direction des systèmes d'information of the Service des immeubles et des systèmes d'information:

- **ensure that both parties understand and acknowledge these objectives;**
- **take the necessary measures to incorporate them in the resolution of issues affecting network migration and contract management.**

3.4.2. PROJECT GOVERNANCE

3.4.2.A. Background and Findings

We paid special attention to governance of the project to outsource telecommunications. In accordance with the supervisory model developed and distributed by the ICCA, we assessed the extent to which the project's current governance framework enjoys:

- A clear vision at all levels of the organization;
- Accountability and leadership that facilitate efficient decision-making;
- Sufficient available resources, expertise and managerial information;
- A process for oversight and learning that can guide activities toward the targeted objectives.

FINDING

Beyond the problems linked to the clarity of vision and objectives that we discussed in the previous section, we agree with the Direction générale sur la gestion des projets majeurs on the need to strengthen the entire governance framework.

First of all, for various reasons described above, the project has not incorporated best practices in resource management. The establishment of a transition team at the CET was difficult and entailed major delays, minimal change management within the team and limited expertise in the management of outsourcing contracts. Various organizational changes occurred and are expected to occur in the coming months, not only within the team but also throughout the accounting structure between the DSI and the Direction générale.

Limited expertise of the available outsourcing resources has imposed a weak form of management and accountability: the various co-ordinating committees are left to make decisions and monitor the work. DSI management is aware of these limitations but feels that it has no option but to maintain this modus operandi. In view of the constraints that the budget and the market impose on the recruitment of expert managers of outsourcing contracts, the DSI's management team believes that it cannot institute more effective project management.

Furthermore, the DSI has designed a monitoring and oversight system based on management dashboards and a log of outstanding issues. It has completed an exercise in risk assessment at the CET that helped enhance mobilization of its staff. This effort has not yet been incorporated, however, into a formal oversight and reporting structure that would not only foster a better understanding of issues by the chain of command but also the adoption of targeted, prioritized means of mitigating these issues. Finally, oversight of the migration effort and reporting to the Direction générale have so far been done on an essentially *ad hoc* basis.

This transformation project is critical to the efficiency of all City operations and has major financial impacts given the duration of the contracts at stake. Consequently, a clear and rigorous governance framework strikes us as being essential to its completion.

The DSI must, however, have the necessary resources to achieve this goal and has to reach an agreement with the Direction générale on a formal, simple and effective means of monitoring and accountability.

3.4.2.B. Recommendations

We recommend that the Direction générale establish a governance framework that will formalize the frequency and content of reports, especially with respect to financial structure, high priority issues and meeting the objectives sought by outsourcing telecommunications services.

We also recommend that the Direction des systèmes d'information of the Service des immeubles et des systèmes d'information update the major risks and issues pertaining to the ability to manage the migration effort and the awarded contracts, as well as the mitigation tools that already exist or that will be established in accordance with a precise schedule.

3.4.3. ANALYSES AND THE PROJECT'S FINANCIAL MODEL

3.4.3.A. Background and Findings

Drafting of Specifications

As we know, City management decided in the spring of 2007 to split the specifications and to issue three calls for tenders.

We believe that the division of one set of specifications into three introduced its share of inconsistencies. One inconsistency worth mentioning is the different durations of the contracts: the City awarded a 10-year contract for data transmission but only a 7-year contract for landline telephony.

The inconsistencies in this case stem from the difficulty of managing these two contracts separately, since they are closely related. In particular, VoIP telephony, which is part of the contract for landline telephony, relies on the same technological infrastructure as data transmission.

Furthermore, by leaving VoIP telephony and landline telephony in the same set of specifications, the City was forced to deal with two competing suppliers, thereby running the risk of having to settle disputes between them.

It would have been more appropriate to separate the calls for tenders by going to the market with one set of specifications solely for Centrex landline telephony and another solely for data transmission and VoIP telephony.

Furthermore, as previously noted, the City did not have a complete inventory of all services that it used from its former landline telephony service supplier.

For instance, the City had privileged access to the infrastructure of its former supplier, which enabled it to program all lines in the City (for call forwarding, changes to the information on the call display, etc.) 3,000 to 4,000 times per year. The loss of this functionality will entail additional costs estimated at \$250,000 per year.

With respect to 311 service, it should be noted that an addendum excluded everything pertaining to call centres, including this service, from the call for tenders. As it happens, the 311 service ordinarily uses a shared platform, independent of the City, provided by the Centre de services partagés du Québec (CSPQ). In the event of a failure, however, a backup system belonging to the City could be called upon as a substitute.

The 311 service and the backup system, both currently served by Bell Canada, may nonetheless be compromised by their exclusion from the call for tenders. The change of telephone service supplier is likely to have a significant impact on call routing, which would require major changes to the configurations of the two platforms.

Finally, this system is also used on a daily basis by the Municipal Court, the SPVM and the DSI's service centre. The City will incur additional expenses to maintain the service provided by the former supplier.

As previously noted, the City sought a model that would enable it to pass on telecommunications costs to its business units under the CSP model. **However, inadequate definition of the billing model in the specifications caused the City and TELUS to interpret this need differently.**

As a result, it has been impossible to apportion expenses among users properly, thereby delaying implementation of a user-pay model.

With respect to the SPVM, it should be noted that differences in the understanding of its expressed needs persist more than two years after the contracts were awarded.

According to the data transmission specifications, migration to "per-jack service" was scheduled for completion by the end of the fifth year and the SPVM was to be involved in the migration process. The contract provided no budget after that period to cover the cost of circuits that did not satisfy the "per-jack service" model.

In our opinion, if the SPVM's decision not to adhere to the "per-jack service" model is maintained, the documented problems could compromise the project's financial viability since this model did not provide for the maintenance of dedicated lines. Additional costs over the initial overall forecasts would inevitably result under such circumstances.

Analysis of Bids

As previously noted, although the City had requested a price for services according to a “per-jack service” model, TELUS added a rate to the price chart based on a “per-port” model.

Moreover, TELUS’s addition of this rate ran counter to the City’s requests. Although the City had requested a maximum monthly price, TELUS added non-recurrent fixed charges of \$500 for the installation of new ports and for existing ports.

In light of these facts, we believe that TELUS, by adding this item, altered the characteristics of the “per-jack service” model that the City had requested.

Finally, the concept of the specifications was based on the “per jack service” model, which would have enabled the City to develop according to its needs. Under this principle, the choice of solutions is left to the supplier, which must, however, meet expected service levels.

Establishing or setting precise values of speed per port to be attained or maintained altered the basic principle of the specifications. The City sought through its call for tenders to set up a “per-jack service” model with specific service levels, rather than to continue managing solutions.

Accordingly, the inclusion of a 32 kbps MAN per port figure in the specifications ran counter to their basic concept by effectively relieving the supplier of responsibility for achieving the desired service levels.

Furthermore, our work revealed that “per-jack service” is among the issues unresolved between the City and TELUS, despite the statement in the agreement to the effect that TELUS *[translation]* “accepts the various service level requirements in the project specifications”.

In our opinion, the resolution of this issue, which could call into question the City’s primary objective of optimizing its telecommunications services, is imperative. Major financial consequences can also be foreseen, as the financial model does not include rates based on the addition of circuits required to upgrade the network, which would inevitably be needed if the “per-jack service” principle were abandoned.

Financial Analysis

As previously mentioned, the executive summary stated that the contract awards would yield savings on the order of \$50 million over a 10-year period.

FINDING

Since these contracts were awarded, no one has been able to substantiate the amount of these projected savings. Furthermore, there are indications that the method employed for determining the amount of the savings was flawed, because:

- **the cost of the bids recorded in the executive summary did not take into account the 20% contingency provision;**
- **the savings were calculated through a straight-line extrapolation of telephony and cellular telephony contract costs over 10 years, rather than over 7 and 4 years, respectively;**
- **total savings were calculated by multiplying the amount of savings expected for the first year by the number of years in the contract of longest duration (\$5 million x 10 years = \$50 million);**
- **it is impossible to confirm that the allocation of prior costs reflected all of the telecommunications costs incurred by the various business units of the City.**

Therefore, we found that the \$50 million estimate of savings was unsubstantiated, as did the Service des finances.

Due Diligence

In its due diligence report, TELUS claimed to have discovered some 3,000 digital Centrex lines. This discovery led to the signing of a change request (CR) to add this item to the price chart. Because of this addition, the City is required to pay a monthly surcharge of \$8.33 per line now that the CR has been signed.

As we shall see later in this section, a re-evaluation of the numbers reduced this figure to 2,006 lines. This surcharge still has a major financial impact on the City, since it involves an additional expenditure estimated at \$1.4 million before taxes, for the duration of the contract. This item will be discussed again in the next part of this section, which addresses the project's

financial model. Note, however, that this estimate will decline substantially as soon as the migration to VoIP telephony is complete.

Furthermore, we conducted an analysis to check the validity of the warning that the Direction de l'approvisionnement sent to the DSI expressing disapproval of this surcharge.

After analyzing the information and inventory reports sent to potential bidders, we believe that they had adequate information regarding the use of this type of lines by the City. Accordingly, we consider this \$8.33 surcharge unjustified and think that it should have been taken into account in the actual quote rather than being the subject of a change request.

As previously noted, the purpose of due diligence was to verify the information supplied by the City during the tender process. This information included the number of Centrex telephone lines, the number of Ethernet-type network jacks and the number of IP telephone lines for which the City wanted "per-jack service".

As appears in Table 3, the City provided in its price charts the figures on which the calls for tenders were based.

Table 3—Amounts Listed in the Price Charts

Year	Data transmission	Telephony	
	Network jacks	Centrex lines	VoIP lines
1	9,555	16,500	1,500
2	9,610	12,500	5,000
3	9,525	7,500	10,000
4	9,540	2,000	15,000
5	9,550	2,000	15,000
6	9,570	2,000	14,500
7	9,580	2,000	14,000
8	8,970	—	—
9	9,175	—	—
10	9,200	—	—

The City also indicated in these price charts that its inventory consisted of 16,500 Centrex telephone lines and 9,555 network jacks. The City also mentioned its need for VoIP telephony by requesting the migration of 15,000 Centrex lines to VoIP telephony.

FINDING

We noticed an inconsistency with respect to the requirements that the City indicated in its price charts. This inconsistency stems from an underestimation of the number of network jacks relative to the number of IP lines requested. Specifically, an IP line requires the use of a network jack to function. However the City requested in its price charts the migration of 15,000 VoIP telephony lines, although it stated that only 9,555 network jacks were required.

TELUS made note of this discrepancy during due diligence and requested the addition of network jacks to meet the City's requests. Given the costs of adding so large a number of network jacks, TELUS agreed to reduce the number of Centrex lines that would be migrated to VoIP telephony and to fix that number at 12,918, thereby setting the number of additional network jacks at 3,363. We could not, however, obtain justification for establishing the number of VoIP telephones at 12,918.

FINDING

Furthermore, as Table 4 shows, VoIP telephony becomes beneficial from an economic perspective only when a VoIP telephone is coupled with a workstation (PC). However, not all VoIP telephones can actually be coupled with a workstation. For example, telephones in waiting rooms or conference rooms and those with limited access to a workstation cannot be linked in this manner.

Table 4—Telephone Charges

Monthly charges	TELUS Centrex	TELUS VoIP telephony (with a PC)	TELUS IP telephony (without a PC)
Line ¹	\$28.13	\$8.70	\$8.70
Network jack	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$19.00</u>
Total—Cost of telephone	\$28.13	\$8.70	\$27.70

¹ Includes voice mail.

FINDING

Furthermore, given the fixed charge of \$500 that TELUS added for each new or existing port, the installation of a VoIP telephone that is not coupled with a workstation becomes more expensive than a Centrex line.

Specifically, to function properly, a device (a VoIP telephone, whether coupled to a workstation or not) connected to a network jack must be connected to a communication port, which acts as the interface between the equipment and the communications network. A data transmission communication port is thus considered to be an [translation] “asset”.

FINDING

We were also informed that 4,000 lines were expected to remain on Centrex after the migration to VoIP telephony was complete, although the price chart indicated that only 2,000 lines would remain on Centrex. According to the information received, one reason for this discrepancy is TELUS’s unwillingness to offer VoIP telephony at sites with eight or fewer users.

FINDING

Our study also revealed that a problem was detected during due diligence following an analysis of the telephone line inventory report that the City had provided during the call for tenders. This analysis enabled us to determine that a large number of Centrex lines belonged to affiliated entities or to paramunicipal corporations rather than to the City itself.

During the July 4th 2008 meeting of the CET’s strategic committee, which at the time oversaw the project, the unilateral decision was made to include the Centrex lines of affiliated entities and paramunicipal corporations in the project to maintain a sufficient number of Centrex lines that could be transferred to VoIP telephony.

When the former supplier of telephone services refused to transfer these lines on the ground that they did not belong to the City, letters were sent to the affiliated entities and paramunicipal corporations to obtain their agreement.

However, the Office municipal d'habitation de Montréal (OMHM) and the Centres locaux d'emploi (CLE) refused to be parties to the contract for telephony; thus 2,127 Centrex lines were withdrawn.

We were also informed that the DSI signed a change request to withdraw 825 Centrex lines used by the 911 emergency service. The specifications stipulated that, in accordance with the law, all lines used to route emergency calls to 911 were excluded from the call for tenders.

However, the withdrawn lines were [translation] "administrative" lines that 911 operators used to communicate with the emergency response network. Since these lines were physically located on the same telephone sets as those used to receive emergency calls, they should have been withdrawn from the contract concluded with TELUS and restored to the former supplier.

Because of this situation, the former supplier now charges a monthly rate that is twice what the City paid previously, when it had a contract with that supplier.

Finally, we were informed that the DSI had signed a change request to withdraw 400 lines for LaSalle borough. The specifications mention that the quantities in the price list exclude the former suburban boroughs.

FINDING

The actual number of Centrex lines withdrawn was 3,352, including this last batch and the ones mentioned earlier. In addition, we learned that the target of 12,918 VoIP telephones established during due diligence cannot be attained if it turns out that 4,000 Centrex lines cannot be migrated to VoIP telephony.

The Project's Financial Model

As we mentioned in Section 3.2 on the project's history, no financing package was prepared before the contracts were awarded. The DSI is, however, currently drafting a financial model, although it has not yet been ratified by the municipal authorities.

After the departure of the DSI's director in November 2008 and in response to the need to obtain a tool suitable for monitoring the project's expenses, in May 2009, the DSI's new acting director assigned a member of his team with the task of formulating a financial model for the project.

According to the information obtained, the model is primarily based on the costs of the contracts, which are spread over the contracts' durations.

Several factors, however, have affected the model, including:

- The CET's operating costs, which were not initially taken into account;
- Fees resulting from the addition of network jacks and an equivalent number of ports that were established through the due diligence.

Our analysis of this model demonstrated that it only takes into account costs associated with change requests (CRs) made between the City and TELUS. These are not, however, the only CRs that could have been analyzed by now to determine their financial impact.

Nonetheless, we believe that this model is currently an adequate method for estimating project costs, although it will have to evolve over time because factors too numerous to quantify today will affect it. Among the most important of these factors are the following:

- The evaluation of CRs that have not yet been completed;
- The financial impact that may result from negotiations currently in progress on resolving issues between the City and TELUS.

FINDING

As illustrated in Table 5, our analysis of the DSI financial model demonstrated that the forecast project cost already equalled the budget initially authorized by the municipal authorities, including the 20% contingency reserve for the delivery of additional goods and services.

It bears mention that the amounts awarded for these contracts are maximum amounts for all goods and services and these amounts apply to the entire durations of the contracts.

Table 5—Analysis of the Financial Model

Forecast cost of project to outsource telecommunications services ¹ as at February 11 th 2010	
Cost of the data transmission and landline telephony ² contracts	78,830,294
Discounted cost, according to the financial model	<u>(91,382,569)</u>
Deficit before the CET and contingencies	(12,552,275)
Operating expenses of the CET—2008	(1,590,144)
Operating expenses of the CET—2009	<u>(1,685,733)</u>
Deficit before contingencies	(15,828,152)
20% contingency reserve for data transmission and landline telephony	<u>15,766,059</u>
Forecast deficit	(62,093)

¹ The model takes into account the amounts allocated to the TYCWP and to the operating budget, and it presents the project's expenses at "net cost"—that is, including taxes but subtracting the GST recovery to which the City is entitled.

² Taking note 1 into account, this explains the discrepancies in the authorized expenses that appear in Table 1.

The "Deficit before the CET and contingencies" of approximately \$12 million is primarily due to:

- Expenses of \$8.2 million resulting principally from the addition of network jacks and a number of corresponding ports, which were established after the due diligence;
- Expenses of \$3.3 million resulting from the evaluation of CRs to date. These include:
 - \$1.5 million for the abovementioned additional charge for digital lines discovered by TELUS,
 - \$1.6 million for additional directory entries.

Our analysis of the financial model, illustrated in Table 5, does not take into account bills from third parties totalling \$6.6 million paid or payable from funds due to TELUS, although these bills are included in the model. The City may have to cover part of this expense as these bills are being discussed by the mixed issue-solving committee.

FINDING

Several stakeholders also told us that the contracts were financially attractive because the City obtained maximum unit prices (price ceilings). This report demonstrated, however, that the City did not properly define all of its needs at the time of the calls for tenders and that it lacked completely accurate inventories. These factors may entail additional expenses.

We were informed after TELUS's pre-visits to the City's sites during due diligence that there were 16,759 active ports, which would imply that the same number of network jacks would have to be active.

As previously noted, this situation is due to the fact that the data transmission specifications indicated that only the (PC) workstations used a network jack, whereas in reality many computer peripherals also use a jack to connect to the network. Examples include printers and photocopiers.

FINDING

Should this number be confirmed, the addition of 3,841 ports (16,759—12,918) and an equal number of network jacks would entail an additional expense for the City in excess of \$10.6 million. The project's financial model did not take this additional expense into account.

FINDING

Furthermore, once the (maximum) number of active ports has been established, the City will be obliged to monitor the modifications (installation and removal) for all of its jacks to avoid non-recurring fixed charges of \$500 per port whenever this threshold is exceeded. Under such circumstances, the maximum will be reassessed to take the number of additional ports into account.

FINDING

Finally, our review also identified other factors that may have a financial impact, but could not be taken into account in the project's financial model.

- 1) TELUS deemed that the need for VoIP telephony survival kits, which the CET estimates at \$2.6 million, lay beyond the scope of the contracts. This item is one of the unresolved issues between the City and TELUS.
- 2) According to the information obtained, the CET secured the addition of [translation] "free" Centrex features, but nothing suggests to us that there will be no charge for these features during the migration to VoIP telephony.

- 3) Since the migrations of Centrex landline telephony and the data transmission network are not finished, there is a risk that new forms of impact may arise as the migrations progress, given the City's unawareness of its own inventory and of the services that it was using.
- 4) According to the information obtained, a lack of awareness of the services that the City uses for its network of copper cables led the City's former supplier to notify the City of charges estimated at \$1.2 million per year, before taxes. This factor is one of the unresolved issues between the City and TELUS.
- 5) As previously noted, internal disagreement persists as to whether the SPVM should or should not entrust the management of its data transmission network to the designated supplier.

We believe that this issue bears considerable financial risk. On the one hand, if the SPVM decides to entrust its network to the supplier and thereby subscribes to the "per jack service" model, the City will have to assume an additional expense resulting from taking charge of the SPVM's active ports and an equal number of network jacks.

We have in fact been advised that no pre-visit to the SPVM's facilities has been performed. Consequently, 3,750 network jacks and an equal number of active ports have not been taken into account, since the City stated in its specifications that it was requesting the takeover of 1,500 network jacks, although the SPVM has 5,250.

On the other hand, if the SPVM does not subscribe to the "per jack service" model, the City will have to incur costs for replacing dedicated links that do not come from the designated supplier, as well as the possible addition of links of this type. However, no budget for these charges was allocated in the project beyond its fifth year.

Furthermore, if the SPVM is not allowed to subscribe to the "per jack service" model, it will be impossible to migrate up to 5,000 Centrex lines to VoIP telephony.

We believe that an assessment should be made of the costs associated with the decision of whether or not to maintain the "per-jack service" model for the SPVM. Furthermore, we believe that this assessment should take into consideration the SPVM's obligation to respect security standards.

- 6) As previously noted, the administration authorized a transfer of funding so that 20 temporary positions could be created in the CET for a period of one year as part of the process involved in implementing the contracts for outsourcing telecommunications services.

We were also informed that since the migrations have not yet been completed, these positions would be funded once again in fiscal year 2010.

In this regard, we believe that although the current number of positions cannot be maintained after the migrations are finished, a certain number of employees will nonetheless be needed to ensure the monitoring of service levels and billing and to provide technological watch.

It is in fact generally recognized that management expenses for outsourcing amount to 5% to 10% of the value of the awarded contracts. Yet no budget has been allocated to the CET beyond fiscal year 2009.

- 7) As previously noted, a disagreement between the City and TELUS over the billing model is delaying implementation of the “user pays” principle.

Furthermore, the City does not have an exact inventory of the number of active jacks and their locations. Consequently, the DSI has not been able to charge the business units for the costs of the data transmission services that they use.

Since this activity has run a deficit for the past few years, the DSI foresees that it will have to incur a deficit of \$3.5 million, before taxes, for data transmission in the 2009 fiscal year because it does not have any budget to absorb this expense.

3.4.3.B. Recommendations

We recommend that the Direction des systèmes d’information of the Service des immeubles et des systèmes d’information review the price chart change request pertaining to the addition of a monthly fee for digital lines.

We recommend that the Direction des systèmes d'information of the Service des immeubles et des systèmes d'information:

- conduct an assessment of the expenses associated with the decision to preserve or abandon the “per-jack service” model for the SPVM;
- take into account the SPVM’s obligation to meet specific security standards;
- incorporate the results of this assessment into the project’s financial model.

We recommend that the Direction des systèmes d'information of Service des immeubles et des systèmes d'information, in conjunction with the Service des finances, complete the financial model. Upon completion, it should request the assistance of the Direction générale in presenting this model to the municipal authorities for approval.

We recommend that the Direction générale set down rules prescribing the inclusion of a financing package or framework endorsed by the Service des finances in any large project or program before it can be submitted to the appropriate authorities for approval.

3.5. POST-MIGRATION ISSUES

The initial objective of our mission concerned the management of outsourcing resulting from the contract awards, as well as the policies, oversight, directives and monitoring procedures that were instituted.

To this end, we examined certain factors for which the DSI must assume responsibility as quickly as possible, despite the current state of the project.

3.5.1. MANAGERIAL FRAMEWORK FOR CONTRACTS

3.5.1.A. Background and Findings

The CET’s current structure is temporary, as it originally focused primarily on system migration. As this migration still is not finished, several controls set out in the outsourcing contracts, such as various co-ordinating committees, reports on network performance and details of billing for

services not yet been established. Moreover, CET officials are still in discussion with TELUS about the terms, conditions and procedures for managing the work.

Secor was hired in 2008 to recommend the changes needed for effective management of the outsourcing contracts to the DSI. In its final report, Secor made several recommendations of functions, skills and organizational structures to establish. The organizational structure selected must ensure effective communications among stakeholders, oversight of performance and network security and monitoring of billing and budgets. It is nothing short of a transformation project, since it requires changing from the operations-based method of management that was in place before the services were outsourced to a contract-based method of management, which will require the development or acquisition of new expertise.

FINDING

These recommendations have not translated into a formal action plan for the selected options. Given the lack of any management framework for the operations-based approach, we cannot assess the relevance or the adequacy of the controls that will be used to manage the outsourced telecommunications services effectively.

FINDING

We also believe that this management framework must be developed and adopted as soon as possible, in view of the changes that it implies. Any delay in this respect might weaken the control structure significantly, complicate the management of changes and drive implementation costs higher.

3.5.1.B. Recommendations

We recommend that the Direction des systèmes d'information of the Service des immeubles et des systèmes d'information immediately develop its management framework to manage outsourcing contracts in the operational phase. Specifically, it should:

- identify activities to undertake, according to the nature and objectives of these contracts;
- identify gaps between the skills needed to undertake these operations and the available resources;
- identify and design the controls to be instituted to ensure compliance with the service levels, security requirements and billing rules for services provided to client units;
- establish, in conjunction with the Service des finances, the operating budget for this organizational framework and incorporate it into the corresponding financial framework.

3.5.2. CONTINUITY AND EVOLUTION OF THE NETWORK

3.5.2.A. Background and Findings

The specifications included in the outsourcing contracts state that the City wishes to have an evolving network that will meet its current and future needs. The winning bidder is responsible for installing, maintaining and replacing the network's equipment at the bidder's own expense for the duration of the contract and ensuring that the City owns the equipment even if it is housed at the bidder's facilities.

To maintain the required service levels, the City depends on the fact that it will be in the winning bidder's interest to maintain and develop a high-performance network and to replace obsolete equipment. The specifications also mention that the equipment shall be replaced at an agreed frequency to avoid its obsolescence and the lapsing of manufacturer warranties.

The winning bidder thus becomes the principal contractor for the network's management and evolution. As such, it may combine the links of the City's network to those of its own network or decide to stop maintaining and developing the City's network and instead replace it with the links of its own network, provided that it meet the required service levels.

The agreement stipulates that the City may request the addition of new dedicated links to meet needs that may arise from time to time. In these cases, however, the City may be called upon to defray costs of construction and installation. As long as TELUS satisfies the required service levels, it may use this new infrastructure for its own needs and therefore claim ownership thereof at the end of the contract, since these links would not be used exclusively by the City. For this reason, some people believe that the ownership of the links is not clear and that this issue may raise questions of interpretation when the contracts expire.

On the other hand, some stakeholders state that the City should have a right of review over the type and origin of the equipment being installed, so that it can verify technical support and manufacturer warranties. In this respect, we found that there is currently significant concern among the stakeholders involved about the continuity of the equipment when the contracts expire, despite the requirements set out in the specifications.

FINDING

All of these items require the City to have a monitoring ability so that it can maintain a current inventory of installed or replaced equipment and develop a detailed protocol for the transfer of assets when contracts end. However, such mechanisms do not yet exist.

3.5.2.B. Recommendations

We recommend that the Direction des systèmes d'information of the Service des immeubles et des systèmes d'information:

- **institute a process for watching and monitoring the evolution of the network and related equipment to ensure their survivability;**
- **specify and formalize the criteria and conditions for the transfer of assets upon contract expiration.**

3.5.3. CONTINUITY OF TELECOMMUNICATIONS

3.5.3.1. DISASTER RECOVERY PLAN

3.5.3.1.A. Background and Findings

Certain events could jeopardize the continuity of telecommunications operations and thus the City's ability to provide the services for which it is responsible. From this perspective, we

examined the mechanisms to be deployed in the event of a breakdown of the facilities, an emergency or disputes with the winning bidder.

Under Section 3.1.3.6 of the specifications, the winning bidder must demonstrate that it has the facilities and disaster recovery plan to ensure 24/7 operation of the telecommunications and telephony services that the City requires.

FINDING

As we mentioned in Section 3.2.5 of this report, the technical compliance assessment committee recommended obtaining clarification from TELUS about this issue. However, some of its concerns were not addressed. Consequently, the committee was unable to secure proof from TELUS that it had the facilities and disaster recovery plan needed to comply with the specifications.

Furthermore, an interruption on August 24th 2009 to the water supply at the site that houses TELUS's main telephony infrastructure demonstrated an area of vulnerability in the solution deployed. TELUS claimed to have taken the necessary steps to avoid another incident of this kind and said that its Centrex solution *[translation]* "is not a redundant solution but a robust solution".

Since any major incident at the site that houses TELUS's facilities might cut off the City's telephone services, we feel that the DSI must ensure that TELUS satisfies the requirements expressed in the specifications, i.e. having the required disaster recovery plan and testing it annually.

3.5.3.1.B. Recommendations

We recommend that the Direction des systèmes d'information of the Service des immeubles et des systèmes d'information obtain from TELUS Québec the required disaster recovery plan as per the specifications and a promise that this plan will be tested annually.

3.5.3.2. EMERGENCY ACTION PLAN

3.5.3.2.A. Background and Findings

A plan under the authority of the Centre de sécurité civile was developed for adequate response to emergency situations.

To avoid any delays in the plan execution, numerous stakeholders, including the City's supplier of telephony and telecommunications services, must be involved in the process.

FINDING

Despite the delivery of an emergency measures escalation list, a TELUS representative stated that the company's ability to respond immediately could be limited since Montréal is not in its traditional service area (not ILEC). Depending on the nature of the required intervention, a third party might have to be involved. He also said that the need for contingency planning was not defined in the contract, that the details would have to be discussed and verified and that a change request would be sent in due time.

We therefore believe that there should be a coordination plan between the City and TELUS to avoid any delay once the plan for emergency measures is activated. Furthermore, having TELUS sit on one or more committees set up by the Centre de sécurité civile would allow for a contingency plan to be completed.

3.5.3.2.B. Recommendations

We recommend that the Direction des systèmes d'information of the Service des immeubles et des systèmes d'information, together with the Centre de sécurité civile, set up a coordination plan in conjunction with TELUS Québec to avoid any delays in the execution of the plan for emergency measures when needed.

3.5.3.3. MEDIATION MECHANISMS

3.5.3.3.A. Background and Findings

The contract specifications stipulate certain mechanisms for communication and co-ordination, as well as certain conditions for transition periods when the contracts begin and end.

FINDING

We consulted with experts who emphasized that these specifications provided very little information about transition plans and did not include any mediation mechanism in the event of a dispute. Should a transition-related problem or dispute arise during the contracts, operational efficiency could be compromised.

FINDING

In addition, the current contractual framework provides for the possibility of default by the winning bidder and, consequently, contract cancellation. However, the business resumption plan under these circumstances is not sufficiently developed to ensure efficient services. A lack of preparation is likely to result in late responses, delays and disputes that would not only compromise the efficiency of telecommunications services, but incur additional expenses.

3.5.3.3.B. Recommendations

We recommend that the Direction générale, together with the Service des affaires juridiques et de l'évaluation foncière:

- examine the appropriateness of formalizing a mediation procedure with the winning bidder to minimize both the expenses incurred by both parties in the event of a dispute;
- identify steps and strategies for resuming operations should the winning bidder be unable to meet its contractual obligations.

3.6. ISSUES EXTERNAL TO THE PROJECT

Our work led us to examine certain aspects surrounding the processes currently in effect in the City.

After completing this work, we identified certain concerns that go beyond the scope of this report's initial audit. Accordingly, we felt that it would be better to present them in a separate section.

3.6.1. DECISION FILE MANAGEMENT SYSTEM

3.6.1.A. Background and Findings

As we mentioned in Section 3.2.6 of this report, we have attempted to obtain explanations for the unauthorized removal from the decision file of the comments that the Direction des opérations budgétaires made with respect to the contract awards. **As a result of this removal, the authorities approved the awarding of these contracts based on incomplete information.**

Our task first involved meeting the person in charge of the Système de gestion des dossiers décisionnels (GDD or Decision File Management System) at the Direction du greffe.

The GDD was developed on the Lotus Notes platform. In the Lotus Notes environment, an application such as the GDD is developed in a document database. Only users with access rights can access information in the document database.

During our meeting, the official explained to us that a completed file is a file that is finished and ready to be placed on the agenda for a decision by the borough council, executive committee or city council. In principle, a completed file is “frozen”; that is, it can no longer be modified.

Sometimes, however, a member of the team in charge of the GDD at the clerk’s office returns a completed file to its author for the addition of specific information. When that happens, the file may be modified.

FINDING

Our work revealed that comments by the Direction des opérations budgétaires were removed after the file was locked, even though the official we interviewed clearly indicated that this type of action was forbidden. Additional research showed that people with deletion rights over the GDD database had unrestricted powers. In other words, these users could delete comments in files that had been locked.

FINDING

Our work also revealed that 19 people enjoyed these deletion rights. We did, however, observe that a monitoring process over logged user actions (e.g. reading, editing, deletion) but that the history of actions was limited to the current day.

FINDING

In conjunction with the official we interviewed, we determined that the deletion of comments in the document in question had not been done [translation] “according to the rules”. Consequently, information remained recorded in the database, thereby proving that the Direction des opérations budgétaires had indeed intervened in the decision file.

Furthermore, we feel that oversight and the associated mechanisms in the GDD should ensure that no comments by one of a file’s stakeholders should be removed without that stakeholder’s prior consent.

3.6.1.B. Recommendations

We recommend that the Direction du greffe of the Direction générale, together with the Direction des systèmes d’information of the Service des immeubles et des systèmes d’information, take the necessary measures to:

- better control deletion rights granted to users of the decision file management system;
- limit, upon analysis, the number of users who have granted these rights;
- create a retention schedule for data stored in the system log for audit purposes.

3.6.2. THREE-YEAR CAPITAL PROGRAM

3.6.2.A. Background and Findings

According to the executive summary on the contract awards, the DSI stated that the expenses would be distributed with \$33 million charged to the three-year capital program (TYCP) and \$75 million to the operating budget.

It should be noted that the inclusion of an allotment to the TYCP demonstrates that capitalized expenditures not in excess of \$33 million can be financed by a borrowing by-law. To ensure adequate monitoring, disbursements are compiled in a separate project account.

In addition to the fact that we were unable to obtain documents that would establish a contingency reserve of 20% for each of the contracts, we were also unable to obtain documents supporting the \$33 million assignment of expenditures to the TYCP and the \$75 million to the operating budget.

We then performed an analysis of the amounts charged to the project's TYCP account, which resulted in the following findings.

FINDING

Borrowing by-laws have already been applied to the entire amount of the authorized expenditure, although the awarded contracts have durations ranging from four to ten years.

FINDING

From a technical point of view, there is no obstacle to prevent the full use of the funding granted in a single year, although the contracts have durations of four, seven and ten years.

FINDING

An analysis of the transactions in the project's TYCP showed that expenditures were recorded without being authorized by the agglomeration council:

- an expenditure totalling \$45,508 was recorded for studies on the CET's organizational and operational models;
- an expenditure totalling \$121,629 was posted for the maintenance and acquisition of Lotus Notes user licences.

FINDING

As we mentioned in Section 3.2.9 of this report, the City has incurred charges exceeding \$306,000, taxes included, for work to upgrade its telecommunications rooms. This expenditure reduces the originally anticipated savings because it was not initially foreseen.

FINDING

Within the scope of the implementation of the telecommunications service outsourcing contracts, the administration authorized the creation of 20 temporary positions for a one-year period. These positions were allocated to the CET.

The administration authorized a total transfer of \$1.7 million in additional funds to the project's TYCP account to finance these positions. These funds, which were not initially foreseen, reduced the originally anticipated savings.

FINDING

During its meeting on December 9th 2009, the agglomeration council authorized an expenditure of \$468,000, taxes included, to buy back equipment required for Centrex landline telephony from its former supplier.

The City had stated in its specifications for the landline telephony service contract awarded to TELUS that it owned all of its telephone assets. This statement turned out not to be true. To correct the situation, the City had to purchase this equipment. This expense reduced the originally forecast savings, since it had not been initially foreseen.

3.6.2.B. Recommendations

We recommend that the Direction des systèmes d'information of the Service des immeubles et des systèmes d'information:

- rectify the project's TYCP account by reversing the allocation of expenditures that had not been authorized by the agglomeration council;
- ensure that only capitalizable expenditures are allocated to the project's TYCP account.

3.6.3. ADMINISTRATIVE MANAGEMENT OF CONTRACTS

3.6.3.A. Background and findings

After examining the administrative clauses, we found that the amounts of the performance bonds were set at \$2.5 million for the landline telephony contract and at \$2.37 million for the data transmission contract, said bonds being good for the first three years of the contracts.

FINDING

In view of the importance of the awarded contracts and their impact on the City's operations, these amounts strike us as being too low in the event that the supplier cannot fulfil its obligations adequately.

FINDING

According to the information obtained, these bonds comply with the usual rules for long-term contracts. However, there are no formal controls supporting this practice.

FINDING

Although the bonds are scheduled to expire on December 31st 2010, we found that the Direction de l'approvisionnement has not, within the 12-month period stipulated in the agreement, asked TELUS to provide a letter of commitment to renew them.

With respect to the administrative management of the contracts, responsibility also falls to the unit in charge of the project, in this case the DSI.

FINDING

In this regard, we found that the DSI did not take the necessary measure to obtain the following from TELUS:

- a valid employer's certificate from the CSST;
- proof of third-party liability insurance;
- a Type II audit report as defined in Section 5970 of the *CICA Handbook*, which shall be delivered to the City no later than January 31st and shall cover the previous calendar year.

FINDING

The DSI is also required to obtain the name of all subcontractors working for TELUS, as well as their individual contribution to contract fulfillment. In addition to the name of the two subcontractors that appeared in TELUS's bid, we noticed that TELUS had hired four additional subcontractors. However, we did not find any evidence indicating that TELUS had notified the DSI about these individuals.

FINDING

Furthermore, the DSI must ensure that TELUS's personnel comply with the safety standards and procedures in effect in municipal buildings. In the case of some city departments, however, we found that:

- the DSI was unable to get TELUS's personnel to sign a non-disclosure agreement to authorize the assignment of personnel to the project;
- the DSI did not ensure that TELUS had provided the list of all regular personnel and substitute personnel assigned to carry out the portion of the contract to which the safety requirement applies.

Finally, we examined the documents in the possession of the Direction du greffe that pertained to the files for the calls for tenders and the contract awards.

FINDING

Through our analysis, we observed that:

- contrary to standard practice, there was no original document on file from TELUS in response to the call for tenders for data transmission ;
- contrary to standard practice, there was no original document on file from TELUS in response to the call for tenders for landline telephony ;
- none of the addenda issued after the call for tenders, specifically 7 addenda for landline telephony and 11 addenda for data transmission, were kept on file;
- no document pertaining to TELUS's performance bonds for its landline telephony and data transmission bids was on file.

In the course of our study, however, we did find the following documents:

- Two photocopies of TELUS's landline telephony bid;
- Two acknowledgements of receipt of the bids, one for landline telephony and the other for data transmission, that were signed by a representative of the Direction de l'approvisionnement;
- Two acknowledgements of receipt of bonds for the tenders, one for landline telephony and the other for data transmission, that were signed by a representative of the Direction de l'approvisionnement.

In this respect, to facilitate the search for original documents and to ensure adequate administrative management of the contracts, we believe that the DSI should, in conjunction with

Direction de l'approvisionnement and the Direction du greffe, institute mechanisms to ensure that:

- All administrative requirements are fulfilled;
- Originals of all documents are sent to the Direction du greffe for safekeeping.

3.6.3.B. Recommendations

We recommend that the Direction des systèmes d'information of the Service des immeubles et des systèmes d'information, in conjunction with la Direction de l'approvisionnement of the Direction générale:

- **institute mechanisms to ensure that all administrative clauses in the contracts are observed;**
- **send all original documents to the Direction du greffe of the Direction générale for safekeeping.**

We also recommend that the Direction de l'approvisionnement of the Direction générale, after consultation with the relevant business units, prepare and distribute a framework identifying the rules for determining the value of the performance bonds.

3.6.4. ISSUANCE OF ADDENDA

3.6.4.A. Background and Findings

The *Guide de référence de la fonction Approvisionnement*, which appears on the Direction de l'approvisionnement's intranet site, stipulates that before the opening date of a call for tenders, any major change to the information supplied or to the requirements stated in the tender documents may require the production of an addendum.

We found that recipients of the tender documents raised many questions with respect to them and that these questions led the Direction de l'approvisionnement to issue several addenda. We also found that several inventory files were sent to the bidders during this period and that files in some cases were sent more than once, after being revised, as the statistics in Table 6 show:

Table 6—Addenda Statistics

	Data transmission	Landline telephony
Number of addenda issued	11	7
Number of questions raised by recipients	306	82
Number of files accompanying the original specifications	7	2
Number of additional files sent to recipients	12	0
Number of revisions to the original files	14	4

We also found that two extensions were issued at the end of the question period and one extension was issued on the due date for tenders, in the cases of both calls for tenders.

FINDING

Based on the large number of changes, clarifications and pieces of information that were transmitted, we believe that the specifications might have been incomplete and that they did not clearly express the City’s needs.

Furthermore, it is stipulated that the full set of documents issued by the City must be considered should problems of interpretation arise.

According to the information obtained, the inclusion of numerous addenda made the documents difficult to read, thereby leading to differing interpretations.

3.6.4.B. Recommendations

We recommend that the Direction de l’approvisionnement of the Direction générale anticipate the possibility of ending the tender process after the issuance of a predetermined number of addenda when they significantly alter the information or the requirements stated in the tender documentation, and that a maximum number of addenda be set.

3.6.5. COMPATIBILITY WITH 911 SERVICE

3.6.5.A. Background and Findings

Following the appearance of articles in *La Presse* in the fall of 2009, we tried to determine whether the claim that [translation] “the VoIP telephone sets purchased at great expense under the TELUS project are incompatible with the City’s 911 service” was correct or not.

Our study determined that at the time of our audit, the City had not purchased any VoIP telephone sets, because migration to VoIP telephony had not yet begun.

Furthermore, as we mentioned in Section 3.2.5 of this report, clarifications were obtained from TELUS during the drafting of the agreements between the City and TELUS, and these clarifications were recorded in an appendix to each of the two agreements.

FINDING

When reading the appendix prepared as part of the agreement for awarding the landline telephony contract, we found that TELUS agreed to comply with the legislation on providing the street address of 911 callers.

Finally, the specifications stipulate that the winning bidder must perform a proof of concept for its solution in an environment that the City accepts. The proof of concept must satisfy the City's needs and expectations. **In this regard, we believe that the DSI is entitled to require TELUS to demonstrate that its VoIP telephony solution is compatible with the 911 service.**

3.6.5.B. Recommendations

During the proof of concept for VoIP telephony, the Direction des systèmes d'information of the Service des immeubles et des systèmes d'information should ensure that TELUS uphold its promise to provide the street address of 911 callers.

3.6.5.C. Comments by the Direction Générale

Given that the department managers concerned by our audit had very little time to give us their remarks, we were unable to obtain their action plan by the production deadline for this annual report. However, the opinions we did receive from them expressed their consensus with our recommendations.

Under the circumstances, we also asked the Direction générale to provide us, to the extent possible, with a collective commentary on this chapter and, particularly, our recommendations. This is the director general's response:

[Translation] "The Cadre de gouvernance des projets et des programmes de gestion d'actifs municipaux that was tabled in April 2010 emphasizes the harmonization of project delivery practices,, from assessment through completion, for all business units.

I am pleased to observe that the most sweeping recommendations submitted to the Direction générale correspond with the directions and practices already advocated by the new Cadre de gouvernance.

For example, the establishment of milestones that are aimed at clarifying expected objectives and benefits for major projects, particularly in their initial phases, as well as the project's financial model, will improve the planning and supervision of projects.

Furthermore, soon after the new director of the Direction des systèmes d'information was appointed in early 2009, he quickly installed governance mechanisms for IT projects. We drew on his work in formulating the Cadre de gouvernance.

Such mechanisms include conducting a risk analysis to ensure a reliable transition without unpleasant surprises before migrating or modifying data transmission or telephony services.

Finally, a workgroup involving the Service des finances was also created in the fall of 2009 to completely revise the financial model and develop at the same time an approach to financial analysis that could be employed in other major projects. The Direction de l'approvisionnement and the Service des affaires juridiques et de l'évaluation foncière also participated in the contract management workgroup."

3.6.5.D. Comments by the General Auditor

It should be noted that the comments by the Direction générale only pertained to those recommendations that were specifically addressed to its representatives. They emphasize the intended impact on future projects of implementing the *Cadre de gouvernance des projets et des programmes d'actifs municipaux* that was tabled in April 2010.

With respect to governance of the telecommunications service outsourcing project, the entire framework must, as previously noted, be strengthened through the adoption of measures aimed particularly at:

- **establishing a governance framework that standardizes the frequency and content of reports, particularly in terms of monitoring the financial framework, key issues and the attainment of the target objectives for the outsourced telecommunications services;**
- **updating the main risks and issues involved in administering the migration and management of awarded contracts as well as mitigation measures that were, or will be, instituted according to a precise timetable.**

The city administration should also take action with respect to other important issues involved in delivering this outsourcing project, including its financial framework.

In view of the significant costs of this transformation project and its critical importance to the efficiency of all municipal operations, we intend to monitor very closely the measures taken in response to our recommendations.