



4.6.

BUILDING MAINTENANCE MANAGEMENT

MARCH 19, 2019

SUMMARY OF THE AUDIT

OBJECTIVES

Ensure that the buildings of the Ville de Montréal (the City) are subject to planned maintenance and effective corrective maintenance in accordance with the strategy established by the Service de la gestion et de la planification immobilière (SGPI). In addition, ensure that sanitary maintenance management is carried out according to good practices.

In addition to these results, we have formulated various recommendations for the Service de la gestion et de la planification immobilière.

The details of these recommendations and our conclusion are outlined in our audit report, presented in the following pages.

Note that the business unit had the opportunity to formulate their comments, which appear after the audit report recommendations.

RESULTS

Responsibility for the maintenance of a little over 50% of the buildings constituting the City's building inventory falls under SGPI. For several years, the building inventory has been underfunded in the operating budget for building maintenance. Such a situation necessarily requires the tight management of maintenance operations, in order to prevent the condition of the buildings from further deteriorating, that does not contravene the well-being and safety of the users who occupy these buildings. Consequently, we believe that improvements should be made with regard to the following main aspects:

- Operational processes surrounding the management of planned maintenance of buildings by external firms will need to be re-evaluated and strengthened to ensure that services are rendered in accordance with contractual agreements;
- The management of the sanitary maintenance activities (on site or under contract) of buildings will have to be reinforced to promote better supervision and better monitoring of operations;
- The processing of requests for corrective maintenance should be better supervised to promote the uniformity of procedures and to obtain reliable management information for the assessment of the performance of operations (e.g., processing times);
- Cost-benefit analyses should be conducted to support the decisions made on how to manage maintenance operations;
- Customer satisfaction with sanitary maintenance services should be evaluated to identify potential sources of improvement;
- Targets and performance indicators were to be identified for the performance evaluation of planned contract maintenance and sanitary maintenance operations. In addition, accountability should be exercised for all boroughs for which SGPI conducts the planned and corrective maintenance of buildings.

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LIST OF ACRONYMS

PEP

Programme d'entretien planifié

SGPI

Service de la gestion et de la planification immobilière

SIGI

Système intégré de gestion des immeubles

RV

replacement value

1. BACKGROUND

The Ville de Montréal (the City) owns just over 3,300 property assets spread across the 19 boroughs. In addition to the various outdoor facilities (e.g., open pavilions, swimming pools, wading pools), there are approximately 1,500 buildings in the building inventory (e.g., administrative offices, neighbourhood stations, sports centres, fire stations).

In terms of sharing roles and responsibilities, we note that the management of the maintenance of City-owned buildings is not explicitly addressed in the *Charter of Ville de Montréal* (the Charter). Thus, to determine the competent authority on a building, including its maintenance¹, we must look at its usage. For example, a building that is used by a borough to provide services to citizens (e.g., a library, arena, borough hall) is a building under the borough's responsibility. On the other hand, a building that is used for municipal council purposes, such as cultural, sports or recreational facilities listed in Schedule D of the Charter (e.g., the Complexe sportif Claude-Robillard, the Centre de tennis du parc Jarry) or a building that is under the jurisdiction of the agglomeration council (e.g., the fire stations, the neighbourhood stations) is a building that is generally maintained² under the responsibility of a central service, in this case the Service de la gestion et de la planification immobilière (SGPI)³.

Note that as of January 1, 2018, SGPI has implemented a broad grouping site to repatriate under its control all real estate activities. In particular, the responsibility for the maintenance of several buildings, which previously was assumed by different central departments (e.g., the Service Espace pour la vie – Biodôme, Planétarium, the Service de l'eau – Plants for the production of drinking water and wastewater treatment), was returned to SGPI. As a result of this repatriation, SGPI undertook to clarify the roles and responsibilities of stakeholders by drafting and transmitting to all central departments a document addressed to each and entitled "*Chantier de regroupement du SGPI pour la fonction immobilière.*" According to the information obtained, however, this division of roles and responsibilities remains to be finalized concerning the Service de l'eau, who has agreed to transfer to SGPI only the maintenance of the outer envelope of the buildings used for the purposes of its operations.

In order to meet the needs raised as part of the work of this site, SGPI has adjusted its organizational structure. The new structure is in force since January 1, 2018, and includes, among others, the following changes:

- Creation of the Direction de l'optimisation, de la sécurité et de la propreté, under which falls the Division de la propreté, which is responsible for ensuring the sanitary maintenance of part of the building inventory under the responsibility of SGPI;

¹ Definition "Maintenance": The care, repairs, cleaning, expenses required to keep buildings in good working order for the services for which they are intended.

² Subject to the exercise of a delegation of powers by the competent authority.

³ Source: Service des affaires juridiques, Ville de Montréal.

- Creation of “*Building Manager*” positions to improve and simplify access to real estate maintenance services through a single point of contact;
- Establishment of a Section centre d’appels within the Direction du bureau de projet et des services administratifs to unify service delivery and ensure quality control.

The various electromechanical and architectural systems, safety devices or other components of the City’s buildings require the implementation of a Programme d’entretien préventif (PEP) to reduce the likelihood of premature failure or degradation, and to increase the operational efficiency with regard to possible failures. These PEPs are developed according to the particularities of the equipment to maintain and a schedule determining the frequencies of their maintenance. In the event of breakdown, failure or malfunctions indicated by the occupants of the buildings, so-called “*corrective*” maintenance may nevertheless be conducted. In addition, the various premises of the buildings must be subject to periodic sanitary maintenance in order to provide occupants and users with an adequate environment.

At the time of our audit work, the information revealed that the planned, corrective or sanitary maintenance of a little more than 750 buildings among the 1,500 buildings constituting the City’s building inventory, falls under the responsibility of SGPI. In addition to the buildings used by central departments, and although this is a borough responsibility, it is important to note that SGPI has, since the municipal amalgamation in 2002, been conducting (planned and corrective) maintenance of buildings located on the territory of the nine⁴ boroughs from the former Ville de Montréal. This offer of SGPI services, however, excludes the sanitary maintenance of buildings in all 19 boroughs of the City.

For their part, the boroughs from former suburbs manage the maintenance of buildings under their jurisdiction autonomously according to their own mode of operation (on site, under contract or mixed). SGPI intervenes with these boroughs only on express request, as is the case for the Montréal-Nord borough which, following an agreement, benefits from the services of SGPI for the maintenance of some of its arena equipment.

These activities related to planned and corrective maintenance within SGPI are the responsibility of the Direction de la gestion immobilière et de l’exploitation. They are carried out in part by management, through multidisciplinary teams of employees from various specialized trades⁵ under the Divisions de la gestion immobilière et de l’exploitation des bâtiments spécialisés des régions Est et Ouest and partly under contract through the Division de la gestion immobilière, de l’exploitation à contrat et de l’énergie. As for sanitary maintenance activities conducted on-site or under contract (excluding boroughs), they fall under the Division de la propreté under the Direction de l’optimisation, de la sécurité et

⁴ These boroughs are as follows: Ahuntsic-Cartierville, Côte-des-Neiges–Notre-Dame-de-Grâce, Plateau-Mont-Royal, Sud-Ouest, Mercier–Hochelaga-Maisonneuve, Rivière-des-Prairies–Pointe-aux-Trembles, Rosemont–La Petite-Patrie, Ville-Marie and Villeray–Saint-Michel–Parc-Extension.

⁵ Specialization in the field of: electricity, heating, ventilation, air conditioning, refrigeration, plumbing, carpentry and painting.

de la propreté. However, at the time of our work this responsibility was transiently shared with the Division de la gestion immobilière et de l'exploitation à contrat et de l'énergie, which still managed different sanitary maintenance contracts. For the purposes of this report, we will refer to this last division as the "*Division à contrat*."

For a number of years, the City has been chronically underfunded in the operating budget for building maintenance, which affects the state and value of its building inventory. According to information obtained from SGPI, the maintenance budget has been adjusted since 2015. Thus, the ratio of the maintenance budget granted on the replacement value (RV) of the building inventory⁶ rose from 1% in 2015 to 1.26% and 1.31% in 2018 and 2019 respectively. According to local practices, the portion of the annual budget that an owner must allocate to the operating budget for building maintenance is recognized as having to be 2% of the RV of the building inventory if he wishes to maintain the state, comfort and value. It is clear that the ratio is improving, but there is still some catching up to do.

Note that the last qualitative evaluation of SGPI current buildings was conducted by an external firm between 2009 and 2016. According to the information obtained, the ratios mentioned previously are based on an undiscounted RV from 2011, which is out of date. At the time of our audit, SGPI was reviewing its strategy for obtaining updated property audits.

In a context where available resources are limited, the efficient management of the operations surrounding the maintenance of buildings is undeniably crucial in order to avoid premature deterioration of equipment, increase their life span and, above all, ensure a healthy and safe environment for the users who occupy these buildings.

2. PURPOSE AND SCOPE OF THE AUDIT

Pursuant to the *Cities and Towns Act*, we completed a performance audit mission on the building maintenance management. We performed this mission in accordance with the Canadian Standard on Assurance Engagement (CSAE) 3001 described in the CPA Canada Handbook – Assurance, and other Canadian public sector certification standards issued by the CPA Canada Auditing and Assurance Standards Board.

The purpose of this audit was to ensure that the City's buildings are subject to planned maintenance and effective corrective maintenance in accordance with the department's strategy and to ensure that the sanitary maintenance management is conducted according to good practices. Note that our audit work excluded the review of planned maintenance activities done by City employees in order to focus on scheduled maintenance contracted out to external firms.

The role of the Auditor General of the Ville de Montréal is to provide a conclusion regarding the objectives of the audit. To do so, we collected a sufficient amount of relevant evidence on which to base our conclusion and to obtain a reasonable level of assurance.

⁶ The undiscounted RV of the City's building inventory, established in 2011, is \$3.1 billion.

Our assessment is based on criteria we have deemed valid for the purposes of this audit. They are presented in Appendix 5.1.

The Auditor General of the Ville de Montréal applies the *Canadian Standard on Quality Control (CSQC) 1* of the CPA Canada Handbook – Assurance and, consequently, maintains a comprehensive quality control system that includes documented policies and procedures with respect to compliance with ethical guidelines, professional standards and applicable legal and regulatory requirements. She also complies with regulations on independence and other ethical guidelines of the *Code of Ethics of Chartered Professional Accountants*, which is governed by fundamental principles of integrity, professional competence, diligence, confidentiality and professional conduct.

Our audit work focused on the management of building maintenance conducted by SGPI. They covered the first eight months of 2018, but for some aspects, data prior to this year were also considered. Our work was primarily carried out from June to December 2018, but we also took into account data that we received up to January 2019.

This work was performed primarily with the following administrative units of SGPI:

- Direction de la gestion immobilière et de l'exploitation:
 - Division de la gestion immobilière et de l'exploitation des bâtiments spécialisés – région Est;
 - Division de la gestion immobilière et de l'exploitation des bâtiments spécialisés – région Ouest;
 - Division de la gestion immobilière, de l'exploitation à contrat et de l'énergie.
- Direction de l'optimisation, de la sécurité et de la propreté;
- Direction du bureau de projet et des services administratifs, Division des services administratifs, Section centre d'appels.

Upon completing our audit work, we presented a draft audit report to the concerned managers of the SGPI branches targeted by the audit. A final report was then submitted to the SGPI directorate to obtain an action plan and time frames for the implementation of the relevant recommendations. The final report was also sent to the Direction générale and, for information purposes, to the Service des affaires juridiques.

3. AUDIT RESULTS

3.1. MANAGEMENT OF BUILDING MAINTENANCE OPERATIONS

3.1.1. PLANNED CONTRACT MAINTENANCE

3.1.B. BACKGROUND AND FINDINGS

The Division à contrat is responsible, among other things, for providing the customers of SGPI with technical maintenance services (planned and corrective) for designated buildings for maintenance through external firms.

As of December 12, 2018, the information obtained indicates that the planned maintenance of approximately 420 buildings were under the Division à contrat. As part of the restructuring undertaken within SGPI, two situations have increased the number of buildings maintained in the Division à contrat from 2017 to 2018. First, as of January 1, 2018, SGPI repatriated, under its governance of property management, several buildings that were previously maintained by various corporate departments of the City. Second, a batch of about 70 buildings that were maintained by the maintenance divisions (Est and Ouest regions) was also transferred to the Division à contrat⁷, according to the information obtained, for reasons of operational efficiency. If we compare the situation in 2018 (about 420⁸ buildings) compared to that prevailing in 2017 (about 130 buildings), we note on December 12, 2018 a significant increase in the number of buildings to maintain under the responsibility of the Division à contrat, a little over 220%, three times more buildings than before. The increase in this workload within the Division à contrat implies the introduction of tight internal management with regard to the follow-up to the various contractual agreements in order to obtain the assurance that the City is paying for services made in accordance with its expectations.

According to the information obtained from the managers interviewed, these buildings maintained through contractual agreements are, in general, non-specialized buildings (e.g., administrative buildings, neighbourhood stations). On the other hand, buildings considered to be more specialized by the peculiarities of their equipment (e.g., arenas, swimming pools) are maintained by teams of specialized employees in the Divisions de la gestion immobilière et de l'exploitation des bâtiments spécialisés – région Est et région Ouest. For the rest of this report, we will designate these two administrative units as the “*Division Est*” and the “*Division Ouest*.”

⁷ According to the information obtained, in return, 10 large sports centres, whose maintenance is more specialized, were transferred from the Division à contrat to the maintenance divisions of the Est and Ouest regions.

⁸ According to the information obtained, for the buildings related to the Service de l'eau, SGPI maintains only the exterior envelope of these buildings.

Thus, the contracts awarded concern the maintenance of various types of equipment (e.g., building mechanics equipment⁹) some of which (e.g., elevators, generators) are subject to preventative maintenance to meet requirements prescribed by Quebec standards and laws¹⁰. The successful firms must conduct all the PEPs in accordance with the instructions of the tender documents and, as the case may be, the corrective maintenance if the contract is “*all inclusive*.”

Our audit work consisted of reviewing the processes in place within the Division à contrat, to assess the extent to which control mechanisms had been put in place to monitor compliance with contract terms, to obtain assurance of the services rendered and to corroborate the validity of the invoices submitted by the contracting firms.

To do this, we obtained from the responsible manager the list of contracts in effect as of September 11, 2018. From this list, the contracts that specifically related to the planned maintenance of building equipment that was in effect during the period covered by our audit, i.e., the first 8 months of 2018, were selected. Note that some of these contracts were subject to extension clauses until a new contract in concluded. We thus identified a population of 12 contracts totalling \$9.9 million (including the cost of extensions). Of these, we selected a sample of 3 contracts totalling \$6.7 million out of a total population of \$9.9 million (68%) – (see Table 1).

TABLE 1 – SAMPLE OF REVIEWED PLANNED MAINTENANCE CONTRACTS

CONTRACT	SUBJECT	CALL FOR TENDERS NUMBER	COST (WITH TAXES AND EXTENSIONS)	TIMELINES	NUMBER OF BUILDINGS INVOLVED
1	Vertical transport equipment maintenance service ¹¹	13-13024	\$2.2 million	January 1, 2014 to December 31, 2016 ^[A]	79
2	Emergency generator maintenance service	13-13028	\$0.4 million	January 1, 2014 to December 31, 2016 ^[A]	31
3	Equipment maintenance service of the building mechanics (heating, ventilation, air conditioning)	17-15952	\$4.1 million	September 1, 2017 to August 31, 2022	58
			\$6.7 MILLION		

^[A] Long-term contracts as of December 31, 2017 and then as of December 31, 2018.

⁹ For example: heating, ventilation or air-conditioning systems.

¹⁰ In particular: *Building Act* (chapter B-1.1) and the *Safety Code* (chapter B-1.1, r.3) and the *Construction Code* (B-1.1, r.2).

¹¹ The equipment involved mainly concern lifts, escalators, platforms for persons with disabilities and hoists.

For these three contracts, we examined the tender documents and noted the relevant clauses relating to the monitoring of the execution of planned maintenance activities and compliance with the conditions for the payment of invoices submitted by the successful bidder. Subsequently, for each contract, we randomly selected three buildings and one equipment per building for further examination of compliance with the contract terms.

We present below the results of the examination carried out with regard to each of the contracts of our sample.

CONTRACT 1 - (TENDER 13-13024) - VERTICAL TRANSPORT EQUIPMENT MAINTENANCE SERVICE

Among the various vertical transportation equipment constituting the present contract, we have randomly selected an elevator for each of the three buildings in the sample. As mentioned earlier, this type of equipment is subject to maintenance that is regulated. The tender document specifies, in particular, that safety tests must be conducted annually and that regular maintenance is required once or twice a month, depending on the age of the equipment. Based on the information obtained from the property manager assigned to monitor this contract and the documentation reviewed, our findings are as follows:

- The tender document¹² provides that the successful bidder must submit to the City (at the beginning of the contract and at the annual renewal) a schedule of safety tests for all equipment for approval purposes. However, we found that the schedule for conducting equipment safety tests was not transmitted by the successful bidder and that SGPI did not request it. Obtaining this schedule would have been relevant to the monitoring of the activity and ultimately, to plan an unannounced audit on the work site;
- It is also expected that the successful bidder will provide SGPI with written confirmation of the results of the safety tests conducted. However, for the three elevators in our sample, we did not obtain evidence that the safety test report had been systematically obtained by SGPI. As a result of our request, they had to be requested from the successful bidder. The responsible property manager says that all the documentation is generally received, but that the problem was due to incorrect filing on their part. In addition, upon examining the three safety test reports obtained, we note that they are not signed by the technician appointed by the firm and they do not mention any particular remark concerning the conformity of the result of the tests conducted. In this regard, the people met in the Division à contrat recognize that better follow-up on their part should be considered;
- As already mentioned, in addition to the safety tests, this equipment must also be regularly maintained at a frequency determined by the PEP in the specifications. To do this, the tender document provides that¹³ a specific maintenance sheet must be completed during each intervention. Generally, depending on the equipment involved, one or two

¹² Section 17 of the special clauses.

¹³ Section 18 of the special clauses.

visits for regular maintenance are required every month. There should also be an annual safety test. However, in light of the information obtained, it should be noted that no internal mechanism has been set up to reconcile the work orders (or the maintenance sheets) sent by the successful bidder for the maintenance and safety tests provided for in the PEP. Under the circumstances, it is more difficult for SGPI to assess the rate of implementation of the PEPs and respond quickly if the services are not delivered as expected. In fact, it appears that the rate of implementation of the PEP is not precisely known by the SGPI.

In order to evaluate whether the PEP had been respected with regard to the regular maintenance to conduct for each of the equipment in our selection (maintenance once or twice per month, depending on the equipment concerned), we asked to obtain the maintenance sheets completed and transmitted by the successful bidder in the last year. Apart from two maintenance sheets that were missing, concerning one of the three equipment examined, the maintenance sheets completed for the two other equipment of our selection were sent to SGPI;

- In addition, concerning these maintenance sheets, the tender document also specifies the following:

Section 18 of the special clauses

“At each maintenance visit, prior to any work, the service technician must report to the building operator (reception desk) to enquire whether any minor faults on any device was reported by the occupants of the building. [...] At the end of the maintenance visit, or after an intervention following a service call, the service technician must give to the building operator (reception desk) the keys and have them sign the “Maintenance sheet or the service and repair log” to validate the intervention. Any work on the site will not be considered, therefore not payable, if the Maintenance sheet or the service and repair register is not signed by the building operator or his representative and if it does not accompany the invoice.”

However, for the three equipment examined, we note that maintenance sheets are usually not signed by the building operator to validate the on-site intervention. In fact, we find that the invoices are nevertheless approved for payment without requiring tender document compliance.

In a similar vein, the information obtained from the responsible property manager reveals that there are not necessarily random visits to validate the services rendered in the field (e.g., review of services and repair register which is kept inside the building). Although the managers interviewed stated that the SGPI technical officers provide a presence within the buildings, if such verifications were carried out, they were not documented. As a result, no evidence of the existence of such control could be demonstrated;

- With respect to the controls over the invoiced costs, it seems appropriate to us that the approval of the invoices is a task entrusted to the property manager rather than to the technical officers also assigned to the follow-up of various aspects of the contracts awarded. The invoices examined bear proof of approval by the responsible property manager. We also took note of the existence of a monthly invoicing tracking chart.

CONTRACT 2 - (TENDER 13-13028) - EMERGENCY GENERATOR MAINTENANCE SERVICE

As with vertical transportation equipment, the maintenance of generators is regulated. The PEP specifies in the tender document that for each of the equipment covered by the contract, the successful bidder must make two visits annually. One in the spring and one in the fall. He must also submit his maintenance schedule to SGPI for approval¹⁴. To justify the payment request, the successful bidder must provide maintenance and inspection reports.

For the purpose of our audit work, the maintenance of three generators in three different buildings was examined. Our observations are as follows:

- As with the previous contract, we note that the maintenance schedule is not necessarily systematically obtained as expected. The proof of obtaining such a schedule could only be obtained for the equipment of the buildings of a central department covered by the contract, in respect of which access to the buildings is controlled. As mentioned above, obtaining this schedule could be a very useful tool for planning spot checks on site;
- Although the PEP implementation rate for all the generators included in the contract was not specifically calculated, we did observe that a follow-up chart is prepared by the property manager for the purposes invoice approval. For each building and for each associated generator, this table identifies the cost to be billed for each scheduled maintenance to be performed (two visits per year). As each invoice is accompanied by the work order for the maintenance performed, it is possible to follow the progress of the planned maintenance. Also, for the three generators in our sample, we obtained the necessary supporting documents to allow us to affirm that the planned maintenance was entirely carried out;
- Contrary to the contract previously examined, we note that work orders and sometimes even maintenance reports bear the signature of the building operator or his representative. This appears to us to be a good practice since this control provides the contract monitoring officer with additional assurance that the work done on site has actually been done;
- The technical specification provides that a log to record checks, tests and maintenance of the equipment must be maintained by the successful bidder and kept on site. However, although spot checks to validate the services rendered and compliance with the contractual clauses could have been carried out by the representatives of SGPI, we did not obtain any proof;
- With respect to the control of billing fees, we find that the hierarchal level of the person designated to approve invoices is appropriate, in this case, the property manager. The invoices examined bear proof of approval by the property manager. As already mentioned, the invoices are accompanied by the work order and the maintenance and test reports as stipulated in the tender document.

¹⁴ Section 1.2 and 1.5 of the technical specifications.

CONTRACT 3 - (TENDER 17-15952) - EQUIPMENT MAINTENANCE SERVICE OF THE BUILDING MECHANICS

The purpose of this contract is to maintain heating, ventilation, air conditioning and plumbing equipment in various buildings in the City. Depending on the equipment, a different PEP may need to be implemented. This involves the performance of specific maintenance tasks, as well as a maintenance frequency that will vary depending on the equipment involved (e.g., twice a year, nine times a year). The technical specifications of the tender document provide the successful bidder with the PEPs to implement for the different equipment and the bidder is required to comply.

For each of the three buildings in our sample, equipment was selected for review: a monobloc roof unit, a heating circulation pump, and a domestic water heater. Our observations are as follows:

- The technical specification states that the successful bidder must submit for approval, within 90 days of the order to commence service, its planned maintenance inspection schedules. This particular calendar for each building lists, on the one hand, the number and type of equipment to be maintained grouped according to the PEP concerned. On the other hand, it indicates for each equipment the number of maintenance interventions to be conducted in accordance with the corresponding PEP and the period of the year (spread over 52 weeks) where the completion of this maintenance is planned.

We observed that for each of the three buildings sampled the calendar had been sent by the successful bidder. However, although the property manager assigned to follow up on the contract mentions having conducted the examination, we do not find any proof of any approval attesting to their conformity. In our opinion, this control is important because it should be able to certify that all the equipment in the building covered by the contract has been listed and that the frequency of scheduled maintenance planned by the successful bidder is in accordance with the PEPs attached to the tender document;

- Furthermore, according to the information obtained, we note that no mechanism has been implemented to bring together, for each of the equipment to be maintained, the work orders sent by the successful bidder and the planned maintenance appearing in the PEP schedule. The staff interviewed stated that such a conciliation mechanism was already implemented a few years ago, but was abandoned because of the time involved and the limited resources available. Since then, we have been informed that an electronic work order tracking file transmitted by the bidder has been created by a technical agent. The file in question lists all the buildings concerned by the contract. Each time a work order is received for a building, a mark is entered in the relevant week. The property manager responsible for monitoring this contract admits that this tool makes it possible to observe, to a certain extent, the presence of the successful bidder in the buildings covered by the contract. However, this does not validate that the equipment has been maintained as planned in the corresponding PEP.

Moreover, the technical specifications stipulate that the successful bidder must provide monthly a signed document showing his rate, as a percentage, of the maintenance

work carried out for each of the buildings included in this contract. It is also stipulated that this document must accompany the original invoice to justify the request for payment¹⁵. However, the responsible property manager admits that he does not enforce these clauses of the specifications. The document in question therefore never accompanies the invoice submitted by the successful bidder and is not requested. As a result, although the tender document states very clearly that SGPI expects the planned maintenance work under the contract to be 100% completed, the people we have met admit that they have in no way this assurance. In fact, the rate of implementation of the PEPs for this contract is not known.

We believe that the follow-up of the completion of the planned maintenance goes beyond the compilation of the documentation transmitted by the successful bidder. In this regard, the managers met in the Division à contrat claim that spot checks on site are occasionally performed on a sampling basis. We did not obtain any documented proof;

- With respect to the control of billing fees, as for the other contracts reviewed, we find that the hierarchical level of the person designated to approve invoices is appropriate and the invoices examined bear the evidence of its approval. On a monthly basis, the successful bidder invoices the overall work carried out for different building batches of the contract (e.g., batch no. 1 – 26 buildings). As for work orders for the building, they are transmitted electronically to an email inbox provided for this purpose in the first days following their execution. According to the information obtained from the property manager responsible for the contract, an internal technical agent is appointed to retrieve the work orders transmitted in order to examine them and to file them in the folder of the building concerned. However, it appears that a considerable number of work orders accumulate in the email inbox without the technical agent having examined and filed them yet. In order not to unduly delay the payment to the successful bidder, this accumulated delay means that the property manager is sometimes forced to approve the invoice without necessarily being able to corroborate it with the corresponding work orders. In our view, this situation increases the risk that the City will pay for services that have not been rendered and deserves corrective action to address them.

In conclusion, we find that in many respects the Division à contrat is currently unable to corroborate that all the services underlying the awarded contracts have actually been delivered as intended. In addition, in a context where the workload of this division has increased considerably with the consolidation of real estate activities and the reorganization undertaken within SGPI, we believe that it will be imperative that measures be taken to tighten the controls in place.

¹⁵ Section 7 of the technical specifications and 16 of the special administrative clauses.

RECOMMENDATION

3.1.1.A. We recommend that the Service de la gestion et de la planification immobilière tighten controls so that it can ensure compliance with all of the contract terms associated with its technical maintenance contracts in order to promote greater assurance of services rendered, to be able to monitor the rate of implementation of planned maintenance programs and to prevent the risk of defects.

BUSINESS UNIT'S RESPONSE

3.1.1.A. *Service de la gestion et de la planification immobilière*
[TRANSLATION] VENTILATION, AIR CONDITIONING AND REFRIGERATION:
Send the contractor a letter recapitulating the contract clauses.
(Planned completion: February 2019)

Create a file for monitoring the ventilation, air conditioning and refrigeration subcontractors' work. ***(Planned completion: June 2019)***

Ask the contractor for the monthly preventative maintenance work schedule. ***(Planned completion: June 2019)***

Calculate the work completion rate at the beginning of each month.
(Planned completion: September 2019)

Implement a mechanism for documenting periodic inspections and audits of the work performed by the subcontractor.
(Planned completion: December 2019)

ELEVATOR AND GENERATOR:
Send the contractor a letter recapitulating the contract clauses.
(Planned completion: May 2019)

Create a file for monitoring the elevator subcontractors' work.
(Planned completion: May 2019)

Ask for the monthly preventative maintenance work schedule.
(Planned completion: June 2019)

Implement a mechanism for documenting periodic inspections and audits of the work performed by the subcontractor.
(Planned completion: December 2019)

3.1.2. SANITARY MAINTENANCE (ON SITE OR UNDER CONTRACT)

3.1.2.A. BACKGROUND AND FINDINGS

Housekeeping of premises within buildings contributes to the health and well-being of occupants and users. In particular, it promotes the maintenance of hygiene and safety conditions while preserving the image of the organization.

The service offering of SGPI, in terms of sanitary maintenance, only covers buildings used by the central departments of the City. Thus, its services are not offered to boroughs from the former Ville de Montréal or to the boroughs of former suburbs, which manage this activity autonomously.

The sanitary maintenance of the central department buildings (e.g., the Service de sécurité incendie, the Service de police de la Ville de Montréal, the Service de l'Espace pour la vie) is conducted either on site by the personnel of the City or entrusted to external firms following the awarding of a contract. Until 2017, sanitary maintenance operations (on site or under contract) were shared between SGPI and various other central departments. However, as of January 1, 2018, following the consolidation of real estate activities, all sanitary maintenance activities were repatriated to SGPI. As already mentioned, this reorganization involved the review of the organizational structure of SGPI and the Division de la propreté was created under the authority of a new branch, the "Direction de l'optimisation, de la sécurité et de la propreté."

The Division de la propreté is responsible, among other things, for providing SGPI's customers with on-site or contracted sanitary services, managing the contracts awarded and ensuring the inspection of the premises with respect to the evaluation of the health standards expected. It should be noted, however, that prior to this reorganization, the Direction de la gestion immobilière et de l'exploitation was already managing sanitary maintenance contracts for various central department buildings. At the time of our audit, the Division de la propreté and the Division à contrat still shared the responsibility for the sanitary maintenance contracts in effect. According to the information obtained, the sanitary maintenance of a total of 165 buildings were the responsibility of SGPI (on site and under contract).

Our audit work consisted, on the one hand, of examining the organization and the supervision of the sanitary maintenance conducted on site. On the other hand, for the Division de la propreté as well as for the Division à contrat, we examined the control mechanisms established for sanitary maintenance conducted through contracts awarded to external firms, with a view to monitor the respect of the contractual clauses, obtain the assurance of the adequacy of the services rendered and corroborate the invoices submitted by the contracting firms.

ON-SITE SANITARY MAINTENANCE – DIVISION DE LA PROPRETÉ

At the time of our audit, the Division de la propreté was responsible for the sanitary maintenance of 18 buildings used by various central departments¹⁶. To accomplish these tasks, it benefits in particular from a staff of 25 permanent blue-collar employees and a pool of about 8 auxiliary employees who intervene when necessary. In addition, a manager and a foreman share the responsibility of the 18 buildings for the organization and supervision of sanitary maintenance operations to be conducted.

The requirements as to the nature and frequency of the sanitary maintenance work to be carried out are established through the development of procedures to identify, for the different types of buildings, the places or premises requiring maintenance (e.g., main entrance, kitchen, washroom), with a predetermined schedule and frequency (e.g., daily, weekly, monthly or yearly). These procedures are called “*Routes de travail*.” They may be accompanied by instructions describing the nature of the maintenance work to be performed (e.g., emptying bins, washing windows and floor), the equipment needed and the work techniques to use. It should be understood that a “*Route de travail*” is assigned to an employee and is specific to each building given its use and characteristics. It can sometimes combine both the detailed schedule of work and tasks to be performed and their frequencies.

According to the information obtained from the division head responsible, there is still no “*Routes de travail*” for all 18 buildings whose housekeeping is managed on site. In fact, we found that this was true for 6 of the 18 buildings (33%). In our opinion, these “*Routes de travail*” are a necessary framework to ensure maintenance in line with the needs and expectations of the organization. In the absence of such frameworks, it may, on the other hand, be more difficult for the managers responsible for the activity to refute that the sanitary maintenance work was not carried out according to the expectations in case of dissatisfaction or complaints.

As for monitoring the work, it was mentioned to us that it was mainly exercised through the presence of the manager and the foreman on site, but also through the complaints received. However, we have not done any work to corroborate these monitoring activities.

RECOMMENDATION

3.1.2.B. We recommend that the Service de la gestion et de la planification immobilière extend to all the buildings, whose sanitary maintenance is carried out on site, the implementation of “*Routes de travail*” in order to supervise the activity and ensure maintenance in line with the needs and expectations of the organization.

¹⁶ In particular, there are nine buildings Service du matériel roulant et des ateliers, the Jardin botanique and Insectarium of the Service de l’Espace pour la vie, three buildings of the Service de sécurité incendie de Montréal including the Headquarters.

BUSINESS UNIT'S RESPONSE

3.1.2.B. ***Service de la gestion et de la planification immobilière***
[TRANSLATION] Continue to develop and implement "Routes de travail" for buildings managed in-house. (Planned completion: November 30, 2019)

CONTRACT SANITARY MAINTENANCE – DIVISION DE LA PROPRETÉ AND DIVISION À CONTRAT

For the purpose of our review, we first identified the sanitary maintenance contracts that were in effect for the period covered by our audit (the first eight months of 2018), within the Division de la propreté and from the Division à contrat. We then selected a sample of three contracts, consisting of two contracts managed by the Division de la propreté and one contract managed by the Division à contrat (see Table 2). A total of 13 buildings distributed through the sample contracts were selected in order to examine the existence of monitoring mechanisms to validate the adequacy of the services rendered and the invoices submitted by the contracting firms.

TABLE 2 – SAMPLE OF REVIEWED SANITARY MAINTENANCE CONTRACTS

CONTRACT	SUBJECT	CALL FOR TENDERS NUMBER	COST (WITH TAXES AND EXTENSIONS)	TIMELINES	NUMBER OF BUILDINGS INVOLVED
DIVISION DE LA PROPRETÉ					
1	Service d'entretien sanitaire de divers bâtiments of the Service de sécurité incendie et grand ménage des casernes	17-15625	\$0.8 million	April 28, 2017 to April 27, 2020 ^[B]	66
2	Housekeeping service – Biodôme de Montréal and Planétarium Rio Tinto Alcan	14-13656	\$6.9 million	September 1, 2014 to September 1, 2017 ^[A]	2
DIVISION À CONTRAT					
3	Service d'entretien sanitaire de divers bâtiments municipaux and the Service de police de la Ville de Montréal	15-14383	\$9 million	November 1, 2015 to October 31, 2018 ^[C]	44
			\$16.7 MILLION		

^[A] Contract extended to September 1, 2018 and then to September 1, 2019.

^[B] Two firms share this contract. The contract of only one of the two firms was examined.

^[C] Three firms share this contract. The three contracts were extended to October 31, 2019. The contract of only one of the three firms was examined.

The purpose of these contracts is the supply of labour, all material, equipment and products required for the sanitary maintenance of the various buildings concerned. The tender documents generally specify the functional requirements to be followed and to be respected by the successful bidder. For example, the successful bidder must assemble and make available to the City a document containing, in particular, a log of the entry and exit of the employees assigned to the maintenance, the "*Routes de travail*" of each employee (the detailed schedule and tasks to be performed), the material safety data sheets of products used. In general, tender documents specify the workspaces requiring maintenance, the tasks to be performed, the frequency of maintenance and the number of hours available in the contract.

Thus, we found that, for each of the three contracts in our sample, a manager had been appointed to monitor it. We will therefore present below our findings from the review of the contracts of the Division de la propreté and of the Division à contrat.

DIVISION DE LA PROPRETÉ - CONTRACT NO. 1 AND NO. 2 SHOWN IN TABLE 2

In light of the documentary proof provided under the contract No. 1 (Tender 17-15625), the established monitoring mechanisms appear satisfactory. In particular:

- For the purpose of applying the applicable legal provisions on safety at work and identification of hazardous materials, a clause in the tender document provides that the successful bidder is required to provide the MSDS for the maintenance products used. The binder containing all these sheets was presented to us;
- In terms of work supervision, we obtained, based on a sample of buildings, the proof of site inspection reports produced by the person responsible for monitoring the contract. The tender document provides that the invoices will be paid at 100% if the result of the cleanliness indices measured randomly during the contract is equal to or greater than 80%. To that end, we note that the evaluation grid provided for in the specifications has been used. In addition, we have proof of a follow-up of major housekeeping operations within the buildings in 2018. This follow-up grid includes, in particular, the date scheduled for the start of the activity as well as the date on which the operation was completed;
- We obtained proof of a follow-up with regard to the complaints made (email exchanges);
- On the basis of sampling, we obtained proof of a log within the buildings compiling the time of entry and exit of the employees of the firm assigned to the sanitary maintenance. In this regard, we also have proof of a verification made by the person responsible for monitoring the contract prior to the approval of invoices, in order to validate the hours invoiced by the successful bidder with those recorded in the employee entry and exit log.

However, for the monitoring of contract No. 2 (Tender 14-13656), monitoring mechanisms are deficient. In particular:

- According to the information obtained, there is no particular validation surrounding the approval of invoices submitted by the successful bidder. A log compiling the time of entry and exit of employees assigned to the maintenance work is not produced as stipulated in the tender document¹⁷. Under the circumstances, SGPI is exposed to the risk of approving invoices that may not correspond to actual hours worked;
- In addition, it appears that no inspection report of the work is produced and that no particular follow-up is carried out with regard to the sanitary maintenance products used. In this respect, it should be noted that this is a contract referring to older tender documents (2014) and that the clauses relating to the controls mentioned above were not included.

¹⁷ Section 15.2 of the special administrative clauses.

DIVISION À CONTRAT – CONTRACT NO. 3 SHOWN IN TABLE 2

For this contract (Tender 15-14383), under the responsibility of the Division à contrat, we note that the monitoring mechanisms with regard to the respect of the contractual clauses and the validation of the services rendered taking into account the invoiced fees are practically nonexistent. The lack of time given the workload and the lack of knowledge of this sphere of activity are the reasons given by the technical agent responsible to explain the situation. Therefore, our observations are as follows:

- As mentioned earlier, although the tender document provides that invoices will only be paid 100% if the result of the cleanliness indices measured randomly during the contract is equal to or greater than 80%, no site inspections are not conducted and no report in this sense is produced;
- The hours invoiced by the successful bidder are not systematically checked. For the surveys carried out with regard to certain buildings, we observed that the invoices bear proof of approval on the part of the responsible property manager. However, we could find no proof of any conciliation with the time in the log of entries and exits of the employees of the firm assigned to the sanitary maintenance;
- According to the information obtained, the complaints received further guide the interventions carried out within the buildings. However, these complaints are mainly expressed verbally to the representative of the firm concerned.

In short, considering the importance of sanitary maintenance for the well-being of the occupants and users of buildings and the extent of the public money spent on the awarding of related contracts, we consider it appropriate, in certain respects, to tighten controls.

RECOMMANDATION

3.1.2.C. We recommend that the Service de la gestion et de la planification immobilière strengthen the controls surrounding the follow-up of the sanitary maintenance contracts for the buildings under its responsibility so that it can ensure that the services are delivered in accordance with expectations and ensure a safe and healthy environment for occupants and users.

BUSINESS UNIT'S RESPONSE

3.1.2.C. *Service de la gestion et de la planification immobilière*
[TRANSLATION] Develop and implement monitoring and follow-up mechanisms to ensure compliance with contract clauses. Determine a percentage of inspections to be performed internally or externally. Also, be sure to require suppliers' entry and exit logs or time management reports in order to reconcile them, and validate and approve invoices. (Planned completion: December 31, 2019)

Moreover, as already mentioned above, as part of the restructuring undertaken by SGPI, the Division de la propreté under the Direction de l'optimisation, de la sécurité et de la propreté was specifically created as of January 1, 2018 to provide customers with sanitary maintenance services. According to the information obtained from the managers interviewed, it was expected that the sanitary maintenance contracts that were formerly under the responsibility of the Division à contrat would be fully transferred to the Division de la propreté. However, upon completing our audit work in January 2019, this transfer had not yet begun. To this end, in order to standardize the procedures for monitoring the management of these contracts and increase their effectiveness, we believe that it may be appropriate for SGPI to complete the transfer in the short term in order to concentrate, as planned, the management of the sanitary maintenance activity within a single administrative unit.

RECOMMENDATION

3.1.2.D. We recommend that the Service de la gestion et de la planification immobilière make the necessary arrangements to complete the transfer of all sanitary maintenance contracts to its Division de la propreté in order to promote the standardization of the procedures surrounding the management of this type of contract and make it more efficient.

BUSINESS UNIT'S RESPONSE

3.1.2.D. *Service de la gestion et de la planification immobilière*
[TRANSLATION] The devolution exercise was initiated on January 1, 2019. The Division de la propreté is now responsible for managing sanitary maintenance contracts. Continue transferring responsibilities. Identify the resources needed to manage tendering and follow-up on sanitary maintenance requests. (Planned completion: December 31, 2019)

3.1.3. PROCESSING CORRECTIVE MAINTENANCE REQUESTS (ON SITE AND UNDER CONTRACT)

3.1.3.A. BACKGROUND AND FINDINGS

The requests for corrective maintenance concern cases of breakdown, failure or malfunctions in buildings or facilities belonging to the City. When such situations arise, an administrative framework, in effect since September 2016, titled "*Demande de service pour l'entretien des immeubles (centre de contact client 872-1234 ou formulaire intranet) PROCÉDURE*,"¹⁸ specifies the procedures for all service requests to the Direction de la gestion immobilière et de l'exploitation. Thus, according to the established procedure, the representative designated by the occupant of the building must make a telephone call to the customer contact centre¹⁹ (hereinafter called the "Centre d'appels") or fill out an online application (if the intervention is non-urgent), via an intervention request form on the City's Intranet site.

In order to create the request, the requester must provide all the information necessary to determine the nature of the intervention required (e.g., plumbing, electrical, ventilation, heating or cooling), the location (e.g., address or building number) and the possible source of the problem. If the request is forwarded to the Centre d'appels, the officer who receives the call must determine whether or not it is an urgent request. To be considered "Urgent," the administrative framework specifies that the request must meet one of the following three criteria:

- There is a risk to a person's life;
- The integrity of the building is compromised;
- The holding of an important activity is compromised, which could harm the image of the City.

Following the creation of the request of Système intégré de gestion des immeubles (SIGI), an email is sent to the requester confirming that the request has been addressed. Subsequently, a second email will be sent when the request is closed by the responsible maintenance unit. The corrective maintenance requested through these applications can be conducted by the technical teams of the divisions of the Est and Ouest regions or can be conducted by the contractors selected following the awarding of contracts, under the responsibility of the Division à contrat or other SGPI divisions responsible for various maintenance activities (e.g., the Division de la propreté).

The mode of operation to process on-site requests provides that, once the request is created in the SIGI application, it is then switched to another application called SIGI Mobile. From this moment, a work order is generated and automatically sent to the

¹⁸ C-RM-GPI-P-16-001, effective date September 15, 2016.

¹⁹ Reference is made to the telephone line (514-872-1234).

property manager responsible for the building concerned. An email is then sent to this manager to indicate the presence of a request. The manager then redistributes the work orders thus received to his technical team for processing.

The SIGI Mobile application (operational since 2013) is connected to the SIGI application via an interface and allows to process work orders electronically from the tablets and smartphones of the assigned employees. It can also document the work done, add photos and comments as a complement to the work order. Once processed by the assigned employee, the work order is redirected to the building manager (or foreman) who is responsible for approving it. Once the work order is approved in the SIGI Mobile application, the request is reverted to the SIGI application with a status of “Completed.”

The mode of operation to process requests under contract is substantially the same as on site with regard in particular to the creation of the request in the SIGI application, the confirmation by email of its undertaking and the transfer of the request to the SIGI Mobile application.

The requests are received by technical agents who are responsible for validating their merits and the nature of the services required to perform the necessary corrective maintenance. When the problem is validated, according to the type of problem to be solved, they transmit the request to the designated successful bidder according to the type of equipment in question and the building concerned. When the work is completed, the successful bidder must contact the Centre d’appels of the SGPI to report it so that the request is closed. Finally, as for the mode of operation on site, an email is sent to the requester to inform him that the request is closed.

From 2015 to 2018, between 25,000 to 30,000 requests per year were sent to SGPI and processed by the various units responsible for the maintenance and operation of the buildings. It should be noted that to handle these requests, SGPI has multidisciplinary teams including, building managers, technical agents, refrigeration specialists, painters, electricians, plumbers and carpenters.

3.1.3.1. GUIDELINES FOR PROCESSING REQUESTS

3.1.3.1.A. BACKGROUND AND FINDINGS

In this context, our audit work included evaluating the extent to which the processing of requests for corrective maintenance work was conducted in accordance with existing frameworks or guidelines. We first identified these guidelines and then examined the processing of requests registered in the SIGI application for the period of January 1 to August 31, 2018. We also reviewed the documentation of interventions from a sample of 24 requests with “Completed” status. It should be noted that of these 24 requests, 12 were under the responsibility of the Division à contrat, 6 under the responsibility of the Division région Est and 6 under the responsibility of the Division région Ouest.

Our audit found that the Division à contrat had two internal directives. One based on the processing of requests²⁰ and the second based on contracts awarded by mutual agreement²¹. The purpose of the request processing directive is to guide technical agents in processing requests in order to move toward a uniform customer approach. We note that this directive does not provide details of the operational functioning of the process, as such, of the request. For example:

- what information must be documented;
- what circumstances justify giving the request the status of deferred;
- At what point in the process is it justified considering the status of the request as “Completed” (after the work has been completed or after receipt of the invoice, if any?).

In terms of the second internal directive referred to in the case of contracts awarded by mutual agreement, it allows to specify the method of awarding the contract according to the estimated level of expenditure relating to the corrective maintenance work to be carried out. According to this directive, technical agents are authorized to award contracts by mutual agreement for expenditures estimated at less than \$8,000. Estimated expenditures between \$8,000 and \$25,000 must be submitted by at least two suppliers.

With respect to the Divisions d’entretien de la région Est et de la région Ouest, based on the information obtained, there are no documented internal directive for the operational procedure for on-site request processing. The only framework to which the managers referred us is the framework addressed to the customers wishing to submit a request, which was mentioned earlier²².

In short, in order to ensure consistent request processing and to obtain reliable and comparable completion times from one administrative unit to another, we believe that it would be judicious for SGPI to develop and to provide everyone with a directive describing the mode of operation recommended by the department to process requests.

RECOMMENDATION

3.1.3.1.B. We recommend that the Service de la gestion et de la planification immobilière develop and disseminate to staff a directive outlining the recommended mode of operation to process corrective maintenance requests, with a view to ensuring uniformity of procedures, increasing the reliability of the management information produced, and fostering customer satisfaction.

²⁰ Titled: “Règles de bonne pratique – Traitement des requêtes”.

²¹ Titled: “Règles de bonne pratique – Contrats de gré à gré.”

²² Reference: “Demandes de service pour l’entretien des immeubles (centre de contact client 872-1234 ou formulaire intranet) PROCÉDURE,” C-RM-GPI-16-001.

BUSINESS UNIT'S RESPONSE

3.1.3.1.B. *Service de la gestion et de la planification immobilière*
[TRANSLATION] Develop a common guideline for in-house and contracted teams on how to create, document the history of and close a request in the Système intégré de gestion des immeubles.
(Planned completion: December 2019)

3.1.3.2. MEETING TARGET LEAD TIMES FOR REQUEST PROCESSING

3.1.3.2.A. BACKGROUND AND FINDINGS

The SIGI application calculates the processing lead time of requests. In fact, two types of lead times can be calculated. On the one hand, there is the customer lead time, which is calculated from the creation date of the request to the date of closing. On the other hand, there is the property lead time, which excludes the days, for example, required to wait for parts or the periods when the request had to be deferred.

In this regard, it should be noted that the SGPI directorate has set lead times to process corrective maintenance requests. For example, non-urgent (regular) requests must be completed within seven days, whereas requests considered urgent must be completed within four hours. Among other things, our work has been geared toward examining compliance with these lead times.

We extracted the requests recorded in the SIGI application, which was provided by SGPI, and we first established the statistical portrait of the requests received and which had the status "Completed" during the period from January 1 to August 31, 2018, according to the administrative unit responsible for processing, status requests (active, cancelled or completed) and the type of requests (urgent or not urgent). The data is presented in Tables 3 and 4 below. We then calculated the average lead time for requests with completed status (see Table 5).

TABLE 3 – PORTRAIT OF REQUESTS RECEIVED BETWEEN JANUARY 1 AND AUGUST 31, 2018

UNIT RESPONSIBLE FOR PROCESSING	STATUS OF THE REQUEST			
	ACTIVE	CANCELLED	COMPLETED	TOTAL
Contract	382	1,030	6,385	7,797
Région Est	212	512	5,785	6,509
Région Ouest	288	342	5,702	6,332
TOTAL	882	1,884	17,872	20,638

TABLE 4 – TYPE OF REQUESTS RECEIVED AND COMPLETED BETWEEN JANUARY 1 AND AUGUST 31, 2018

UNIT RESPONSIBLE FOR PROCESSING	TYPE OF REQUEST		
	URGENT	NOT URGENT	TOTAL
Contract	507	5,878	6,385
Région Est	416	5,369	5,785
Région Ouest	340	5,362	5,702
TOTAL	1,263	16,609	17,872

TABLE 5 – AVERAGE LEAD TIME OF REQUESTS COMPLETED BETWEEN JANUARY 1 AND AUGUST 31, 2018

TYPE OF REQUEST	TARGET LEAD TIME	NUMBER OF REQUESTS	AVERAGE LEAD TIME	NUMBER OF REQUESTS OUTSIDE OF LEAD TIME	RATE OF REQUESTS COMPLETED OUTSIDE OF LEAD TIME
Not urgent	7 days	16,609	18 days	6,542	39%
Urgent	4 hours	1,263	10 days	1,042	83%
		17,872			

The analysis conducted shows that the average lead time for resolving completed requests was 18 days for non-urgent requests and 10 days for urgent requests, whereas target lead times set by management were 7 days for non-urgent requests and 4 hours for urgent requests. We also note that 39% of non-urgent requests were not resolved within the set 7-day target lead time. For urgent requests, this rate reaches 83%, given the target lead time of 4 hours.

To justify these results, it was mentioned to us that some requests are delayed when SGPI is not able to conduct the corrections immediately because, for example, a spare part is not available. In order to evaluate the impact of deferred requests on the rate of unresolved requests within the set lead times, we analyzed the requests that had been deferred using the “*building lead time*.” Our work revealed that for these requests, a negligible number of non-urgent requests whose “customer lead time” did not reach the 7-day target had a “*building lead time*” of 7 days or less (57 requests). Therefore, the deferral had little or no impact on the target lead time.

As for the explanation obtained for the so-called “urgent” requests, it was mentioned to us that the SIGI application does not allow to reflect the actual lead times because these requests must sometimes remain active until the complete resolution of the problem, which may include a portion of “urgent” work and a portion of non-urgent work. For example, in the case of a water leak, the repair of the leak is urgent, but the restoration of the walls or floors are not necessarily urgent. This would have the effect of extending the resolution period. That said, the fact remains that the average time for resolving urgent requests is 10 days, which is still greater than the target of 7 days set for non-urgent requests, without taking into consideration that urgent requests do not always require non-urgent restoration work.

Despite the fact that causes negatively impacting completion times were mentioned to us, our review also allowed us to note that some closing dates for requests were modified manually and that this generated zero lead times. That is, the closing date recorded for certain requests was earlier than the date of their creation. In the SIGI application, these negative lead times count for lead times of 0 days. We identified 609 cases, most of which (87%) were requests under the responsibility of the Division à contrat.

These findings show that the closing dates of the requests can be modified in the SIGI application and that in addition, they are incorrect in some cases.

For the corrective maintenance work, we were also told by the Division à contrat manager that a directive had been communicated in 2018 to the contract-awarding firms concerning the closure of requests. The firms were advised to contact the Centre d’appels directly to notify that the work for which they had been mandated was executed, so that the agent could enter the completed status of the request in the SIGI application. This directive would reflect actual intervention times and limit manual data changes in the application (e.g., the closing dates of the requests).

In order to deepen our analysis of turnaround times for corrective maintenance, we examined more specifically our sample of 24 requests with “Completed” status and reviewed work orders and invoices where applicable (see Table 6).

TABLE 6 – MEETING TARGET LEAD TIMES FOR THE 24 SELECTED REQUESTS WITH “COMPLETED” STATUS

RESPECT OF TARGET LEAD TIMES	UNIT RESPONSIBLE FOR REQUESTS		
	RÉGIONS EST AND OUEST	CONTRACT	TOTAL
Yes	5	4	9
No	5	4	9
Not determined	2	4	6
TOTAL	12	12	24

LEAD TIMES NOT RESPECTED

According to the information recorded in the SIGI application, three out of the four requests in the Division à contrat met the lead times since they were lead times of less than one day. However, upon examining the supporting documents obtained with regard to these requests (the invoice and/or the work order), we observed actual lead times of 42, 105 and 110 days. We also noted that for requests under the responsibility of this division, the practice often consisted in closing a request as soon as the successful bidder had been informed to carry out the required work. This practice obviously distorts the real turnaround time of the request in addition to not allowing the technical agents to adequately track the undertaking of the request since it is closed in the SIGI application before being processed.

LEAD TIMES NOT DETERMINED

Secondly, our analysis did not allow us to corroborate the actual lead time of six requests. For those in the Est and Ouest regions, these are two requests that were closed in less than 30 minutes, but no intervention time was recorded in the work order. Moreover, in both cases, a second request was made for the same building and the same problem in the two weeks that followed. This suggests to us that the request could be closed without any intervention being carried out. However, in one of the two cases, it is recorded in the SIGI Mobile application that the work was executed. As for the four of the six requests which fall under the responsibility of the Division à contrat, in all cases, the requests were closed after the successful bidder was advised to carry out the work, combined with the fact that we were unable to corroborate the actual lead time by an external source such as the supplier’s invoice or work order. These findings confirm the existence of the practice we observed in the analysis of the global database and for which the requests had a zero lead time or were completed in a short period of time. However, we are not able to accurately determine the proportion of requests whose closing dates were changed, and to what extent this has had an impact on the calculation of average request turnaround times.

RECOMMENDATION

3.1.3.2.B. We recommend that the Service de la gestion et de la planification immobilière take the necessary measures to strengthen the controls surrounding the closing of requests in the computer application used in order to obtain reliable management information for the evaluation of operational performance.

BUSINESS UNIT'S RESPONSE

3.1.3.2.B. *Service de la gestion et de la planification immobilière*
 [TRANSLATION] Finalize the implementation of the building maintenance mobile application, corrective component. The mobile application will make it easier to document and control operations.

Analyze request wait times. The new dashboard produced in conjunction with the Service de la performance organisationnelle provides indicators on new and closed work orders, workload backlog, and age of work orders. Data extracted to populate the management dashboard will be validated.

Adjust the dashboard according to the above analysis.

Follow-up on open requests on a monthly basis. 2019 targets for this purpose are already set for Direction de la gestion immobilière et de l'exploitation executives. (Planned completion: December 2019)

3.1.3.3. DOCUMENTATION OF CONDUCTED CORRECTIVE MAINTENANCE INTERVENTIONS

3.1.3.3.A. BACKGROUND AND FINDINGS

As part of the analysis of our sample of 24 requests, we sought to assess the extent to which the intervention time (the duration) spent processing the request and the description of the work done to resolve the reported issues were documented in the SIGI application.

First, with regard to the corrective maintenance conducted on site by the Divisions de la région Est and the région Ouest, we found that for 5 of the 12 selected requests, there was no time data recorded in the SIGI application. For 2 of these 5 requests, we found that they were undertaken remotely (in remote management), which explains the absence of time. As for the other 3 requests, there was no evidence to justify this information.

In order to obtain an overall picture of the situation, we then examined the entire database of requests received and completed on site between January 1 and August 31, 2018. A total of 11,487 requests that met these criteria were counted. Of these 11,487 requests, we recorded 2,488 requests for which no intervention time data was entered in the SIGI application (22%). As previously mentioned, in certain situations in particular, when the request does not require on-site intervention (e.g., the correction provided by remote management), it is normal that there is no time recorded in work order. However, we are unable to confirm that the absence of time on the work order is justified in all cases.

Considering that the analysis of the time devoted to processing requests in relation to the time spent on PEP maintenance is undoubtedly a key performance indicator, we are of the opinion that there should be closer monitoring so that the information concerning the intervention time is systematically recorded in the SIGI application. In fact, SGPI's 2016-2019 strategic plan mentions that one of the targets is to increase the proportion of scheduled maintenance work performed compared to corrective maintenance. Moreover, for requests that have not generated on-site work (no intervention time), justifications should be recorded in the SIGI application (or in the SIGI Mobile application).

We observed a summary description of the work conducted in only one request processed on site among the 12 in our sample. However, for 10 of the 12 requests, the wording is always the same, "*The work is executed,*" without further details as to the nature of the work done. In 1 case out of 12, the request was closed with no information to this effect recorded.

Finally, with respect to the duration of the intervention and the nature of the work performed in relation to the requests reviewed under the Division à contrat, we found that while suppliers generally document this information on the invoices or work orders sent to SGPI, they are never recorded in the SIGI application. We are aware that interventions by external firms are not always invoiced on an individual basis because of the nature of some maintenance contracts awarded by SGPI (e.g., "turnkey"-type maintenance²³). However, this does not prevent a work order from being sent to SGPI, at least to inform it of the nature of the work done.

In a context where an increasing number of buildings are being maintained by external firms, we believe that the SIGI application should be used more rigorously to enter information in order to, on the one hand, monitor the actual completion of the work related to the requests received (e.g., the description of the work done, the date of completion of the work, the number of hours invoiced, the cost of the work invoiced), and on the other hand, to have a more complete database with regard to the repairs carried out historically within a building.

²³ A "turnkey" contract for the City is a guaranteed service contract, if a breakdown occurs, parts and labour are covered 100% (no cost to the City).

RECOMMENDATION

3.1.3.3.B. We recommend that the Service de la gestion et de la planification immobilière take whatever steps it deems appropriate to ensure that all information related to the processed requests is recorded in the *Système intégré de gestion des immeubles*, with a view to promoting better operations and to having a complete history of the work done on a building.

BUSINESS UNIT'S RESPONSE

3.1.3.3.B. *Service de la gestion et de la planification immobilière*
 [TRANSLATION] training on the guideline described in recommendation 3.1.3.1.B. (foremen, building managers, group leaders, technical agents).
 Training on the guideline described in recommendation 3.1.3.1.B. (Centre d'appels team). (Planned completion: April 2020)

3.1.3.4. MONITORING MECHANISMS OF REQUEST PROCESSING

3.1.3.4.A. BACKGROUND AND FINDINGS

As part of our work, we also sought to identify the supervisory mechanisms implemented by the managers responsible to ensure the status of the corrective maintenance requests received, whether they are, for example, not yet taken undertaken, in progress, or deferred and to assess the extent to which these mechanisms were applied.

According to the information obtained from the managers interviewed, the main mechanism implemented is a dashboard that is updated every month. This dashboard, according to the version that was in effect in August 2018, concerning the corrective maintenance (on site and under contract), presents the following statistical results:

- Average completion times;
- Number of new and closed work orders;
- Number of work orders waiting to be processed (status "in progress");
- Age of work orders waiting to be processed.

We recognize that these are relevant performance indicators. However, in light of the findings we previously reported, particularly with regard to the existence of incorrect data affecting the results to calculate the processing times of the requests (e.g., manual modifications of the closing dates of the requests resulting in zero or abnormally short lead

times, requests systematically closed before being processed), we question the reliability of the data recorded in the SIGI application and the risks of skewing the management reports or the dashboards produced.

Although employees can be met individually, however, we have not obtained the proof of spot checks to examine the workload assigned to the various caseworkers. In our opinion, this monitoring would identify situations that deserve to be questioned (e.g., the large number of unaddressed or deferred requests, abnormally long or too short processing times). Also, considering that the inappropriate processing of requests could impact the satisfaction of the customers and ultimately the image of the City, such a monitoring is deemed essential. It would ensure that requests are promptly and adequately addressed, in accordance with the directives issued regarding the processing time and the mode of operation recommended by the department.

RECOMMENDATION

3.1.3.4.B. We recommend that the Service de la gestion et de la planification immobilière establish the necessary monitoring mechanisms with regard to issues that may arise from the analysis of the dashboard, with a view to ensuring prompt undertaking and processing in accordance with the guidelines, thereby promoting customer satisfaction.

BUSINESS UNIT'S RESPONSE

3.1.3.4.B. *Service de la gestion et de la planification immobilière*
[TRANSLATION] Implement monthly monitoring of open requests by unit. 2019 targets for this purpose are already set for Direction de la gestion immobilière et de l'exploitation executives.

Perform a monthly dashboard review at Direction de la gestion immobilière et de l'exploitation management committee meetings. The new dashboard developed in conjunction with the Service de la performance organisationnelle provides indicators on new and closed work orders, workload backlog, age of work orders, average completion time, time spent on planned maintenance, completion rate of planned maintenance programs, financial monitoring of minor maintenance work, attendance indicators and occupational health and safety. Data extracted to populate the management dashboard will be validated. (Planned completion: December 2019)

3.2. COST-BENEFIT ANALYSIS OF THE MAINTENANCE OPERATIONS MANAGEMENT (ON SITE VERSUS UNDER CONTRACT)

3.2.A. BACKGROUND AND FINDINGS

As mentioned before, as part of the restructuring undertaken within SGPI, two situations have increased the number of buildings maintained by the Division à contrat from 2017 to 2018. On the one hand, SGPI undertook the repatriation of the property management of several central department buildings and, on the other hand, a batch of approximately 70 buildings, which were maintained by the maintenance divisions (région Est and the région Ouest), was transferred to the Division à contrat. The Division à contrat maintained a total of 130 buildings before September 1, 2017, and approximately 420 buildings by the end of 2018; an increase around 220%. This situation obviously affected the workload. The number of contracts to be awarded has increased. Moreover, the information obtained reveals that the number of person-years in this division has almost doubled.

In order to know the support underlying the decision taken to increase the management of maintenance operations through the awarding of contracts rather than on-site management, we sought cost-benefit analyses performed by SGPI. However, the information obtained from the managers interviewed revealed that no extensive analysis had been carried out in order to evaluate the possible scenarios. It was mentioned that a cost-benefit analysis had not been performed because the hourly rates for skilled trades (by decree) invoiced by contracting firms were comparable to the hourly rate of the City's specialized employees (blue collar).

In our opinion, the management of maintenance operations on site or under contract may be influenced by many factors to be considered, the single comparison of an hourly rate may not be sufficient to justify the economic decision made. We are aware that the implementation of the Plan quinquennal de la main-d'œuvre²⁴ may have contributed to complicating on-site maintenance given the lack of personnel and thus pressuring recourse to private industry. Nevertheless, such an analysis could have taken into consideration, for example, the following points:

- The evaluation of the number of resources that would have been required on site to achieve all PEPs and corrective maintenance and estimate the cost;
- The increase of the internal workload and the costs associated with administrative and operational support (e.g., validation of invoices and work orders, payment and billing of invoices, compliance with contractual clauses) involved in the use of external firms.

We do not question the decision made by SGPI; however, we deplore that a decision of such importance, which involves the use of public funds, has not been supported by an analysis showing that all options were considered and that the operational choices

²⁴ The Plan quinquennal de la main-d'œuvre was a measure to reduce the number of employees and the City's payroll, and to eliminate one out of two vacant positions.

were the most appropriate in the circumstances. Having failed to find proof of such an approach on the part of the department, it was difficult to fully understand and evaluate that all decision-making aspects had been taken into account. As a result, as part of the reorganization undertaken within SGPI, it is more difficult for SGPI to demonstrate that the decision taken is an optimal solution given the budgets available to accomplish its mission.

In conclusion, because the reorganization of operations (e.g., the repatriation within SGPI of the management of the maintenance of several buildings, the transfer of maintenance from on site to under contract) has been effective for a year now, we believe that the business model chosen should be re-evaluated after a short period of time. Given the assessment of the workload and the results, it may be necessary to make the adjustments deemed appropriate to adequately meet the needs of the organization in terms of building maintenance and expectations of the customers.

RECOMMENDATION

3.2.B. We recommend that the Service de la gestion et de la planification immobilière review the strategy adopted in light of maintenance results (on site and under contract) when the model is fully operational in order to ensure that it meets the expectations of the customers and the organization.

BUSINESS UNIT'S RESPONSE

3.2.B. *Service de la gestion et de la planification immobilière*
[TRANSLATION] Comprehensive cost analyses performed by the Service de la performance organisationnelle since 2015 have shown adverse deviations for 8 activities ranging from 26% to 217%. These adverse deviations are due to various factors other than overtime, such as employee benefits, vacation, and more paid sick days for in-house employees.

*Comprehensive cost comparisons for both in-house and contracted maintenance will be performed in conjunction with the Service de la performance organisationnelle when the model is fully operational at the beginning of 2020. The recommendations resulting from these analyses could be incorporated in budget preparation in December 2020.
 (Planned completion: December 2020)*

3.3. ASSESSMENT OF CUSTOMER SATISFACTION

3.3.A. BACKGROUND AND FINDINGS

The assessment of customer satisfaction, with regard to the performance of the various processes inherent to building maintenance management, involves the implementation of measurement tools to determine and understand the causes of any dissatisfaction and then bringing the appropriate corrective measures.

We were informed that, in 2016, SGPI commissioned a survey from an external firm to evaluate the satisfaction of the various services rendered to its customers, including the general maintenance of the buildings. The examination of the survey results highlights the following main findings:

- Customers do not know the services of SGPI very well;
- Overall satisfaction rates are very low for all services offered. In particular, building maintenance is one of the services with the lowest satisfaction rates;
- The execution of the work is particularly problematic (access to the representative, monitoring, speed);
- More than half (52%) of customers consider themselves not sufficiently informed.

The review of budget documents produced by SGPI from 2017 to 2019, however, allows us to observe that customer satisfaction is one of the main objectives to be achieved. In the course of our work, we have seen the efforts made to this end. In particular, among the achievements and to name only a few, we find:

- the reorganization of the management mode of maintenance activities through the creation of building manager positions dedicated to the maintenance management of each of the nine boroughs from the former Ville de Montréal. So, a single point of contact to better understand the needs of the customers;
- the deployment in early 2018 of the Centre d'appels accessible at all times.

Specifically with regard to the assessment of customer satisfaction, the information obtained from the division heads we met reveals that a functionality integrated into the SIGI application allows requesters to be sent an email for the satisfaction of the services rendered to the customer following the processing of a service request. We found that this mechanism was used for corrective maintenance done on site or under contract. The email sent contained only one statement, *"We are satisfied with the maintenance work done"* to which the requesters were asked to respond by selecting one of the following: "Strongly agree," "Agree," "Disagree" or "Strongly disagree." Requesters did not have the opportunity to enter comments to justify their degree of satisfaction. As of December 2017, however, the systematic transmission of this email was interrupted because the response rate was insignificant.

In 2018, the Division des services administratifs team within the Direction du bureau de projet et des services administratifs worked on developing a new satisfaction questionnaire to be launched by the end of January 2019. We were informed that the transmission of this questionnaire would follow the same path as before (an email sent via the SIGI application as soon as the request was closed) and that it would take the form of a series of three questions. This questionnaire will take into account the overall assessment of the request processing and will allow the requesters' comments to be collected. The questions are:

- *How would you describe your experience with the SGPI Centre d'appels?*
- *How would you rate the quality of the service provided at the location in question?*
- *How would you define your satisfaction for the speed of execution of the service after submitting your request?*

In short, considering the reasons given for abandoning the previous satisfaction questionnaire, we believe that it may be appropriate to establish a mechanism to obtain a greater response rate. For example, reminders could be scheduled or a memorandum could be sent to SGPI customers to emphasize the importance of responding to the survey in order to identify potential sources of improvement.

RECOMMENDATION

3.3.B. We recommend that the Service de la gestion et de la planification immobilière incorporate a mechanism for greater response rates into the customer satisfaction assessment process in order to gather enough information and identify potential sources of improvement.

BUSINESS UNIT'S RESPONSE

3.3.B. *Service de la gestion et de la planification immobilière*
[TRANSLATION] Review best client survey practices.
(Planned completion: December 2019)

With regard to the sanitary maintenance of buildings under the Direction de l'optimisation, de la sécurité et de la propreté (Division de la propreté), since January 2018, we agree that requests for this activity will be covered by the new survey developed, since many of them could have been submitted through the SIGI application. In addition, other comments or complaints may also be made directly to the Division de la propreté. At the time of our audit, we noted that no specific measures had been planned to determine the overall customer satisfaction with this activity. In the interest of improving the way we do things, we believe that such an initiative would be very relevant.

RECOMMENDATION

3.3.C. We recommend that the Service de la gestion et de la planification immobilière make the necessary arrangements to ascertain the overall customer satisfaction with respect to the sanitary maintenance of the buildings under their responsibility, so as to guide, if necessary, decisions regarding the corrective measures to be put forward.

BUSINESS UNIT'S RESPONSE

3.3.C. *Service de la gestion et de la planification immobilière*
[TRANSLATION] Review best client survey practices.
(Planned completion: December 31, 2019)

3.4. ACCOUNTABILITY

3.4.A. BACKGROUND AND FINDINGS

Accountability is based on the obligation to prove, review and take responsibility for performance, both the results achieved in the light of agreed expectations and the means used.

Various accountability mechanisms have been implemented to monitor the management of operations. On the one hand, the information obtained from the managers we met shows that accountability is exercised through regular statutory meetings with management. Performance targets are set for executives, and feedback meetings are scheduled each semester to evaluate the progress of the results. These processes are implemented, both for the Direction de la gestion immobilière et de l'exploitation for the technical maintenance of buildings, and for the Direction de l'optimisation, de la sécurité et de la propreté, which is responsible for sanitary maintenance activities.

On the other hand, the Direction de la gestion immobilière et de l'exploitation has a dashboard, which is produced monthly. According to the information obtained, this dashboard is examined and discussed on a monthly basis at management committee meetings. The source data is obtained from the SIGI application. We note that several performance indicators are presented including, among others, those presented in Table 7 below for planned and corrective maintenance. Expected targets and comparative data are presented. In addition, there are other aspects such as the distribution of the number of structures (buildings and other facilities to be maintained) under the responsibility of each division (région Est, région Ouest and à contrat), the number of employees according to the trade, as well as work attendance data.

TABLE 7 – EXCERPT FROM THE DASHBOARD PERFORMANCE INDICATORS
DIRECTION DE LA GESTION IMMOBILIÈRE ET DE L'EXPLOITATION

MAINTENANCE ACTIVITIES	PERFORMANCE INDICATORS	INFORMATION PRESENTED – WORK ON SITE	INFORMATION PRESENTED – WORK UNDER CONTRACT
Planned Maintenance	<ul style="list-style-type: none"> • Proportion of time spent on planned maintenance by skilled trades versus corrective maintenance. • Completion rate of PEPs. 	YES	NO
Corrective Maintenance	<ul style="list-style-type: none"> • Average completion times. • Number of work orders opened and closed during the period. • Number of work orders waiting to be processed. • Age of work orders not yet processed. 	YES	YES

In our opinion, the development of such a dashboard represents a very relevant management tool. Unfortunately, we found that there is no data on planned maintenance performed under contract by external firms. As mentioned earlier in this report (see Section 3.1.1), the Direction de la gestion immobilière et de l'exploitation has not established any mechanism to assess the extent to which the planned maintenance assigned to external firms is completed (the completion rate of PEPs under contract is unknown). The absence of data does prevent the department's management from obtaining a complete picture of the actual performance of all maintenance activities under the responsibility of the Direction de la gestion immobilière et de l'exploitation.

In addition, our work on the processing of corrective maintenance requests (in Section 3.1.3.) revealed discrepancies with respect to the reliability of the information recorded in the SIGI application, particularly with respect to intervention lead times. As a result, the results on the dashboard may not match reality and, in some ways, may reduce the usefulness of the tool. However, it is understood that the reliability of the information underlying the management reports produced for the purposes of accountability is based primarily on the existence and effectiveness of the control systems and procedures in place.

With regard to the performance evaluation of sanitary maintenance activities under the Direction de l'optimisation, de la sécurité et de la propreté, the information obtained reveals that no such dashboards have been developed. In our opinion, the nature of the performance indicators relevant to monitoring the progress of this activity should be determined in light of the objectives, and a periodically produced dashboard should be implemented to show the results obtained.

RECOMMENDATION

- 3.4.B. We recommend that the Service de la gestion et de la planification immobilière identify the objectives and performance indicators relevant to the monitoring of sanitary maintenance and planned contract maintenance activities, and implement a dashboard in order to periodically evaluate the results obtained in relation to the expected performance.**

BUSINESS UNIT'S RESPONSE

- 3.4.B. *Service de la gestion et de la planification immobilière***
[TRANSLATION] Sanitary maintenance:
Develop a dashboard. Identify indicators to measure contract monitoring and our clients' level of satisfaction.
(Planned completion: December 31, 2019)
- Planned contract maintenance:*
Incorporate the results obtained in 3.1.1.A. on the Direction de la gestion immobilière et de l'exploitation's new dashboard prepared in conjunction with the Service de la performance organisationnelle, which already includes scheduled in-house maintenance indicators.
(Planned completion: December 2019)

In a different vein, it should be noted that the Direction de la gestion immobilière et de l'exploitation provides the technical maintenance service (planned and corrective) of the central departments' buildings. It also offers this service to the nine boroughs of the former Ville de Montréal, under a service agreement concluded under Section 85²⁵ of the Charter. However, SGPI, regardless of the direction in question, does not offer sanitary maintenance services to the 19 boroughs of the City, which are all entirely autonomous.

SGPI produces, for the nine boroughs to which it offers its technical maintenance services, annual reports²⁶ on the evaluation of the condition of certain building components (maintained on site or under contract). We confirm that such reports are produced with regards to mobile doors, roofs, heating equipment²⁷ and plumbing equipment²⁸. It should be noted that the investment budgets for the three-year capital expenditures program fall under

²⁵ Section 85 of the Charter provides that the city council may, subject to the conditions it determines, provide a borough council with a service related to a jurisdiction of the borough council; the resolution of the city council shall take effect on passage by the borough council of a resolution accepting the provision of services.

²⁶ The last balance sheets sent to the boroughs in 2018 are those for 2017.

²⁷ These include boilers, domestic water heaters, pool heaters, radiant heaters and fan heaters.

²⁸ Applies to filtered and effluent streams in water bodies (e.g., indoor and outdoor pools, and wading pools).

the boroughs and not SGPI. These balance sheets are useful for boroughs to better assess and prioritize the required investments.

Also, in 2017 and 2018, we obtained proof of annual meetings conducted by the head of the Division région Est with five²⁹ of the nine boroughs from the former Ville de Montréal under his responsibility. During these meetings, the boroughs concerned were, among other things, informed on topics such as the mission, the vision and the roles and responsibilities of SGPI, the mode of operation of building maintenance, the balance sheet of corrective maintenance requests (e.g., number of requests per family of activity (plumbing, electrical) and per building), required maintenance work (e.g., replacement or refurbishment of equipment). The managers interviewed confirm that no particular accountability has been provided for the performance of PEPs. With respect to the Division région Ouest and the Division à contrat, it appears that no formal reporting mechanism has been established to periodically inform the boroughs of the nature or progress of the technical maintenance performed by SGPI with regard to the buildings under their responsibility. We agree that the changes to the organizational structure, including the creation of building manager positions, who are responsible for managing multi-disciplinary teams, will have allowed to establish local customer service and a better understanding of the maintenance requirements for each of the buildings. Nevertheless, we believe that it would be judicious to take the necessary steps to reach an agreement with all the nine boroughs, under the responsibility of SGPI, on the management information they wish to receive periodically in relation to the maintenance conducted or planned in the buildings under their jurisdiction. This information could for example relate to:

- implementation rate of PEPs;
- problems encountered, the number of active requests;
- use of components and investments to be made.

RECOMMENDATION

3.4.C. We recommend that the Service de la gestion et de la planification immobilière make the necessary arrangements, in consultation with the boroughs concerned, to establish appropriate accountability mechanisms to inform the boroughs of the nature and progress of the maintenance conducted or planned in the buildings under their jurisdiction.

²⁹ These boroughs are: Ahuntsic-Cartierville, Mercier–Hochelaga-Maisonneuve, Rivière-des-Prairies–Pointe-aux-Trembles, Rosemont–La Petite-Patrie et Villeray–Saint-Michel–Parc-Extension.

BUSINESS UNIT'S RESPONSE

- 3.4.C. *Service de la gestion et de la planification immobilière***
[TRANSLATION] Initiate annual meetings with each borough. The meetings began on March 26, 2019. (Planned completion: June 2019)
- Present the management indicators related to the number of requests and the system status reports from the planned maintenance programs. (Planned completion: December 2019)*
- Confirm the Service de la gestion et de la planification immobilière's service offering to the boroughs. (Planned completion: September 2019)*

4. CONCLUSION

The property inventory is an important asset for the City. The buildings that make it up are used to provide a multitude of services to citizens and, in this sense, they are occupied by a large number of people every day. For buildings under its jurisdiction, the Service de la gestion et de la planification immobilière (SGPI) is, among other things, responsible to ensure that they receive the necessary maintenance in order to provide users with a healthy and safe environment, while allowing the Ville de Montréal (the City) to ensure the longevity of its buildings and maintain their value on the market.

For several years, the City's buildings have been underfunded by the maintenance budgets required to maintain their state and functionality. Efforts have been made to correct the situation by injecting additional budgets. Nevertheless, in 2018 and 2019, we find that the ratio of the maintenance budget granted to the replacement value of the property inventory (1.26% and 1.31% respectively) is still below the recommended threshold (2%) according to industry practices.

In 2017, SGPI undertook a major shift by consolidating real estate activities, which became effective as of January 1, 2018. As part of this project, several buildings, which were maintained by various central departments, were repatriated under the responsibility of SGPI. A batch of about 70 buildings was also targeted for maintenance through private firms rather than being maintained on site. As a result, the Division à contrat, which is responsible for the maintenance entrusted to external firms, has seen its workload increase by 220% from 2017 to 2018.

In the wake of the SGPI reorganization, a new organizational structure and a new operational model have been introduced with the goal of enhancing the performance and the level of customer satisfaction. In particular, we have created: property manager positions dedicated to the maintenance management of specific building batches (a single contact), a Division de la propreté responsible for the sanitary maintenance of buildings, and a Centre d'appels available 24/7.

In a context where limited resources are available and responsible managers must contend with the effects of programs such as the Plan quinquennal de la main-d'œuvre, we can agree that achieving the objectives was a great challenge. Under the circumstances, in our opinion, it had become essential to re-evaluate the methods and to quickly establish appropriate control mechanisms for the operational management to be optimal and economically profitable for the City.

Our audit work has highlighted a number of observations that allow us to conclude that SGPI must tighten the controls surrounding the management of the maintenance conducted within the buildings under its responsibility. In particular:

- several relevant contractual clauses, which would have enabled SGPI to monitor the services rendered by the external firms mandated with respect to the technical maintenance of the Programmes d'entretien planifiés (PEP) and the sanitary maintenance, were not applied by SGPI or respected by the firms;

- we did not always obtain documented proof that the planned maintenance assigned to external firms has been completed as planned;
- SGPI is in no position to know the rate of implementation of contracted PEPs since no documented control mechanism has been specifically established internally to ensure this follow-up. Thus, no objective or performance indicator appears on the dashboard;
- the average lead time for resolving urgent and non-urgent requests for corrective maintenance is respectively 10 and 18 days, while the target lead time set by the service management is 4 hours and 7 days;
- the absence of formal directives and monitoring mechanisms for the processing of corrective maintenance requests by designated staff results in the use of non-uniform and sometimes debatable methods (e.g., closing a request prior to the execution of the work), which impacts the reliability of the data recorded in the *Système intégré de gestion des immeubles*;
- significant decisions have been made at the operational level without a first performing comprehensive cost-benefit analysis;
- the degree of customer satisfaction with the sanitary maintenance of buildings is not specifically measured to identify potential sources of improvements. Moreover, objectives and performance indicators for this activity are yet to be established;
- a formal accountability process is not fully implemented to periodically inform the boroughs of the nature and progress of the maintenance conducted by SGPI with regard to the buildings under their jurisdiction.

Under the circumstances and for the sake of improving the performance of operations, we believe that SGPI must take steps to, among other things:

- know the impact of the chronic underfunding of the budgets required for building maintenance;
- evaluate the performance of operations with respect to the completion of planned and corrective maintenance conducted on site and under contract, given the increased workload.

Ensure that, ultimately, all these analyses enable SGPI to reassess its strategy as to the business model to recommend in order to ensure the maintenance of the buildings under its responsibility and the satisfaction of the customers.

5. APPENDIX

5.1. OBJECTIVES AND EVALUATION CRITERIA

OBJECTIVES

Ensure that the buildings of the Ville de Montréal are subject to planned maintenance and effective corrective maintenance in accordance with the strategy established by the Service de la gestion et de la planification immobilière. In addition, ensure that sanitary maintenance management is carried out according to good practices.

EVALUATION CRITERIA

- The planned contract maintenance of buildings is structured and monitored.
- The corrective maintenance management (on site or contract) is carried out in accordance with existing frameworks.
- A cost-benefit study supports decisions made for the management of maintenance operations.
- Sanitary maintenance is planned, executed and followed up according to the established frameworks.
- Accountability mechanisms are in place to measure the achievement of results and the level of satisfaction of requesters.