HRM Payroll System –
A Performance (Process) Review©

August 2013

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Preamble

Through an initial high-level review and environmental scan, the Office of the Auditor General (OAG) noted concerns surrounding the variety of processes Halifax Regional Municipality (HRM) and certain of its ABCs utilize for processing payroll, particularly with respect to the collecting of data for front-end[1] input into the Enterprise Resource Planning system (SAP)[2]. HRM's payroll costs for fiscal 2012/2013 were approximately $255 million, with entries processed for approximately 6,839 individuals.

In order to complete its environmental scan with respect to HRM payroll processes and to assist in directing the focus of the project, the OAG met with the Manager of Payroll, Finance - Information, Communications and Technology (FICT) who is responsible for the administration of the HRM Payroll section. The goal of this meeting was to understand:

1.   What overall systems and controls are in place within and surrounding the payroll processes
2.   If performance measures and benchmarks are used for evaluating the payroll processes.

In reviewing the variety of systems in use throughout HRM's business units and its Agencies, Boards and Commissions (ABCs) utilizing the HRM SAP system for payroll processing, it appears most of the processes start from with either a manual or electronic entry system, followed by managerial approval and ending with entry into the SAP system. In most situations, HRM's FICT staff receive the payroll data from a front-end system and re-enter it into the SAP payroll module. In some cases, the business units and ABCs, re-enter the payroll data into SAP utilizing their own staff, with the final processing completed by FICT Payroll section.

As a result of the information gathered, a project to review HRM payroll processing was felt to have value and was included in the OAG's 2013-2014 Work Plan.

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[1] A front-end system or application is one where individuals interact with it directly. In the case of HRM, these could be for example, Microsoft Excel spreadsheets or the Time Sheets application on the HRM Intranet.
[2] The Halifax Regional Municipality utilizes the SAP system as its financial Enterprise Resource Planning (ERP) tool.

Objective and Lines of Enquiry

Objective:

> To review and comment on the efficiency, effectiveness and economies of the various processes used within individual business units and relevant ABCs in the collection and processing of biweekly payroll information.

Lines of Enquiry:
1. Is there consistency in the payroll processes used throughout HRM's business units and Agencies, Boards and Commissions?
2. What are the costs associated with the delivery of HRM's biweekly payroll processes?
3. Are there options for greater automation in the production of HRM payroll?

Scope

The review included the payroll processes of HRM's business units and ABCs[3] utilizing the HRM payroll system. The project included reviewing and understanding the various processes and staffing arrangements in place.

The project included all payroll entries completed in calendar year 2012 unless otherwise stated; however, this project focused primarily on process rather than data.

Methodology

The methodology used in conducting this project included the following:
- ➤ Meetings with FICT (Payroll), HRM's business units and relevant ABCs, to determine processes used for time collection and processing of payroll records
- ➤ Documenting processes and summarizing similarities and differences
- ➤ Comparing the payroll processes used in each business unit with each other and to the centralized payroll processes for duplication of efforts and to note areas for greater efficiencies or better economic decisions to increase value for money.

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[3] Halifax Regional Water Commission does not utilize HRM payroll services.

Executive Summary

In the view of the OAG, by bringing various inconsistencies or concerns to the attention of Management, performance can be improved.

Approach to Review – Commentary on Performance

The goal of the OAG in conducting this review was to encourage HRM Administration to consider possibilities for increased efficiencies as it creates its blueprint for leading the organization going forward. In the view of the OAG, by bringing various inconsistencies or concerns to the attention of Management, performance can be improved.

In previous work, the OAG discussed the concepts of measuring efficiencies and economies with specific attention to appropriate measurement criteria. Generally, there are three possible approaches which can be used in conducting these types of projects:

- ➤ Results-based
- ➤ Systems/controls-based or
- ➤ Some combination of both (the OAG's normal practise).

In the preliminary assessment performed for this project, the OAG was not satisfied appropriate criteria existed to allow for a results-based approach.

A results-based approach is focused on using performance measures (benchmarking and other techniques) to compare actual results to stated organizational expectations or peer results. In the preliminary assessment performed for this project, the OAG was not satisfied appropriate criteria existed to allow for a results-based approach; therefore, a systems or controls-based approach was adopted which focuses on Management's systems and controls used in achieving and measuring efficiency.

One of the starting points of a controls-based approach to assessing efficiency of operations is to identify indicators of potential inefficiency.

One of the starting points of a controls-based approach to assessing efficiency of operations is to identify indicators of potential inefficiency. During its environmental scan, the OAG identified a number of indicators pointing to significant inefficiencies or areas where value for money can be greatly increased:

- ➤ Inconsistent payroll processes across business units and Agencies, Boards and Commissions (ABCs)
- ➤ In many instances, highly manual processes in place for the collection and input of employee time records
- ➤ Corporate payroll information being maintained in external spreadsheet applications
- ➤ A centralized payroll group within FICT, as well as separate groups within business units and/or ABCs.

Once efficiency has been assessed, the economy of a process or program is then reviewed. In assessing economies, the OAG seeks to understand given the choice of alternatives, if the current approach uses the least number of inputs or costs to achieve the expected outcome and if alternatives are considered. As with efficiency, there appear to be applications within HRM's payroll processes which may not be the most economical choice therefore value for money is not being maximized, such as:

➢ Utilizing a manual data entry process when an existing system is capable of uploading the required data from an automated entry system

➢ Using a variety of approval processes which require varying resources to complete.

Overall, based on the information reviewed, the OAG has significant concerns regarding efficiencies and lack of economies among HRM's business units and ABCs in terms of the collection, entry and processing of payroll information.

Focus on Innovation

With a focus on efficiency and economy also comes a focus on innovation. It is important to understand innovation in this context is not simply doing something better. Instead, it also focuses on doing things differently to achieve a better result (most outputs for inputs used or fewer inputs required to achieve the desired outputs).

Through this review, the OAG found little focus on innovation or technology with regards to the provision of payroll services within HRM as the current payroll processes have remained relatively unchanged for over ten years.

The OAG suggests HRM needs to be more focused on innovation in order to achieve efficiencies and economies as a means to move forward in times of restricted budgets and increasing pressures to deliver services.

Summary

FICT provides payroll services for HRM's business units and many of its Agencies, Boards and Commissions (ABCs). Delivery of payroll services is not consistent, as the front-end processes vary by individual business unit and ABC.

Overall, based on the information reviewed, the OAG has significant concerns regarding efficiencies and lack of economies among HRM's business units and ABCs in terms of the collection, entry and processing of payroll information.

With a focus on efficiency and economy also comes a focus on innovation.
Through this review, the OAG found little focus on innovation or technology with regards to the provision of payroll services within HRM as the current payroll processes have remained relatively unchanged for over ten years.
The OAG suggests HRM needs to be more focused on innovation in order to achieve efficiencies and economies as a means to move forward in times of restricted budgets and increasing pressures to deliver services.

Within HRM, FICT is the primary provider of payroll services; however, Halifax Regional Police (HRP), Halifax Regional Fire and Emergency (HRFE) and Halifax Public Libraries (HPL) process their own payroll directly rather than utilizing corporate payroll services. The OAG believes if the effectiveness and economies of business units maintaining their own payroll processes in-house were considered given the processes and expertise available with FICT, a less than optimal use of staff and other resources is taking place and HRM is not achieving highest value for money.

The OAG also found in the limited situations where automation and innovation have been introduced in the collection of time records, the processing and handling of payroll entries is highly efficient - specifically Metro Transit, which utilizes a schedule-based system to create and transfer time records to the SAP payroll system. This transfer automated the entry of 220,000 time records to the SAP payroll system for 2012. Lack of innovation in processes in other business units leaves a highly manual routine which is prone to errors.

The OAG was made aware of individual business unit requests for innovation and advancements to the current payroll system; however, for a variety of reasons there appear to be barriers to change.

Organizationally, HRM records employee time worked using one of two approaches:
1. Exception time reporting where employees are assumed at work unless an exception is reported, and
2. Positive-time reporting where employees must record all time worked as well as exceptions. In short, considerably more effort is required to process payroll for positive-time recorded employees.

Employees maintained through positive-time reporting require significantly more entries than exception-based employees. For example, if you were to compare two employees (one exception based, the other positive) over a biweekly pay period, (both worked fulltime hours, no missed time, no overtime), the exception-based employee requires no data entry; the positively recorded employee requires, at a minimum, ten entries - one for each day in the pay period.

For 2012, time for 58% of HRM's employees'[4] was recorded as positive time, which represented 79% of all entries to SAP. The OAG, through analysis in this report, believes HRM could make adjustments and system enhancements to see at least 90% of all employees' time collected electronically allowing for electronic transfer to SAP, resulting in a significant reduction in staff time spent on data entry.

This review analyzed the estimated costs to HRM for the delivery of its biweekly payroll. As a result, the OAG conservatively estimated annual direct staff costs of $1.5 million. Including estimated indirect costs, calculated based on industry suggestions, the total approximate cost to deliver HRM's payroll would be $4.1 million for 2012/2013. These costs, when factored over the current employee count processed through HRM systems, reflects a $22.90 cost per period.

Internal documentation has described the current payroll process as 'error prone manual processes' and the OAG could not agree more. With highly manual time collection and payroll administration processes existing for the majority of HRM, there is the potential for significant errors to occur.

Payroll industry estimates of errors in a manual payroll system are between 0.5% and 2.4% of the value of the annual payroll. Based on this estimate, HRM could be losing between $1.3 and $6.1 million dollars per year with the current payroll process.

With HRM's future SAP direction now set, the OAG believes moving payroll enhancements forward, along with organizational changes, to support a more efficient reporting of time, should be a priority.

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[4] Includes all employees processed through HRM's payroll system (HRM business units and ABCs employees)

Summary of Recommendations

1.2.1   The OAG recommends FICT Payroll become responsible for the retired employees included in the payroll (as pension top-ups) for consistency and to better isolate this function from the Human Resources function to improve internal controls. (Page 19)

1.3.1   The OAG recommends the realignment of reporting relationships for entity staff with payroll responsibilities to the Manager of Payroll within FICT. Such an alignment would better enable HRM to provide a unified approach to payroll delivery and allow for flexibility in staffing as the needs of entities, or HRM as a whole, change.

The OAG also recommends, with the realignment of reporting relationships, job descriptions be updated and harmonized. The OAG, realizing different collective agreements apply to HRM and HPL payroll staff, acknowledges the suggested realignment may require additional discussions and planning. (Page 21)

2.2.1   The OAG recommends FICT Payroll be made responsible for the development of more efficient methods for time entry. Where business areas currently use or are able to utilize electronic data collection, the electronic approval and transfer of these records to SAP should be implemented immediately. (Page 33)

2.2.2   The OAG recommends if the Intranet Time Sheets application continues to be a tool of choice for the entry and recording of employee time, HRM investigate the electronic approval of employee entries and data transfer of approved time to the payroll system. However, the OAG recommends this only continue as an intermediary measure until a complete end-to-end solution is implemented. See Recommendation 5.1.1. (Page 33)

2.2.3   The OAG recommends supervisors not complete time sheets on behalf of employees, but approve the completed time sheet, thus ensuring a proper division of duties. (Page 33)

2.2.4   The OAG recommends HRM Administration review the various manual processes currently in place with a view to consolidating the processes so there is one standard manual process in addition to the automated processes. (Page 33)

2.2.5   Where HRM entities have application software allowing for schedule-based time keeping, the OAG recommends interfacing all applications with the payroll system to minimize further data entry and data entry errors.

Specifically, the OAG recommends:

a) HRM investigate an electronic data transfer from the HRFE roster (scheduling) system to SAP, similar to the manner in which the Transit scheduling system transfers records to SAP.

b) HRP investigate and, where possible, implement the Time Reporting component of the HRP record management system to streamline data collection and transfer of records to SAP. (Page 33)

2.3.1   The OAG recommends HRM establish a standard set of time codes for use by all business entities along with clear instructions on their use. The OAG further recommends the number of available codes be reduced to those as pointed out in the report used in collecting the majority of the information. (Page 36)

2.3.2   The OAG recommends, in conjunction with Recommendation 2.3.1, business entities determine the appropriate time codes to use in their particular business circumstances for the recording of so-called 'special' time and begin to record any banked time as both earned and taken.

The OAG recognizes until such time as employee-entered data is electronically approved and transferred to SAP, this may not be feasible due to resource constraints. (Page 36)

2.4.1   The OAG recommends HRP and HPL, in conjunction with FICT Payroll, adapt the entity processes currently in use to eliminate corporate payroll data being maintained in separate spreadsheets thus eliminating a multitude of possible control issues and inherent inefficiencies. (Page 38)

2.4.2   The OAG recommends HRM implement existing SAP functionality to allow for multiple positions for one individual. This 'concurrent employment' functionality, once implemented, should assist with streamlining payroll processing for HPL. (Page 38)

2.4.3   The OAG recommends HRM utilize the SAP payroll system to track and calculate allowances (clothing, etc.) due to and paid to employees. (Page 38)

2.5.1   The OAG recommends HRM adjust payroll processes utilizing recommendations contained within this report to allow for time sheet submission to begin after the end of the payroll period. (Page 39)

2.6.1   The OAG recommends HRM Administration review employee positions where time is currently reported positively in an effort to have positions reported by exception only.

Given much of the organization now uses exception reporting and HRM has organizational processes currently in place for exception reporting across a wide variety of operational units, extending these processes to other units where exception reporting is not used predominately, should provide immediate savings in processing time and costs. (Page 43)

2.7.1   The OAG recommends HRM establish and implement clear guidelines for all entities of acceptable time collection, approval and transmittal of payroll information. These guidelines should set out, at a minimum, who may sign to approve time, journals/logs and acceptable transmittal methods of payroll information. (Page 45)

2.7.2   The OAG recommends HRM establish and implement clear guidelines for all staff with front-end payroll responsibilities, enabling all payroll services to be provided consistently to managers and supervisors within the individual entities. (Page 45)

3.0.1   The OAG recommends, in conjunction with Recommendation 5.1.1, HRM implement Employee Self-Service (ESS) for the distribution of biweekly pay notifications and other annual notices such as T4s.

An Employee Self-Service site would allow HRM employees to, at their leisure, log on, view and print pay notifications. (Page 47)

3.0.2   The OAG recommends until such time as Recommendation 3.0.1 is fully implemented, HRM require all employees with a halifax.ca e-mail address, to receive electronic delivery of pay notifications, thereby eliminating the processing and handling of paper notices.

The OAG further recommends HRM encourage the remaining employees (without a halifax.ca e-mail) to voluntarily sign-up for electronic delivery of pay notifications using other e-mail accounts for delivery. (Page 48)

4.0.1   The OAG recommends for smaller entities, where payroll is not the primary job function for the individual(s) responsible for front-end payroll processing, payroll functions be transferred to FICT Payroll to take advantage of their expertise in payroll and to provide for the appropriate segregation of duties. (Page 51)

4.0.2   The OAG recommends FICT Payroll be responsible for payroll entries for individual staff with front-end payroll responsibilities to enhance controls and segregation of duties. Should Recommendations 1.3.1 and 4.0.1 be accepted, this would be implemented as a result. (Page 51)

4.0.3   The OAG recommends HRM Administration review and evaluate the current situation with respect to eligible retirements within payroll groups, and create an appropriate succession plan to mitigate risks. (Page 51)

5.1.1   The OAG recommends HRM, working with the SAP services delivery partner, leverage the SAP payroll experience within the Provincial CCC to enhance the basic functionality for the HRM payroll implementation, introducing for example, Employee Self-Service and Manager Self-Service. (Page 54)

5.1.2   The OAG recommends HRM gather full costing information for the delivery of payroll services for the purpose of benchmarking against alternative service delivery models. (Page 54)

Detailed Findings and Recommendations

1.0 HRM Payroll – Overview of Current Processes

The Halifax Regional Municipality (HRM) Finance and Information, Communication and Technology (FICT) business unit is responsible for processing payroll for the Municipality's business units and most Agencies, Boards and Commissions (ABCs)[5]. The HRM FICT Payroll group reports to a Payroll Manager who in turn reports to the Manager, Financial Policy and Planning who reports to the Director of FICT.

The FICT Payroll group has a staff complement of 23.6 full-time equivalent[6] (FTE) positions. These positions are listed in Exhibit 1 below:

Exhibit 1 FICT – Payroll Staffing

Position	FTE Count
Payroll Manager	1
Administrative Assistant	1
Team Lead	1
Payroll Administrator	3
Position Management Coordinator	2
Supervisor	1
Payroll Costing Coordinator	13.6
SAP System Trainer	1

For simplicity, the payroll processes for HRM can be divided into two components: front-end and back-end. The front-end component involves the initial collection and entry of employee time records. These front-end tasks are, for the most part, completed by Payroll Costing Coordinators (PCC), (or similar positions in various entities) and include tasks or requirements such as:

- ➢ Data collection, entry and verification for payroll processing
- ➢ Providing advice, guidance and support to business unit/ABC managers, supervisors and employees on all aspects of the payroll process
- ➢ Knowledge of the various HRM collective agreements and/or unique business unit payroll data collection requirements.

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[5] For brevity when describing HRM business units and agencies, boards and commissions throughout this report, the OAG will reference the collective group as HRM entities.
[6] FTE is defined as the equivalent of one position, continuously filled, full-time for the entire fiscal year and may be comprised of any combination of part-time and full-time positions. (http://abs.colorado.edu/ABS_WEB/policies/FTE.pdf)

The tasks completed for each HRM entity may differ somewhat, as individual entities have different internal processes and requirements.

Unlike front-end processes, back-end components of payroll are consistent across all business units. The back-end processes, completed by FICT Payroll Administrators, begin after the biweekly data entry into SAP has been completed and verified by the Payroll Costing Coordinators (front-end data entry staff). The job description for FICT Payroll Administrators includes tasks such as:

➢ Generating, balancing and auditing the biweekly payroll
➢ Providing support, as subject matter experts, to other payroll staff
➢ Initiating changes, incorporating new payroll knowledge
➢ Production of T4s, T4As and other year-end reporting for the organization.

Front-end processes are completed by HRM Payroll (FICT) PCC staff, for 55% of the organization's employees. The remainder of the organization's front-end payroll is processed by individual entity's own staff. Exhibit 2 highlights the breakdown of front-end payroll processing by entity.

Exhibit 2 Responsibility for Front-end Processing of Payroll by Business Unit and ABC

	FICT processed	Entity processed
Business Units		
Chief Administrative Office (CAO)	✓	
Community Recreation Service (CRS)	✓	
Finance and Information, Communication and Technology (FICT)	✓	
Halifax Fire & Emergency Services (HRFE)		✓
Human Resources* (HR)	✓	✓
Halifax Regional Police (HRP)		✓
Legal and Risk (LEGAL)	✓	
Halifax Public Libraries (HPL)		✓
Planning & Infrastructure (P&I)	✓	
Transportation and Public Works (TPW)	✓	
Metro Transit Services (TRANSIT)	✓	
Agencies, Boards and Commissions (ABC)		
Canada Games Centre	✓	
Centennial Pool	✓	
Cole Harbour Place	✓	
Dartmouth Sportsplex		✓
Halifax Forum		✓
Springfield Lake	✓	
Sackville Sports Stadium	✓	
St. Margaret's Centre	✓	

*Payroll for Human Resources staff is processed by FICT, Human Resources staff only process payroll information for pension top-ups and some Long Term Disability.

1.1 How Payroll Time is Recorded

Exception reporting requires only anomalies or exceptions to be reported on a time sheet and ultimately entered into the SAP payroll module.

An employee's time worked may be recorded in one of two manners:

➢ Exception reporting
➢ Positive reporting.

Employees on salary or with a predictable work schedule are often 'exception' reported while hourly paid or part-time employees with changing schedules are 'positively' reported. Exception reporting requires only anomalies or exceptions to be reported on a time sheet and ultimately entered into the SAP payroll module. Under

Under this method (exception), by default, employees are automatically considered to have been at work.

In contrast, positive-time recording requires all entries to be recorded including regular time worked as well as time for vacation, sickness and overtime, for example.

this method (exception), by default, employees are automatically considered to have been at work. Exceptions such as vacation, sick and overtime (to list a few) must be collected and recorded through a front-end payroll entry. In contrast, positive-time recording requires all entries to be recorded including regular time worked as well as time for vacation, sickness and overtime, for example. In positive-time recording, an employee will not be paid unless time is entered. The current split between employees being reported on an exception or positive basis is 42% and 58% respectively.

1.2 Corporate vs. Entity Processed Payroll – Specific Commentary around Staffing

There are three HRM entities utilizing their own departmental resources to complete front-end tasks. These entities account for 82% of the employees processed outside of FICT payroll group. Halifax Regional Police (HRP), Halifax Regional Fire & Emergency (HRFE) and Halifax Public Libraries (HPL) combined, process payroll for 2,500 employees, while a further 550 employees (processed outside of FICT) are spread throughout other ABCs and Human Resources 'pension top-ups'[7]. The reasons given for maintaining separate staff to complete front-end payroll tasks rather than using FICT resources vary; however, generally the individual departments believe the complexity of their operations drives the need for specialized attention.

Generally the individual departments believe the complexity of their operations drives the need for specialized attention.

Payroll staff within HRP, HRFE and HPL along with the smaller ABCs report directly to their entity's management with no reporting relationship to FICT. For other business units, FICT Payroll staff are either located centrally or situated within the entity they support, allowing a close working relationship with clients, while at the same time, administratively reporting through FICT management.

During the review period, there were a total of 26.2 positions identified as working with the front-end processing of the biweekly payroll. Exhibit 3 below provides a breakdown of HRM entities and their corresponding staff FTEs having front-end payroll responsibilities.

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[7] Human Resources staff maintain 'pension top-up' records for approximately 120 former employees.

Exhibit 3 Staff FTEs Responsible for Front-end Payroll Processing

HRM Entity	Positions Dedicated to Front-end Processing of Payroll
FICT	13.6
HRP	4.6
HRFE	3.0
HPL	2.0
Other	3.0

Recommendation

1.2.1 The OAG recommends FICT Payroll become responsible for the retired employees included in the payroll (as pension top-ups) for consistency and to better isolate this function from the Human Resources function to improve internal controls.

1.3 Job Descriptions – Similarities and Differences

Payroll staff within FICT, HRP and HRFE are members of NSUPE Local 13. Although the three groups of employees work under three separate job descriptions, there are strong similarities and as such, these three groups are rated at the same level, NSUPE-13 Level 5. Two of the three groups list "Level I Certificate from the Canadian Payroll Association" as a qualification, while the job description for HRFE staff speaks generically to requiring a payroll designation.

The job description for HRP payroll staff has a section titled "Police Specific Functions"; however, the duties listed appear consistent with those within the FICT and HRFE job descriptions, with the exception of a requirement to provide relief support to the Field Support Representative role, a procurement task.

The HPL employees responsible for front-end payroll processing fall under the NSUPE Local 14 Collective Agreement. HPL employees - Human Resources Assistant 7, report to the Manager, Human Resources within HPL. The HPL Human Resources Assistant 7 front-end payroll employees have similar job descriptions to those of FICT, HRP and HRFE, with additional duties of maintaining personnel files. Also, in the absence of the HPL Human Resources Manager, the drafting of job descriptions and offer letters, falls to these positions. The job descriptions for HPL do not reference any type of payroll certification as part of the job qualifications; however, the processing of payroll is a primary function of the position.

The job descriptions for HPL do not reference any type of payroll certification as part of the job qualifications; however, the processing of payroll is a primary function of the position.

With similarities in the individuals' tasks and job descriptions for front-end payroll processing, the OAG believes the harmonization of the positions, job descriptions and reporting relationships could lead to improved service delivery and higher efficiency (value for money) through the deployment of resources from a central location and as the organization's needs evolve.


Recommendation

1.3.1 The OAG recommends the realignment of reporting relationships for entity staff with payroll responsibilities to the Manager of Payroll within FICT. Such an alignment would better enable HRM to provide a unified approach to payroll delivery and allow for flexibility in staffing as the needs of entities, or HRM as a whole, change.

The OAG also recommends, with the realignment of reporting relationships, job descriptions be updated and harmonized. The OAG, realizing different collective agreements apply to HRM and HPL payroll staff, acknowledges the suggested realignment may require additional discussions and planning.

1.4 Simplified View of Overall Payroll Process

Through HRM entity interviews, the OAG was able to gain an understanding of the processes utilized by each business unit and the larger ABCs. A simplified overview of HRM's overall payroll processes is shown in Exhibit 4 below.

Exhibit 4 Simplified Overview of HRM Biweekly Payroll Process
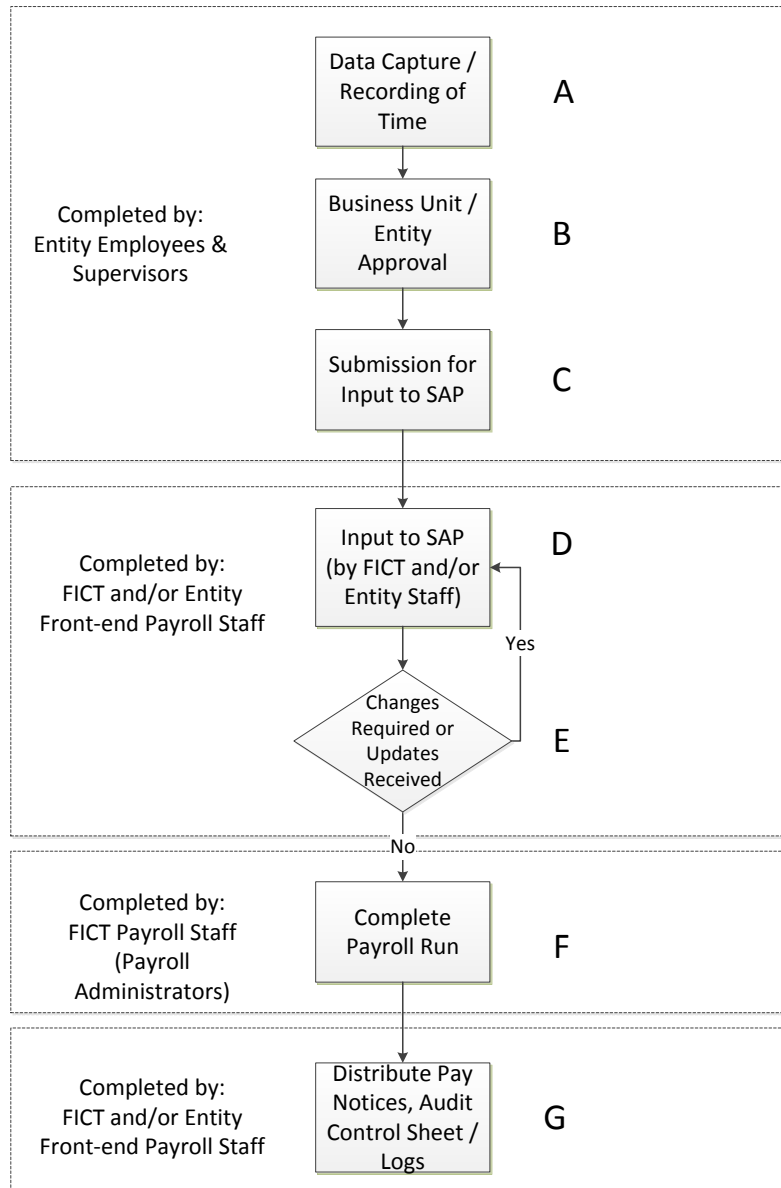
1.5 Payroll Entry

This section of the report takes a detailed look at entity processes involved in boxes D and E of the work flow presented in Exhibit 4. The FICT - Payroll Costing Coordinators, HRP - HRIS/Admin Support Payroll[8], HRFE – Payroll Administrative Coordinators[9] and HPL - Human Resources Assistants 7 are responsible for 92% of payroll entry and initial processing for HRM's employees. The remaining 8% are employees of smaller ABCs utilizing their own staff for initial input. Exhibit 5 below provides a breakdown of the approximate ratio of the number of employees maintained to front-end payroll staff by entity.

Exhibit 5 Ratio of Number of Employees Maintained to Front-end Payroll Staff (Approximate)
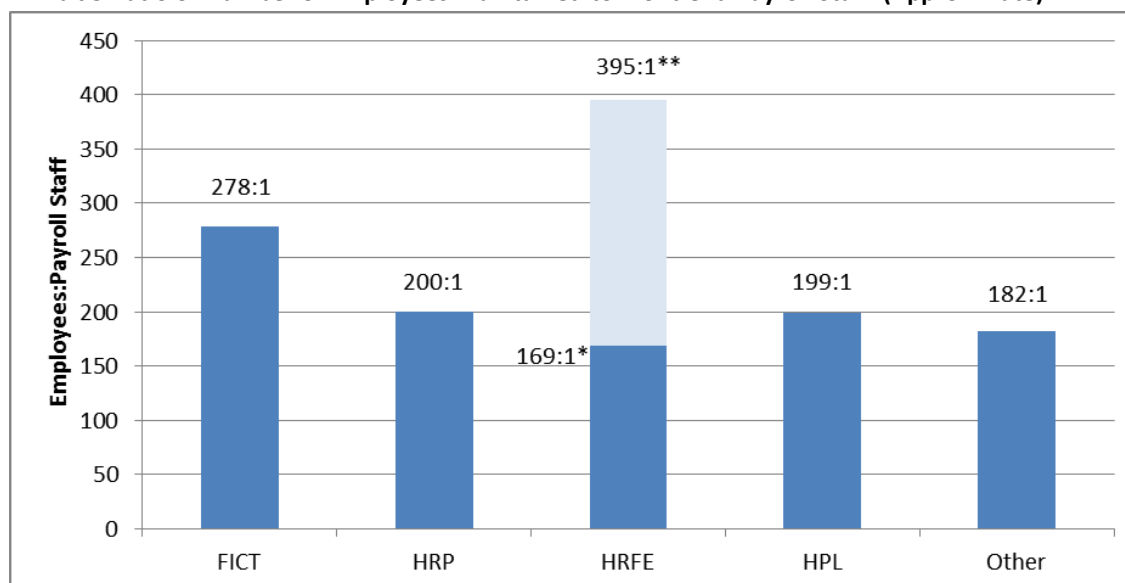
*   ratio includes HRFE employees processed on a biweekly period

**   ratio includes HRFE employees and volunteer firefighters

Payroll Processing Related to Volunteer Firefighters

Currently, HRFE staff process an annual honorarium payment to approximately 700 Volunteer Firefighters. Within the volunteer complement, senior officers are paid biweekly, and as such, are included in the biweekly payroll numbers. There are on average two payroll entries per year for each of the remaining volunteers

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[8] The job description uses the title HRIS/Admin Support, the position title in SAP is listed as Payroll/Costing Coordinator. The term HRIS refers to Human Resources Information System.

[9] The job description uses the title Payroll Administrative Coordinator, the position title in SAP is listed as HRIS Administrative Support.

(who are recorded on a positive basis). HRFE was asked by the OAG to provide an estimate of time spent over a biweekly pay period managing the payroll for the volunteers. Unfortunately, they were unable to provide this information.

The ratio of employees to payroll staff for HRFE, taking the Volunteer Firefighters into account, would be 395:1. The ratio without the volunteers would be 169:1. The OAG acknowledges HRFE time is required to process the payment for the annual honorarium; however, the effort is significantly less than that required to pay 700 employees on a biweekly pay basis. With the limited number of individual transactions required for volunteers, the OAG believes the realistic ratio to be closer to 169:1 rather than 395:1 and efficiencies through more centralization are likely possible.

The OAG acknowledges HRFE time is required to process the payment for the annual honorarium; however, the effort is significantly less than that required to pay 700 employees on a biweekly pay basis.

Scope of Responsibility

Regardless of the point of data entry, the FICT Payroll group are considered the subject matter experts for payroll and payroll support. Through the Payroll Administrators and Team Lead positions within FICT, support is provided to both HRM business units and ABC staff with independent payroll functions. As subject matter experts, FICT Payroll also has responsibility for all entity training regarding payroll.

FICT Payroll has slightly more FTEs designated as payroll entry positions (13.6) compared with HRM entities carrying out their own front-end payroll (12.6). However, FICT services 11% more employees than non-FICT staff.

FICT Payroll has slightly more FTEs designated as payroll entry positions (13.6) compared with HRM entities carrying out their own front-end payroll (12.6). However, FICT services 11% more employees than non-FICT staff.

## 2.0 HRM Entity Front-end Processes – Inefficiencies and Other Issues

Through interviews with HRM business units and ABC entities, the OAG has observed differences among payroll time collection and input processes. The processes range from use of an automated schedule-based electronic transfer of data to SAP to a highly manual/paper-based system with extensive data entry and re-entry processes. Despite some similarities among processes within entities, the OAG found:

➢ Inconsistent use of time codes
➢ Inconsistent online tracking of banked time and earned days off
➢ Inefficiency with processes with the same information being entered more than once – 'double entries'
➢ Extra processes and steps for recording and calculating entries – i.e. external spreadsheet records for vacation, holiday pay and various allowances
➢ Inconsistent services provided by staff
➢ Differences in time sheet forms
➢ Differences in processing timelines.

2.1 Comparison of FICT and Entity Entry Processing

Exhibit 6 provides a breakdown of the number of employees processed by FICT and entity staff.

Exhibit 6 Number of Employees Processed by FICT Staff and Entity Staff on a Positive/Exception Basis
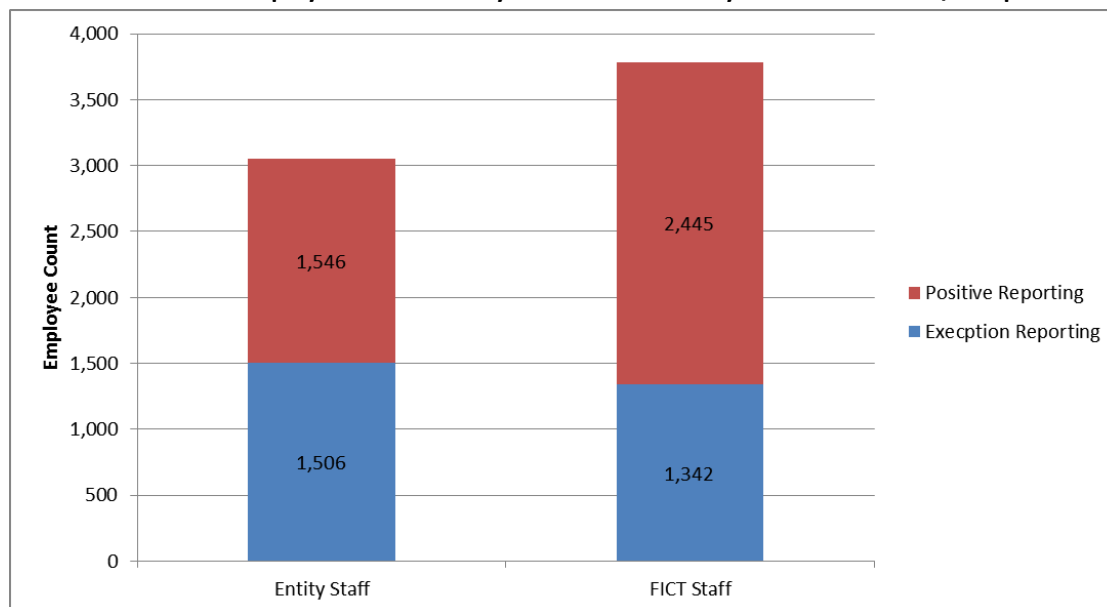
In addition to showing the overall employee count, the Exhibit above also provides a breakdown of how the employees' time is collected. As introduced in Section 1.1, employee time may be recorded as either exception or positive depending on the position and requirements.

Exhibit 7 below further clarifies the data outlining whether employees are positive or exception based as well as whether they are processed by FICT or entities' staff.

Exhibit 7 Entry Count - Positive/Exception Breakdown Processed by FICT Staff and Entity Staff 2012

	Staff	Positive Employees	Exception Employees	Total Employees	Positive Entries	Exception Entries	Total Entries
FICT	13.6	2,445	1,342	3,787	511,875	87,992	599,867
Entity	12.6	1,546	1,506	3,052	98,176	77,522	175,698

Although payroll staffing numbers within FICT and HRM entities are relatively equal (with 13.6 and 12.6 positions respectively) and the number of employees serviced by each group are fairly well divided (as shown in Exhibit 6), Exhibit 7 shows the number of data entries completed by FICT staff far exceed the entries completed by entity staff.

Positive recording of time results in significantly more entries over exception reporting. While positive-time recording may be necessary for parts of the organization, the OAG would question if it is necessary for all areas. Sections 2.2 and 2.6 will further discuss individual entity payroll processes and the use of positive and exception time reporting.

Exhibit 8 Average Entries per Payroll Staff Member

	Staff	Total Payroll Entries	Average Entries per Payroll Staff	Adjusted Total Payroll Entries*	Average Manual Entries per Payroll Staff
FICT	13.6	599,867	44,108	380,089	27,948
Entity	12.6	175,698	13,944	-	13,944

*Adjusted to eliminate Transit system internally generated entries, 219,778

Exhibit 8 shows the entity staff complete on average 13,944 manual entries each, while FICT staff complete on average, 27,948 entries, approximately 100% more. This clearly indicates to the OAG the inefficiencies within the entities' manual processes and where cost savings through a redeployment of FTE resource time are likely possible. This will be discussed in subsequent sections of this report.

When the analysis takes into account all entries processed through FICT, including the electronically transferred records from the Transit scheduling system, FICT staff process on average 44,108 entries each with entity staff completing only 13,944 each. This 216% difference highlights the efficiencies technology can bring to the organization and clearly supports the OAG's position: to become more efficient, HRM must make greater use of technology.

2.2 Time Collection Methods

One significant difference in the overall processing of payroll is, HRM uses three separate payroll cycles. The majority of employees fall into a two-week Sunday to Saturday cycle, while Metro Transit Bus Operators are on a two-week Monday to Sunday cycle (this cycle coincides with Metro Transit's scheduling of routes). The third cycle is a monthly cycle used for pension top-up, described briefly in Section 1.2.

Throughout HRM, there are a variety of methods utilized to collect an employee's time. Following is a discussion of several of the methods. Please note this is not an exhaustive list, rather it is meant to illustrate the variety of different practices in use throughout HRM and the likely resulting inefficiencies.

HRM Intranet – Time Sheet Application

A web-based time collection application exists on the internal HRM network. This application, used at some level across most business units[10] provides a tool for biweekly employee time entry. Individual employees enter time and/or exceptions online, with a supervisor

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[10] A review of users as of March 2013 indicated only 922 user accounts were actively being used for payroll time input.

printing a summary sheet of their employees. The printed summary sheet is required to be signed, indicating approval and forwarded to payroll for final processing.

Within this application, individual employees select time codes through drop-down menus. Entities also have the ability to add any time codes they feel are required for the proper management of their operations.

Although the data is collected electronically, the information transmitted to payroll is paper-based, thus requiring re-entry of all individual employee data. This system is not efficient or economic in the use of available technology. The OAG believes the system could be adapted to allow the approval process to be automated allowing the electronically collected and approved data to be uploaded to SAP. This would remove the need for printing and re-entry, thus eliminating a highly inefficient process. Together with the possible re-deployment of resources, this measure would significantly increase value for money.

Paper-Based Manual Time "Sheets"

With a lack of clear corporate direction, many HRM entities choose not to use the available Intranet-based application for time recording and have opted to record time in a spreadsheet or word processing document. The end result is a document with similar information to those produced by the Intranet application, but ultimately with a unique look and feel. Most of the sample time sheets reviewed by the OAG were neat and orderly, usually with typed information. However, some samples provided had hand-written entries as well as small typed information and various levels of shading, making reading difficult.

The OAG feels strongly the use of paper-based time sheets can be eliminated through enhanced automation. There may be specific circumstances where a paper report is necessary; however, the OAG would see these as the exception rather than the norm. Reviewing the samples and variety of time sheets produced throughout HRM, and on the assumption they are actually needed, the OAG questions why these forms have not been standardized for ease of data entry. With the current variety of time sheets, there is a higher potential risk of error by data entry staff.

The OAG believes the system could be adapted to allow the approval process to be automated allowing the electronically collected and approved data to be uploaded to SAP.

This would remove the need for printing and re-entry, thus eliminating a highly inefficient process.

Most of the sample time sheets reviewed by the OAG were neat and orderly, usually with typed information. However, some samples provided had hand-written entries as well as small typed information and various levels of shading, making reading difficult.

The OAG feels strongly the use of paper-based time sheets can be eliminated through enhanced automation.

This manual/paper-based method of biweekly time collection generally puts the responsibility on a supervisor/manager to collect the time for his/her group rather than being able to delegate it to the individual employee, as is the case with the Intranet-based application. In many cases, the same individual responsible for completing the time report is also responsible for approval of the time. This lack of segregation of duties is a concern to the OAG.

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Task-Based Manual Time "Sheets"

Within TPW - Municipal Operations, CUPE[11] employees' time is collected on manual forms (spreadsheets) by supervisors and is positively recorded. Rather than being submitted biweekly, time is submitted daily to FICT Payroll staff for input. The data collected on a daily basis is based on various tasks performed and is intended to provide the ability to report the costs of individual services i.e. mowing, shrub maintenance, plowing, etc.. The OAG was advised the allocation of time by task for each individual is generally estimated by the supervisor and where these estimates are used more as a management function rather than payroll (as employees are paid based on a standard number of hours regardless), it is the view of the OAG a greater use of technology could easily remove this unnecessary burden on payroll staff.

Within TPW - Municipal Operations, CUPE employees' time is collected on manual forms (spreadsheets) by supervisors and is positively recorded.

Interviews with Municipal Operations Supervisors suggest a minimum 0.5 – 1.0 hours per day is being devoted to completing staff time sheets. With 18 individuals responsible for time sheet completion within Municipal Operations, based on an estimated average of 0.75 hours per day, supervisors potentially spend a total of 3,510 hours per year completing time sheets. Given much of the data is estimated, the OAG questions if the level of detail collected and entered into the payroll system is warranted, given the effort required. Put another way, this time represents in the order of 1.7 FTEs at the supervisor level.

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The OAG does not question the value for TPW in collecting data at the task level; however, the OAG does question the FTE commitment to capturing it.

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[11] CUPE – Canadian Union of Public Employees – This union represents over 300 TPW employees.

Paper-Based Manual Time "Cards"

Transit Mechanical Employees
The Bus Maintenance Division of Metro Transit utilizes time cards completed on a daily basis by Transit Mechanical employees and approved by the shift foremen. The time cards have two purposes:

1. To provide a breakdown of work-orders (tasks) with hours worked by mechanical staff. This information is not recorded in the payroll system.
2. To note any exception entries for payroll.

Exception entries from the time cards are manually compiled in a spreadsheet for final approval by the Superintendent (Bus Maintenance) for entry into the payroll system.

Transit Mechanical employees are exception-based, requiring fewer entries to complete the payroll process than the positively recorded Municipal Operations employees. Unlike TPW - Municipal Operations, Transit - Mechanical employees within the Bus Maintenance Division are individually responsible for the recording of their own time on a daily basis (based on work-order), allowing for greater efficiency with significantly greater managerial time afforded to operations rather than administrative payroll-related tasks.

To summarize, Transit (Mechanical), like TPW - Municipal Operations, collects employee hours at the task level (work-orders) allowing for the reporting of the cost of its various services. With the TPW division, this time is captured using the payroll system while Transit accomplishes this task in conjunction with another management function and using a separate program. In addition, at Transit, employees allocate their time directly as opposed to Municipal Operations where it is done by a supervisor, seemingly a less accurate and efficient approach.

HRP Employees

HRP officers prepare a unique type of a time card at the completion of each shift cycle or week. Officers manually complete a time card indicating start and end time for regular hours worked as well as any overtime. The employee-signed time cards are forwarded to a supervising officer for approval, then to the HRP payroll section for processing. With officers' time ultimately recorded on an exception

basis, the OAG questions the benefit of detailed employee manually-generated time sheets for regular time worked.

HRP uses a wide variety of paper-based forms for collection and maintenance of time worked and leave requests. The OAG noted overtime could possibly be recorded on up to three separate forms. Additionally, time worked as 'Extra Duty', compensated by a third party but collected and paid through HRM, has an additional form.

The OAG suggests these forms could easily be automated, at least in part, in order to provide for a more efficient and economic approach.
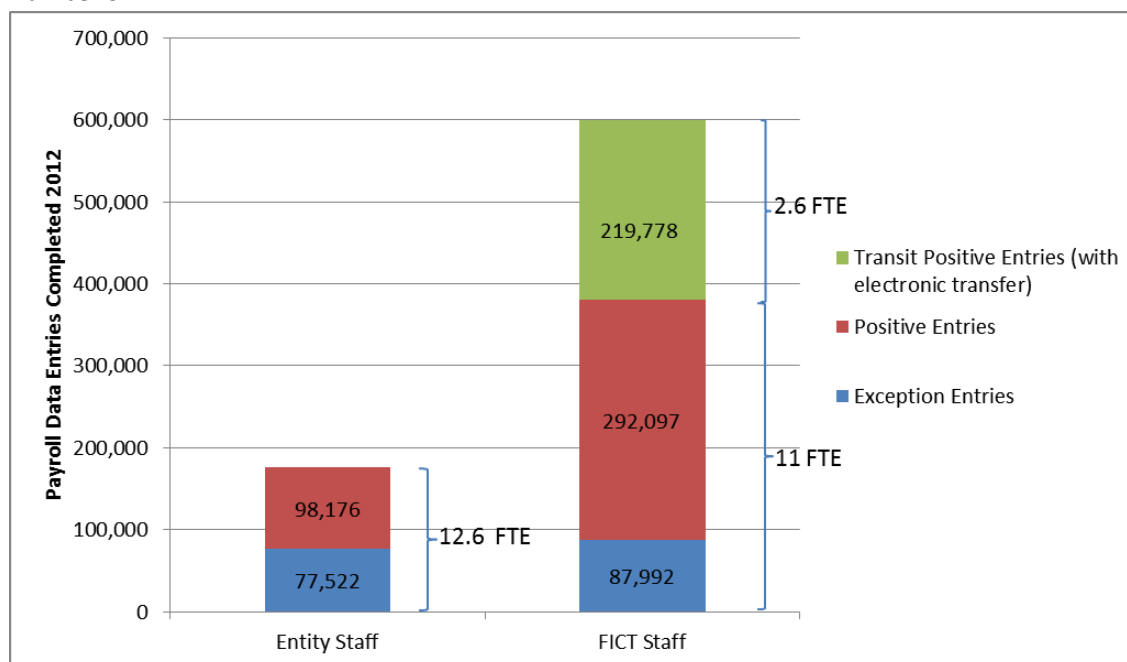
Schedule-Based Electronic Data

Within Metro Transit, the Conventional Bus Operators' work schedule is created and maintained in a highly efficient software application. All driver and route information is maintained by Transit Dispatch. As changes are made to leave or overtime (for example), adjustments are made to the schedule through the software. Operators complete a paper time card to be used as an audit verification of the schedule-based entries, used only in the case of a discrepancy.

This system-based schedule information is electronically transferred weekly to SAP for payroll processing. This electronic transfer of scheduled time, with adjustments, results in approximately 220,000 entries (annually) not having to be re-entered in SAP. These schedule-based entries are approved by Transit Dispatchers within the scheduling system itself, prior to transfer to SAP.

The efficiency of schedule-based time collection can be illustrated further by referring to Exhibit 9 below. Transit Services utilize FICT Payroll staff (2.6 FTEs) for the oversight and auditing of the 220,000 entries for Transit Operations. In comparison, non-schedule-based manual entries used significantly more staff resources.

It is interesting to note, FICT utilizes the resources of 2.6 employees to process 220,000 transit operations entries. This is, in fact, more than the entries of all types processed by all 12.6 FTEs in the entities. Clearly, significant efficiencies are possible by utilizing a software-based process and transfer of electronic data.

Exhibit 9 Data Entry Count, Positive/Exception Breakdown Processed by FICT and Entity Staff by Number of FTE

Paper-Based Application Generated Time "Sheets"

HRM Fire and Emergency Services, like Metro Transit, utilizes a schedule-based application to create and maintain a record of hours worked (work schedules) by career fire operations employees. Unlike Metro Transit however, the HRFE data is printed, manually approved and then faxed to HRFE Payroll staff for entry into the SAP payroll system, thus reducing the efficiencies of the electronic system.

A review of data entry records for 2012 indicates approximately 14,000 entries were made in SAP for career fire operations employees. This figure represents 70% of the entries completed by HRFE payroll staff, with the remaining entries involving non-operations staff. FICT staff completed 599,867 entries using 13.6 payroll positions; HREF completed 20,570 with 3.

As noted earlier, the schedule-based system in use at Metro Transit has greatly decreased the manual entries required to be completed by payroll staff as time entries transfer electronically to SAP. The OAG would suggest such a transfer from the HRFE schedule-based system would significantly reduce the manual re-entry of data

Unlike Metro Transit however, the HRFE data is printed, manually approved and then faxed to HRFE Payroll staff for entry into the SAP payroll system, thus reducing the efficiencies of the electronic system.

The schedule-based system in use at Metro Transit has greatly decreased the manual entries required to be completed by payroll staff as time entries transfer electronically to SAP.

required by HRFE Payroll staff and could result in significant efficiencies in payroll operations.

Overall, the OAG has to question the economy of HRM utilizing at least five distinct processes for collecting payroll data, most of which are inherently inefficient.

Recommendations

2.2.1 The OAG recommends FICT Payroll be made responsible for the development of more efficient methods for time entry. Where business areas currently use or are able to utilize electronic data collection, the electronic approval and transfer of these records to SAP should be implemented immediately.

2.2.2 The OAG recommends if the Intranet Time Sheets application continues to be a tool of choice for the entry and recording of employee time, HRM investigate the electronic approval of employee entries and data transfer of approved time to the payroll system. However, the OAG recommends this only continue as an intermediary measure until a complete end-to-end solution is implemented. See Recommendation 5.1.1.

2.2.3 The OAG recommends supervisors not complete time sheets on behalf of employees, but approve the completed time sheet, thus ensuring a proper division of duties.

2.2.4 The OAG recommends HRM Administration review the various manual processes currently in place with a view to consolidating the processes so there is one standard manual process in addition to the automated processes.

2.2.5 Where HRM entities have application software allowing for schedule-based time keeping, the OAG recommends interfacing all applications with the payroll system to minimize further data entry and data entry errors.

Specifically, the OAG recommends:

a) HRM investigate an electronic data transfer from the HRFE roster (scheduling) system to SAP, similar to the manner in which the Transit scheduling system transfers records to SAP.

b) HRP investigate and, where possible, implement the Time Reporting component of the HRP record management system to streamline data collection and transfer of records to SAP.

2.3 Coding of Employee Time

Throughout the course of the entity interviews, the OAG asked what codes are used to record time worked/taken. All entities use HRM standard time codes for vacation, sick, overtime, etc.. However, the OAG observed confusion among the entities where additional codes were made available to assist with capturing time for various other types of leave. The payroll system is able to track time as, for example, training, conferences, earned days off and parental leave to list but a few of the 110 different codes available. The top 20 codes account for 94% of all payroll entries while the remaining 90 codes account for only 6% of the entries.

With no clear direction provided on the proper use of individual codes, entities were inconsistent in their application. Some entities use codes they believe appropriate to manage their costs, others do not use separate codes to track items such as training as they do not see it as necessary. By not requiring a consistent use of codes across entities (or divisions within entities), Senior Management loses the ability to accurately report on employee time on an organizational-wide basis. The OAG questions whether this may also be a result of a non-centralized reporting structure (Section 1.3).

Tracking of Earned Days Off (EDOs)

The ability to select codes and track time on the Intranet (or time sheet) but not have those time entries appear by code in SAP for reporting purposes, adds additional confusion for some entities. For example, some employees working extra time each day to gain an earned day off (EDO) enter time on a time sheet showing the extra time worked, although the extra time worked is not entered and recorded in SAP. However, the time the employee takes off (EDO) is entered in both the time sheet and SAP. The OAG would question how the earned banked time (for EDOs) accumulated by employees throughout HRM is being maintained/managed and has concerns around the possible outcomes of this control issue.

The payroll system is able to track time as, for example, training, conferences, earned days off and parental leave to list but a few of the 110 different codes available.

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The OAG would question how the earned banked time (for EDOs) accumulated by employees throughout HRM is being maintained/managed and has concerns around the possible outcomes of this control issue.

Recommendations

2.3.1 The OAG recommends HRM establish a standard set of time codes for use by all business entities along with clear instructions on their use. The OAG further recommends the number of available codes be reduced to those as pointed out in the report used in collecting the majority of the information.

2.3.2 The OAG recommends, in conjunction with Recommendation 2.3.1, business entities determine the appropriate time codes to use in their particular business circumstances for the recording of so-called 'special' time and begin to record any banked time as both earned and taken.

The OAG recognizes until such time as employee-entered data is electronically approved and transferred to SAP, this may not be feasible due to resource constraints.

2.4 Additional Entity Records (Use of Spreadsheets)

Halifax Regional Police (HRP) and Halifax Public Libraries (HPL) maintain external spreadsheets of employee pay-records to assist with tracking of time, maintenance of leave banks and verification of entries to SAP.

Two HRM entities keep extensive payroll records outside the SAP payroll system. Halifax Regional Police (HRP) and Halifax Public Libraries (HPL) maintain external spreadsheets of employee pay-records to assist with tracking of time, maintenance of leave banks[12] and verification of entries to SAP.

Part-time employees at HPL may work in multiple positions, at varying rates of pay for various supervisors[13]; entries for hours worked under these circumstances are assembled in a spreadsheet, by HPL payroll staff, for final calculations and entry to SAP. Additionally, HPL payroll staff complete holiday pay calculations for part-time employees in spreadsheets outside of the SAP payroll system. Clearly, this type of system has the likelihood of a high error rate and is at a minimum highly inefficient. In discussions with FICT Payroll staff, the OAG was advised SAP functionality could be implemented to address situations where there are multiple positions filled by one individual. HPL also maintains spreadsheets to account for leave balances for many of its employees who work multiple part-time positions, rather than maintaining these banks in SAP.

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HRP payroll staff, after collecting the employees' time sheets/time cards information, noted previously, make duplicate entries to SAP (for final payroll) and an Excel spreadsheet (for verification and reporting).

HRP payroll staff, after collecting the employees' time sheets/time cards information, noted previously, make duplicate entries to:
1. SAP (for final payroll)
2. An Excel spreadsheet (for verification and reporting).

The OAG noted Metro Transit is able to use the SAP payroll system to track a clothing allowance for their employees, where HRP uses a spreadsheet rather than SAP to track this kit allowance - a less efficient approach.

In addition, HRP maintains separate records of payment and entitlements (by individual) relating to items such as a kit allowance (paid annually) and 96 hours of shift adjustment leave for each employee working 12-hour shifts. The OAG noted Metro Transit is able to use the SAP payroll system to track a clothing allowance for their employees, where HRP uses a spreadsheet rather than SAP to track this kit allowance - a less efficient approach.

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[12] Leave banks reflect the earned overtime, vacation, sick and other types of leave employees earn or to which they are entitled.
[13] HPL employees working in multiple positions could have time worked records appear on multiple time sheets, one for each position.

As noted in Exhibit 6, the number of FICT Payroll staff and entity payroll staff is relatively equal; however, FICT Payroll staff are responsible for 55% of total employees and process 77% of payroll entries. The OAG would suggest the extra data entry steps required due to the processes followed by the payroll groups outside of FICT Payroll have led to inefficiencies requiring additional staff.

Recommendations

2.4.1   The OAG recommends HRP and HPL, in conjunction with FICT Payroll, adapt the entity processes currently in use to eliminate corporate payroll data being maintained in separate spreadsheets thus eliminating a multitude of possible control issues and inherent inefficiencies.

2.4.2   The OAG recommends HRM implement existing SAP functionality to allow for multiple positions for one individual. This 'concurrent employment' functionality, once implemented, should assist with streamlining payroll processing for HPL.

2.4.3   The OAG recommends HRM utilize the SAP payroll system to track and calculate allowances (clothing, etc.) due to and paid to employees.

2.5 Timing of Submission of Recorded Time

Time is usually submitted prior to the end of the pay period.

Halifax Public Libraries requests time sheets for their staff be submitted by the Wednesday prior to the end of the pay period. This early submission request is made in part to allow extra time to complete the volume of manual calculations and entries.

The processing of the biweekly payroll begins with the submission of recorded time to payroll staff. As mentioned, the normal biweekly pay period in HRM runs Sunday – Saturday (Monday – Sunday for Metro Transit Conventional Transit), however time is usually submitted prior to the end of the pay period. Payroll staff request time be submitted by noon on Friday, the day prior to the end of the pay period, so data entry can commence.[14] Halifax Public Libraries requests time sheets for their staff be submitted by the Wednesday prior to the end of the pay period. This early submission request is made in part to allow extra time to complete the volume of manual calculations and entries.

Adjustments to employee time after the initial time sheet cut-off may be submitted to payroll staff any time up to the following Monday morning.

Although beyond the scope of this review, the OAG wonders how many changes, such as sick days or last minute vacation requests go unreported due to the early submission of the employee's time and no formal organizational process for follow-up to ensure changes are properly recorded.

The OAG suggests with the level of automation and process improvements being recommended, the payroll processing period could be compressed allowing time submissions to occur after the close of the payroll period.

Recommendation

2.5.1 The OAG recommends HRM adjust payroll processes utilizing recommendations contained within this report to allow for time sheet submission to begin after the end of the payroll period.

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[14] Where a holiday falls within the data-entry period, time-sheets are requested by Thursday noon.

2.6 Exception vs. Positive-time Reporting

As introduced in Section 1.1, employee time is recorded either on an exception or positive basis. Exhibit 10 provides a distribution of exception-based and positive-based employees by entity.

Exhibit 10 Exception/Positive-time Recording - Employee Distribution by Entity

Entity	Exception Reported Employees	Positive Reported Employees	Notes
Chief Administrative Office (CAO)	91	7	
Community Recreation Service (CRS)	297	1,100	Included in positive are part-time program instructors.
Finance and Information, Communication and Technology (FICT)	267	4	
Halifax Fire & Emergency Services (HRFE)	465	44 679	Volunteer Firefighters (679) are included as positive based.
Human Resources (HR)	65	171	Pension top-ups and other special case employees are included and maintained by Human Resources (171).
Halifax Regional Police (HRP)	831	92	
Legal and Risk (Legal)	28		
Halifax Public Libraries (HPL)	171	226	
Planning & Infrastructure (P&I)	78	2	
Transportation and Public Works (TPW)	227	289	
Metro Transit Services (Transit)	250	629	Transit Mechanics, Ferry Operators and Access-a-bus operators are exception based.
ABCs/Other	78	748	Positive employees include part-time staff at facilities such as Canada Games, Dartmouth Sportsplex.
Total	**2,848**	**3,991**	

The largest groups of positive-time recorded employees are found within the ABCs and CRS where many of the recreation facilities staff and recreation instructors are part-time employees. As mentioned previously, within HRFE, volunteer firefighters are counted as employees and in this Exhibit, the volunteer firefighters are noted as positively-recorded employees.

Although Metro Transit recorded a high number of positive-time records, as reflected in Exhibit 9, these entries are schedule (application) generated and not manually entered as are other entities' positive-time entries.

To better illustrate the additional effort required to maintain the time records of positive-recorded employees over exception based, Exhibit 11, provides the average number of time entries per position, by entity.

Exhibit 11 Entity Employee Counts, with Exception and Positive Recorded Employees and Transactions January – December 2012

	Employee Count	Employee Count (Exception Based)	Employee Count (Positive Based)	Average # of entries per Exception Employee	Average # of entries per Positive Employee
ABC/Other	826	78	748	35	90
CAO	98	91	7	37	9
CRS	1,397	297	1,100	54	76
FICT	271	267	4	70	171
HRFE	1,188	465	723	41	2
HR	236	65	171	33	1
HRP	923	831	92	50	47
LEGAL	28	28		40	
HPL	397	171	226	74	263
P & I	80	78	2	44	210
TPW	516	227	289	76	402
TRANSIT	879	250	629	79	393
Total	6,839	2,848	3,991		

Note: With respect to the positive-based entries and employee counts, the OAG obtained the data directly from the SAP system. The OAG performed no attest functions on the data and accepted it as presented. The Exhibit is presented to illustrate concepts. The variation in the number of entries per employee is due in part to part-time employees with a limited number of transactions.

The Employee Count (Positive Based) column in Exhibit 11 shows HPL, TPW, Transit, HRFE and CRS all have an employee count greater than 200 for employees using positive-time recording. The smaller ABC entities also have greater than 200 employees in total. The average number of entries completed for each employee using positive time show FICT, HPL, P&I, TPW and Transit with a higher than average number of entries. An entity with both a high total positive employee count and a high number of average transactions

indicates to the OAG an area for improvement where efficiencies could easily be seen. For example, with positive employees in HPL and TPW, the transactions are entered by payroll staff. In Transit, with 89% of the positive entries transferred from the scheduling system to SAP, Transit has been able to address the inefficiencies associated with the high number of positive entries per employee by utilizing technology. As the OAG has suggested in a number of reports – to overcome inefficiencies, technology and innovation must be utilized.

As the OAG has suggested in a number of reports – to overcome inefficiencies, technology and innovation must be utilized.

Excluding entities where a large percentage of the staff complement are part-time (ABCs and CRS) and entities where the number of staff required to be positively recorded is low (FICT, CAO's Office and P&I), the OAG made the following observations.

Fire and Emergency Services:
- Large number of positively recorded employees, 679 volunteer firefighters
- Low number of time entries, average of 2 per employee
- Positive recording of time appears acceptable method for this group.

Halifax Regional Police:
- Small number of part-time employees
- Limited number of time entries
- Positive recording of time appears acceptable method.

Of interest with HRP, the average number of entries on both positive and exception is nearly 50 transactions per employee per year. As shown in Exhibit 5, of the entities with dedicated payroll staff, the HRP ratio of employees to payroll staff is 200:1. It is interesting to compare this number to FICT where the ratio is 278:1, which includes a large number of positive-time entries. This low ratio at HRP coupled with a low number of positive recorded employees highlights the inefficiencies within the HRP payroll process.

Halifax Public Libraries:
- Large number of part-time employees
- Employees may hold multiple positions, often with scheduled reoccurring hours
- Large number of entries per employee

➢ Exception reporting could save time and entries for scheduled employees and increase efficiency and cost savings significantly.

Transportation and Public Works:
➢ Large number of employees
➢ Large number of entries per employee
➢ Employees work a standard scheduled 40-hour work week
➢ Exception reporting could save time and entries and increase efficiency and cost savings significantly.

By using a model similar to the Bus Maintenance Division within Metro Transit, the OAG believes the number of payroll entries per employee and the time devoted to maintaining time sheets could be greatly reduced for TPW – Municipal Operations.

By using a model similar to the Bus Maintenance Division within Metro Transit, the OAG believes the number of payroll entries per employee and the time devoted to maintaining time sheets could be greatly reduced for TPW – Municipal Operations.

In addition to time and effort saved within payroll, the management hours spent on time sheet preparation could be returned to direct operational activities, if time was reported/recorded as exception.

Recommendation

2.6.1   The OAG recommends HRM Administration review employee positions where time is currently reported positively in an effort to have positions reported by exception only.

Given much of the organization now uses exception reporting and HRM has organizational processes currently in place for exception reporting across a wide variety of operational units, extending these processes to other units where exception reporting is not used predominately, should provide immediate savings in processing time and costs.

2.7 Payroll Time Approval, Transmittal and Adjustments

After completion of time sheets/time cards, a manager/supervisor must approve the payroll information. During interviews, the OAG was advised of a variety of entity procedures for the approval of employee time.

In most cases, the approving manager/supervisor signs the time sheet/time card. The following were situations where concerns were noted:

➢ The OAG observed unsigned copies of time cards having been entered into the system
➢ Administrative Assistants using an electronic graphic of an approving signature and proxy access to allow e-mailing of time sheets
➢ Unsigned time sheets forwarded to meet the early payroll deadline, with signed copies to follow
➢ The same individuals completing (on behalf of staff) and approving time sheets
➢ Original time sheets kept with entity.

With respect to adjustments after the original time sheet submission, the OAG was advised for the most part, an e-mail to the appropriate payroll staff person would initiate the change. However, the OAG was advised of the following inconsistencies:

➢ Administrative Assistants could, in some cases make the request for changes on behalf of a manager/supervisor, while in other cases they were not permitted to do so
➢ An original signature was required to complete changes by some payroll staff while other payroll staff would accept a signed FAX copy
➢ Re-submission of the entire payroll sheet was required in some cases, while others required only the requested adjustments.

For TPW's CUPE employees, there is a 'CUPE Pay List' generated early in the pay-period process. The Monday morning, after time submissions are due, all CUPE employees are provided a summary of their upcoming pay. This summary is intended to give the employees an opportunity to review the hours submitted on their behalf by the manager/supervisor. Should the employee have concerns, these are discussed with the manager/supervisor and payroll is notified of any necessary adjustments.

The OAG was advised the distribution to the TPW managers of the Monday morning pay summaries varies within TPW. Some managers receive paper copies through interoffice delivery, while others are able to receive a file electronically, print the summaries at the work site and then distribute the copies to employees, allowing additional time for employee review.

The OAG questions if this notification process would always be necessary if employees were exception-based rather than positive-time recorded.

On completion of the biweekly payroll, the front-line payroll support staff generate audit journals and control logs. These journals and logs are forwarded to the managers and supervisors who signed the original time sheet submissions for final approval. Through the entity interviews, the OAG received feedback on inconsistencies in the manner by which these documents are handled at the entity level. Responses varied from an in-depth review before signing, to administrative support signing on behalf of a manager. The lack of a consistent approach across the organization with respect to audit journals, with an annual payroll of $255 million, is of concern to the OAG.

Recommendations

2.7.1   The OAG recommends HRM establish and implement clear guidelines for all entities of acceptable time collection, approval and transmittal of payroll information. These guidelines should set out, at a minimum, who may sign to approve time, journals/logs and acceptable transmittal methods of payroll information.

2.7.2   The OAG recommends HRM establish and implement clear guidelines for all staff with front-end payroll responsibilities, enabling all payroll services to be provided consistently to managers and supervisors within the individual entities.

3.0 Financial Costs – Payroll Production

The report estimates direct costs, such as payroll staff time and HR data administration, account for on average 37% of costs, while the remaining indirect costs, such as system maintenance and indirect labour costs (manager/ supervisory approval) account for 63% of the cost to deliver payroll..

A PricewaterhouseCoopers (PWC) report [15] suggests organizations often fail to consider key cost components when assessing the full costs to produce payroll. The report estimates direct costs, such as payroll staff time and HR data administration, account for on average 37% of costs, while the remaining indirect costs, such as system maintenance and indirect labour costs (manager/ supervisory approval) account for 63% of the cost to deliver payroll.

An estimate of the payroll costs, salary and benefits[16], for FICT and entity employees involved to some degree in payroll production totalled $2.3 million for 2012. The OAG understands not all staff involved in the delivery of payroll were fully allocated to payroll production. With this in mind, the OAG adjusted the estimate based on the likely proportion of time each position dedicated to payroll processing. Based on this revised calculation, the adjusted direct cost estimate for payroll production for 2012 totalled $1.5 million.

Accepting 37% of the costs of delivering payroll are the visible (known) costs, the remaining costs, in this case $2.6 million, are the additional costs HRM incurs in the overall time collection and payroll process.

Accepting 37% of the costs of delivering payroll are the visible (known) costs, the remaining costs, in this case $2.6 million, are the additional costs HRM incurs in the overall time collection and payroll process. (See Exhibit 12)

Exhibit 12 2012 HRM Costs (Estimated) to Deliver Payroll

Direct Costs	$1,506,858	37%
Indirect Costs	$2,565,731	63%
Total	$4,072,589	
Employee/Volunteer Count	6,839	
Cost per Employee per year	$595.49	
Average cost per Employee per pay period (CPEPP)	$22.90	

As noted throughout this report, many different collection and approval methods are employed throughout HRM. Entities using some form of automation for collection and approval would have a

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[15] March 2012, "Exposing the hidden cost of Payroll and HR Administration *A total cost of ownership study*"
[16] The OAG estimated the total benefits cost for HRM Business Unit employees and ABC employees directly involved in payroll production at 20%.

lower cost per employee per pay period than an entity relying on a more manual system for collection and approval.

There are other costs (not included in the above) HRM incurs in the total delivery of payroll. While the production and internal distribution of pay notifications would be included, the cost of postage, for example, may not. Parts of the HRM organization have pay notices mailed through Canada Post, due to work locations or the employees' lack of access to a secure pickup. Approximately 1,800 pay notices per pay may be distributed in this manner.[17] Although HRM employees have the option to receive pay notices via e-mail, the OAG is advised the adoption rate for electronic notification is approximately 24%, while almost 27% are delivered via Canada Post.

The OAG acknowledges the monetary savings in not having to pay postage are a small part of the overall HRM budget and cost to produce a biweekly payroll. However, the estimated $30,000 spent annually on sending pay notices through Canada Post could be used in other manners. The current process is effective: employees receive pay notifications; however, with staff time, production costs and delivery taken into account, the process is not economical.

The OAG realizes all employees may not be in a position to accept an e-mail message of a pay notification; however, other options could be made available allowing employees to retrieve an electronic copy of a pay notification at their request.

Parts of the HRM organization have pay notices mailed through Canada Post, due to work locations or the employees' lack of access to a secure pickup.

Although HRM employees have the option to receive pay notices via e-mail, the OAG is advised the adoption rate for electronic notification is approximately 24%, while almost 27% are delivered via Canada Post.

Recommendations

3.0.1   The OAG recommends, in conjunction with Recommendation 5.1.1, HRM implement Employee Self-Service (ESS) for the distribution of biweekly pay notifications and other annual notices such as T4s.

An Employee Self-Service site would allow HRM employees to, at their leisure, log on, view and print pay notifications.

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[17] Actual number could vary depending on CRS staffing levels.

3.0.2   The OAG recommends until such time as Recommendation 3.0.1 is fully implemented, HRM require all employees with a halifax.ca e-mail address, to receive electronic delivery of pay notifications, thereby eliminating the processing and handling of paper notices.

The OAG further recommends HRM encourage the remaining employees (without a halifax.ca e-mail) to voluntarily sign-up for electronic delivery of pay notifications using other e-mail accounts for delivery.

3.1 Time Recording Errors – Cost Estimates

Each time data is entered, there is a risk of error. With many HRM employees' remuneration based on a paper time sheet for initial collection of information or for time to be electronically captured, followed by the manual re-entry of information to SAP, the chance for error increases.

Industry averages estimate undetected payroll errors in manual systems range between 0.5% and 2.4%, with the average at 1.2%. Applying this range to the HRM payroll would yield an estimated total error of between $1.3 and $6.1 million for fiscal 2012/2013.

Industry estimates of losses due to unearned time off or improperly recording of time off is 0.48% of payroll.

In the previous section, the OAG looked at the costs HRM incurs during the collection (indirect) and processing (direct) of the biweekly payroll. Other costs, more difficult to measure, are those where errors may have been made in the recording of time and/or attributing time to incorrect codes. Each time data is entered, there is a risk of error. With many HRM employees' remuneration based on a paper time sheet for initial collection of information or for time to be electronically captured, followed by the manual re-entry of information to SAP, the chance for error increases. With multiple labour agreements in place within HRM[18], each with unique terms embedded, there are multiple coding and pay-rate options for individual employees, again increasing the chance for error in entries or coding.

For fiscal year 2012/2013, HRM's approximate payroll (salaries, wages, overtime and honorariums) was $255 million. Industry averages estimate undetected payroll errors in manual systems range between 0.5% and 2.4%, with the average at 1.2%. Applying this range to the HRM payroll would yield an estimated total error of between $1.3 and $6.1 million for fiscal 2012/2013.

Additionally, with manually-based time recording systems, it may be possible for employees to not have time taken off properly recorded. Manual time sheets prepared a week or more after time was taken could easily have time overlooked or not properly recorded. As well, with time sheets due prior to the end of the pay period, late adjustments may be inadvertently missed. Industry estimates of losses due to unearned time off or improperly recording of time off is 0.48% of payroll. Applying this estimate to an adjusted total HRM payroll figure, including only those employees entitled to vacation, suggests the possible value of unearned time off for fiscal 2012/2013 is $1.1 million.

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[18] Amalgamated Transit Union (ATU), Canadian Union of Public Employees (CUPE), Nova Scotia Union of Public & Private Employees (NSUPE) (two locals), International Association of Firefighters (IAFF), Halifax Regional Police Association (HRPA formally MAPP) and Non-union employees.

4.0 Controls and Risks

Segregation of Duties

Throughout the course of this review, the OAG noted concerns around controls within various processes discussed and made comment and recommendations as appropriate.

As part of the overall data analysis, the OAG reviewed areas of concern within the front-end payroll processing to ensure staff with payroll responsibilities do not maintain either their own payroll or records of immediate family members. An electronic scan of addresses revealed, although there are no apparent (immediate) conflicts between payroll staff and the employees they maintain, possible conflicts could exist for payroll staff during periods, such as vacation relief, where payroll staff maintain either their own records or those of immediate family members.

Within smaller entities, proper segregation of duties may not always be possible, i.e. staff may be responsible for entering their own time without the proper independent approval.

The OAG was advised by FICT Payroll any individual with payroll responsibilities has the ability to make entries for any HRM employee.

Additionally, the OAG was advised by FICT Payroll any individual with payroll responsibilities has the ability to make entries for any HRM employee. The intent of this allows for vacation and absence coverage by other front-end payroll staff without having to realign the employee/payroll responsibility relationships. All entries, regardless of the individual making the entry, appear on audit logs for review by the individual with payroll responsibility for the employee, as well as the employee's supervisor's audit report. This control, however, is weak as mentioned in Section 2.7 where audit logs are not always reviewed by supervisors.

Potential Retirements/Succession Planning

Through the course of this review and discussions with Management, it became evident to the OAG many staff with payroll responsibilities are eligible to retire now, or within the calendar year. Currently, 23 employees[19] within FICT, HRP, HRFE and HPL are

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[19] The entities have a combined total of 23.2 FTE positions, resulting in 24 individuals if all positions were staffed.

involved directly with the collection, input and verification of payroll. Using the 'Rule of 80'[20], 10 employees, or 44% of those with payroll responsibilities, are eligible to retire now or within the calendar year. This is of concern to the OAG, as nearly one-half of staff with payroll responsibilities could leave the organization, creating significant issues in the short term for payroll processing and organizational knowledge.

Recommendations

4.0.1 The OAG recommends for smaller entities, where payroll is not the primary job function for the individual(s) responsible for front-end payroll processing, payroll functions be transferred to FICT Payroll to take advantage of their expertise in payroll and to provide for the appropriate segregation of duties.

4.0.2 The OAG recommends FICT Payroll be responsible for payroll entries for individual staff with front-end payroll responsibilities to enhance controls and segregation of duties. Should Recommendations 1.3.1 and 4.0.1 be accepted, this would be implemented as a result.

4.0.3 The OAG recommends HRM Administration review and evaluate the current situation with respect to eligible retirements within payroll groups, and create an appropriate succession plan to mitigate risks.

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[20] 'Rule of 80' or earliest retirement date is calculated by combining consecutive years of service (with Halifax Regional Municipality) plus age.

5.0 Current and Future HRM SAP Implementation

The current HRM installation of SAP will be migrated to the Province of Nova Scotia's Customer Competency Centre (CCC) during calendar 2013[21]. This alternative service delivery model will see the CCC provide infrastructure (hardware), technical services (system administration) and functional services (configuration and enhancements) for an SAP system for HRM.

The CCC has implemented SAP payroll functionality for the Province of Nova Scotia's use, beyond the current capabilities of the HRM installation. Where the HRM payroll process is primarily a paper-based collection system, with manual sign-off and partially decentralized data entry, the Province's implementation is primarily an employee-based self-service, with electronic approval and electronic transfer of information.

The HRM payroll process is primarily a paper-based collection system, with manual sign-off and partially decentralized data entry, the Province's implementation is primarily an employee-based self-service, with electronic approval and electronic transfer of information.

5.1 Benchmarking – Province of Nova Scotia SAP Implementation

The OAG, through its review of the overarching payroll process, determined it would not be beneficial to benchmark the entire process against comparable municipalities, primarily due to the differences with time capturing tools among HRM's entities, services provided and the imminent transfer of the system to the Province of Nova Scotia.

As HRM is in the process of transitioning its SAP services and support to the Province of Nova Scotia's CCC, the OAG deemed it reasonable to draw comparisons between the two organizations' payroll processes.

The Province of Nova Scotia, like HRM, utilizes SAP to process payroll for its employees. Despite using the same vendor's software, the two processes for collection and processing of payroll differ greatly.

Listed below are the high-level differences the OAG has noted with the front-end processes between the Province of Nova Scotia and

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[21] HRM Council Report – October 23, 2012, Item 11.2.1

HRM's implementations:

1. The Province of Nova Scotia uses a 'portal add-on' SAP tool to enable Employee Self-Service (ESS) and Manager Self-Service (MSS). These tools allow employees to enter their own exception records during a pay period. With this, the leave banks reflect balances accurately.

2. The ESS process is used by 75% of Provincial employees; the exception to this method of time collection would be CUPE hourly-paid employees, who collect time using a hard-copy spreadsheet.

3. Following entry by Province of Nova Scotia employees, the data reaches an intermediate phase, where managers log in, review time, identify any necessary adjustments and assign an electronic approval. The time records at this stage are ready for final (back-end) processing.

4. Control features built into the Manager Self-Service ensure employee time is not held up by expected/unexpected management absences, as approval escalates to the next level of management as time thresholds are not met.

5. The Province of Nova Scotia does not utilize third-party, schedule-driven, software to transfer information to SAP, as is the case with Metro Transit's software. All collected time is through the portal via ESS/MSS, or by hard-copy time sheets (CUPE Employees).

The OAG believes HRM could immediately implement in many HRM business units, a hybrid system taking the Employee Self-Service model in use with the Province and combining it with an enhanced schedule-based system, greatly reducing the number of manual entries required for payroll.

By enabling data for all exception-based employees and many of the (currently) positive employees to transfer electronically to SAP, along with enhanced schedule-based systems where possible (Transit, HRFE and perhaps HRP), the OAG believes the number of employees' time collected and transferred in this manner to SAP for processing could approach 75%, or 90% of payroll entries. The bulk

of the employee data, where a manual process would be required, would remain with Community and Recreation Services for program instructors, and the annual payment to Volunteer Firefighters.

Opportunities may exist for the delivery of payroll and time tracking outside of the organization; however, without knowing the full go-forward costs for the delivery of individual internal services through the Provincial SAP implementation, the best value for money cannot be determined.

Recommendations

5.1.1 The OAG recommends HRM, working with the SAP services delivery partner, leverage the SAP payroll experience within the Provincial CCC to enhance the basic functionality for the HRM payroll implementation, introducing for example, Employee Self-Service and Manager Self-Service.

5.1.2 The OAG recommends HRM gather full costing information for the delivery of payroll services for the purpose of benchmarking against alternative service delivery models.

Appendix: Management Response

September 9, 2013

Larry Munroe
HRM Municipal Auditor General
Belmont House, Suite 620
33 Alderney Drive
Dartmouth, Nova Scotia
B3J 3A5

Re: HRM Payroll System – A Process Review

Dear Mr. Munroe:

I have reviewed **HRM Payroll System – A Process Review** and am pleased that the report has confirmed the need for change. Administration is aware of the issues raised in your audit, and plan to address them through the SAP system.

A project to adopt most of the changes recommended in the report will be initiated once the transfer of the SAP system to the Province is complete, and the required upgrades to the software have been implemented. Part of the business case for this transfer was to enable HRM to take advantage of enhancements such as Employee Self Service, which you have identified in recommendation 3.0.1.

As with past reports released by your office, HRM administration will work to ensure the findings are addressed in a coordinated and appropriate manner, and strive for the best possible result for the municipality.

Sincerely,

HALIFAX REGIONAL MUNICIPALITY

Original Signed

Richard Butts
Chief Administrative Officer