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### **NOTE REGARDING NEXT STEPS AND IMPLEMENTATION**

This Service Efficiency Study provides advice and recommendations to the City Manager and was conducted in consultation with the Agency. The Study identifies actions and directions that could result in more efficient and effective service delivery, organizational and operational arrangements and associated savings.

The City Manager will work closely with senior management to determine which of the actions are feasible and can be implemented, implementation methods and timeframe and estimated savings. In some cases, further study may be required; in other cases the actions may not be deemed feasible.

Implementation will be conducted using various methods and may be reported through annual operating budget processes or in a report to Council or an applicable Board, where specific authorities are necessary. In all cases, implementation will comply with collective agreements, human resource policies and legal obligations.

Preliminary estimated savings have been identified in the study by year where possible. In some cases savings have been included in the 2012 budget submission. Achievement of these savings is highly dependent on the viability of these actions as determined by senior management, timeframes, and other implementation considerations.

The Corporation of the City of Toronto

**Service Efficiency Study  
Toronto Public Library**

# FINAL REPORT



November 2011

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## EXECUTIVE SUMMARY

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The purpose of the Toronto Public Library (TLP) Service Efficiency Study (SES) is to support the City's efforts to ensure the cost-effectiveness of services (e.g., services are not costing more than they should) and general process efficiencies. By taking a closer look at the services offered, this SES will assist the TPL and the City to identify and obtain a set of achievable recommendations directed at delivering maximum service efficiency savings in the shortest period of time.

The key steps to assess service efficiency as part of the SES included:

- Identifying and assessing costs and cost drivers of current practice;
- Reviewing and assessing services, activities and methods;
- Comparing against service providers in other jurisdictions using comparable and relevant best practices;
- Analysing and comparing service benchmarks and measures; and
- Assessing against other relevant information.

The specific goals for the assignment included:

- Identify areas of focus and the most appropriate methodologies which bear the greatest potential for cost savings and improved service delivery;
- Assess these areas against best practices in the industry as well as similar jurisdictions to explore service efficiencies, identify cost drivers of current practice;
- Identify and recommend both immediate and longer term opportunities for improved efficiency and cost savings

The scope of the study focused on four major service areas and their function in five representative locations. These areas included: consolidation of services; technology; and the movement and shelving of books and other materials between the library, its borrowers, and at the inter-library level.

The outcome of the study includes recommendations on a service model that is efficient and effective without severely compromising service quality or continuity in support of the TPL's mission and mandate. The recommendations will have an impact (both direct and indirect) across all 98 locations that make up the Toronto Public Library organization.

The consulting team of DPRA Canada Inc. and LeisurePlan International Inc. were selected in late July 2011 to work collaboratively with the City and TPL on the SES.

**The study consisted of the following tasks:**

- Orientation meeting;
- Review of relevant studies and background information;
- Key informant interviews conducted during site visits with key TPL Executive, Management, branch, and hub operations staff;

- Focus groups with library staff conducted during site visits;
- Three working sessions with TPL Executive staff to discuss study progress;
- Development of draft opportunities for improved efficiency and cost-savings;
- Working session to discuss recommended opportunities; and,
- Documenting the study (final report).

This report documents both the study process and study results based on a limited scope and timeline: this is not an in depth comprehensive assessment. The observations, findings and recommendations are approximations and meant to guide TPL to complete further evaluation.

The calculations and numbers presented in this report are based on the information and documentation provided to the DPRA consulting team during the SES. During the completion of the analysis and the development of this report, some of the report numbers/information and documentation have been updated by TPL, hence may not be consistent with data presented in recent publications released since the development of this report.

### **Key Findings and Recommendations**

The following is a summary of the key findings and recommendations emerging from the SES. The following observations, considerations and recommendations are cognizant of the efforts and commitment of TPL related efficient and effective operations, data collection and management, and proactive identification of process efficiencies. TPL is a quality work environment driven and framed by its investments and commitments to Lean Six Sigma principles. Greater levels of detail related to the recommendations are provided in the report.

The first four recommendations are ones put forward by TPL to its Board for approval in response to City Council's request for 10% budget reductions. These TPL recommendations are consistent with DPRA research during the execution of the SES, and therefore, the DPRA consulting team supports. The remaining recommendations are a direct result of the analysis completed by the DPRA consulting team for this SES.

### **RECOMMENDATION 1 – THAT THE TPL BOARD CONSOLIDATE THE TWO INTER-BRANCH DELIVERY HUBS INTO ONE AT ELLESMERE**

There are currently two hubs that support inter-branch deliveries. The Front Street hub is a smaller operation and supports the south branches, while the Ellesmere hub (a former Scarborough library branch) supports the east, north, and west branches.

DPRA supports the work by TPL aimed at consolidating the hubs. Consolidation will not only increase efficiencies but will ensure that the process is centralized into one location. Having operations centralized to one location allows for greater control, increased Quality Assurance and Quality Control (QA/QC), and an enhanced ability to monitor and adjust processes and efficiencies as and when needed. It will also facilitate reductions in the size of the fleet, eliminate trips between hubs<sup>1</sup>, and further optimize delivery routes<sup>2</sup>. A reduction in delivery routes also reduces fleet operations and maintenance costs.

<sup>1</sup> The frequency of trips between the Front Street hub and Ellesmere hub will be eliminated, allowing for a re-configuration of routes and a reduction of one truck and driver per shift

## **RECOMMENDATION 2 – THAT TPL STREAMLINE THE HOLDS PROCESS BY IMPLEMENTING A NEW LABEL TECHNOLOGY**

The holds process as it currently operates could be augmented to be more efficient and effective. The current process resembles the following: upon printing the holds report, the staff “picks” the item in question off the shelf, fills in a hold/delivery slip by hand, and wraps it around the book with an elastic band. This process can take time, slips can get lost and hand-written notes can be illegible which, in turn, can result in errors.

Instead of printing out reports, it is recommended that labels be printed. Then, as the staff person “picks” the items off the shelf, the labels can be applied directly to the hold item at the time of picking. Labels eliminate errors associated with lost slips and illegible handwriting. In addition, check in stations should be equipped with similar processes so that when a book is returned, the system would recognize if there is a hold on the item being returned and print a label, as needed. This would ensure that the item is sorted in a more expedited fashion and placed in the appropriate bins for delivery to the necessary hub.

## **RECOMMENDATION 3 – THAT THE TPL BOARD CONTINUE INVESTING IN SELF-SERVICE AND AUTOMATION (WHERE FEASIBLE) TO REALIZE LONG-TERM OPERATING COST SAVINGS**

DPRA’s review of other jurisdictions and the available technologies to support self-service found that Radio Frequency Identification (RFID) is the most appropriate, accepted, and used technology in libraries across North America. TPL, from 2003 to 2007, installed and piloted RFID technology in 9 library locations. Based on the success of the pilot, TPL received a one-time capital investment approval for \$6.6 million from the City to install RFID in 40 other branches in 2008. This capital investment is scheduled to be implemented by the end of 2012. In addition, based on circulation statistics and overall efficiencies, an additional 10 branches could support RFID self-service.

DPRA supports the TPL recommendation for the expansion of RFID for efficiencies and long term savings both related to self service at 10 additional branches as well as the installation of three automated sorters at North York Central Library, Richview and Agincourt.

Further, DPRA supports the TPL recommendation that FTE savings should not be reinvested in opening for longer hours and that the FTE savings from the 2012 implementations also not be re-invested: these savings should be realized to reduce the budget.

To facilitate these investments, TPL will need to transfer \$1 million from the virtual branch service project in 2011 and \$0.3 million from the multi-branch project in 2012.

## **RECOMMENDATION 4 – THAT THE TPL BOARD UNDERTAKE A REVIEW OF MANAGEMENT AND ADMINISTRATION TO DETERMINE FURTHER EFFICIENCIES**

The current management complement is less than 4% of the total workforce and less than 5% of the total FTE count. When combined with other exempt positions, the total exempt group

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<sup>2</sup> Routes are examined and adjusted on a regular basis for efficiencies by the facilities service coordinator.



represents under 5% of the total workforce and approximately 6% of the total FTEs. TPL has completed a management review and is reducing exempt staff by 6 FTEs in 2012.

**RECOMMENDATION 5 – THAT THE TPL BOARD CONTINUE TO DEVELOP STRATEGIES TO INCREASE THE VIRTUAL LIBRARY AND VIDEO/ AUDIO STREAMING AND CAPACITY**

There are numerous advantages over the longer-term for TPL to transition to a greater virtual library system. This could equate to significant savings. Therefore, it is recommended that TPL continue to develop strategies to further enhance and increase its virtual library collection, video streaming capacity (i.e. DVDs, e-books, music, magazines, newspapers, and periodicals), and maximize on-line transactional services. This may ultimately reduce the need for some “physical” branches and traditional library infrastructure – which has great potential cost savings given that it will reduce facility need along with associated operating costs and staffing needs/costs. It is important to note that the expansion of the virtual library is limited to availability of materials and funding.

**RECOMMENDATION 6 – THAT THE TPL BOARD REVIEW THE SCHEDULE OF OPEN HOURS TO ENSURE CONSISTENCY WITH PEAK CUSTOMER DEMAND FOR GREATER EFFICIENCY AND BETTER CUSTOMER SERVICE**

Customer activity varies by day and hour due to the number of branches open and the number of hours open. This is the case on Sunday, which is the busiest per hour with 27 branches open for 3.5 hours. This is likely a reflection of user patterns and the fact that personal leisure time is typically highest on weekends.

Thursdays and Fridays appear to have fewer visits per hour despite being open a significant number of hours per week. This suggests that while it is beneficial to offer customers access to library services and materials at the branches, there is a need to examine the schedule of the open hours to ensure that those hours are consistent with community needs and patterns of use, as well as determining the number of “required” open hours for a particular branch. The results of the community consultation for the City’s core service review also support the notion that residents do not need branches open more hours.

Given the growth and value of a virtual library, comments by residents from the City’s core services review consultation, and service demands during afternoons/evenings/weekends, the DPRA consulting team suggests that TPL consider rescheduling branch hours to better align to peak customer demand times.

In response to the City’s direction to reduce budgets by 10%, TPL has been examining the issue of reducing open hours (as a component of the 10% reduction). TPL is proposing open hours reductions of 7% or 19,444 hours of the current total hours open. Based on research and analysis completed as part of the SES, the DPRA consulting team is recommending additional reductions of open hours per year in order to realize additional budget savings.

The following weekly hour allocation, per branch type, is proposed as a way of meeting and accounting for peak customer demand times. It should be noted that this rescheduling could mean no/minimal morning service on weekdays, closures on off-peak weekdays, and greater

open hours during high/peak times (i.e., afternoons, evenings, and weekends) across all branches. Such a shift in open hours to be consistent with customer peak demand times may result in a transitional scheduling challenge for staff, however over time it is achievable.

- **Research and Reference Branches (2):** 56 hours per week (Monday through Sunday);
- **District Branches (17):** 56 hours per week (Monday through Sunday);
- **Neighbourhood Branches (32):** 48 hours per week (Monday through Sunday); and,
- **Neighbourhood Branches (47):** 40 hours per week (Monday through Sunday).

Assuming this proposal is accepted, it would result in a 35,164.5 hour savings per year (or 13%) compared to current total hours open, but more focussed on peak customer demand periods. Presuming a direct 13% saving of overall operating labour costs (i.e. related to Monday through Saturday and Sunday costs), the annual savings would be \$10,097,285. However, the direct reduction of hours may not correlate directly with staff reductions as there are certain business functions that will be required regardless of the number of open hours (i.e. minimum staffing thresholds). Hence, the net savings will likely be in the range of \$7,000,000. The calculation does not directly take into consideration premium pay for late evenings and Sundays since it is unclear as to how many hours would be associated with late evenings and Sundays.

#### **RECOMMENDATION 7 – THAT THE BOARD CONSIDER CONSOLIDATING THE SERVICES OF SOME BRANCHES WITHOUT COMPROMISING SERVICE DELIVERY, AND SUPPORT EFFECTIVE BUSINESS MANAGEMENT**

Based on accepted scientific methods and measurement standards (both qualitative and quantitative) used to determine the feasibility and possible consolidation of services based on utilization and (under) performance, DPRA, in consultation with TPL staff, identified 15 branches that were underperforming.

As in business, where there are instances of lower than average performance, consolidation of services in fewer locations does not decrease services, but rather increases efficiency of operations and saves the costs of maintaining overlapping service areas. To determine the number of branches necessary to maintain an excellent library service to all Toronto residents, there are several considerations:

- 1) Distance to travel to any branch
- 2) Density of the population in the service area and demographics
- 3) Size of other branches in the area
- 4) Current demand measured by circulation and visitor counts.

There are instances where consolidation does not directly affect service delivery, because other branches overlap with the service area and neighbouring branches have the capacity to absorb additional demand. However, there are other instances where, regardless of performance and utilization, consolidation would result in a service gap in particular neighbourhoods. In the latter cases, consolidation of branches is not recommended even though the branch still performs below average. However, alternatives such as consolidation supported by the Bookmobile could be considered to ensure access to service by local residents.

While there appears to be overlap in some areas serviced by branches in the downtown area of Toronto, they are smaller branches serving the densest population of the City. Each is well utilized; as such, consolidation of small branches in close proximity is not an effective strategy, given that surrounding branches would not have the capacity to absorb the increase in customers without building larger branches.

DPRA's assessment and analysis (based on the provided and available data) suggest the following consolidations:

1. Swansea to be consolidated with: Runnymede, Brentwood (currently under renovation), High Park and Annette Street;
2. Todmorden Room to be consolidated with: S. Walter Stewart and Pape/Danforth;
3. Davenport to be consolidated with: Wychwood, and Dufferin/St.Clair;
4. Queen/Saulter to be consolidated with: Riverdale, Pape/Danforth, and Gerrard/Ashdale
5. Taylor to be consolidated with: Main St and Albert Campbell;
6. St.Clair/Silverthorn to be consolidated with Annette St and Dufferin/St.Clair;
7. Victoria Village to be consolidated with: Eglinton Square, Maryvale and McGregor Park;
8. Evelyn Gregory to be consolidated with: Mount Dennis and Maria A. Shchuka;
9. Long Branch to be consolidated with: Alderwood and New Toronto;
10. Perth/Dupont to be consolidated with: Bloor Gladstone, Annette St and Dufferin/St.Clair;
11. Mount Pleasant to be consolidated with: Northern District, Deer Park and Leaside;
12. Humber Bay to be consolidated with Mimico Centennial and Brentwood (currently under renovation);
13. Pleasantview to be consolidated with Fairview and Bridlewood; and,
14. Jones to be consolidated with: Gerrard/Ashdale, Riverdale, and Pape/Danforth.

Northern Elms ranks fourth in terms of underperformance; however, given the demographic circumstances of the neighbourhood (i.e., lower family incomes, significantly high proportion of newcomers, etc.); physical geographic barriers; and limited proximity to other branches, it is not recommended for consolidation at this time. However, Northern Elms could be considered for consolidation with Rexdale as well as with support from the Bookmobile. While the Bookmobile would ensure access to the collections for residents, it would not facilitate access to study space, computers, internet access and programs.

The consolidations proposed above would not lead to reductions in library service or access given that the affected populations are located in areas which are serviced by other branches within walking distance. The net operating cost efficiencies from these proposed consolidations are estimated to be approximately \$3,682,000. If Northern Elms is consolidated, then, saving would increase to approximately \$4,000,000.

**RECOMMENDATION 8 – THAT THE BOARD DEVELOP A NEW STRATEGIC PLAN FOR THE LIBRARY WITH CONSIDERATION OF CITY PRIORITIES AND THE FISCAL CONTEXT**

Toronto Public Library's strategic plan is the primary method by which the Board fulfils its legislated mandate to provide a comprehensive and efficient public library service that reflects the community's unique needs. It is through this planning process that the Board establishes consensus on the business objectives of the Toronto Public Library.

The Library's strategic planning process ensures that the Library continues to fulfil its mandate and mission to meet the changing needs of the residents of Toronto within the context of Council direction and priorities and the Library's budget.

The development of a new strategic plan provides an opportunity to work with Council, the City, stakeholders and residents to determine what library services and service levels address community needs within the context of the City's priorities and fiscal environment.

**RECOMMENDATION 9 – THAT THE CITY MANAGER INCLUDE LIBRARIES IN THE CURRENT STUDY OF PUBLIC SPACES TO ASSESS OPPORTUNITIES FOR SHARED FACILITIES WITH OTHER PROVIDERS OF PUBLIC SPACES.**

Libraries, schools, community centres, and service agencies (e.g. youth centres, YMCA, newcomer associations, etc.) all attempt to provide a range of services in response to community needs. Given the similarities in some business functions across such entities, there is merit in examining whether there are further opportunities for joint use facilities or the grouping of some of the services being provided by these separate entities for cost saving and efficiency purposes. The Social Development, Finance and Administration (SFDA) Division completed some of this work as part of another assignment.

It is recommended that the City work cooperatively with TPL to expand the scope of the original research to include library branches, and better examine the feasibility of an integrated service delivery model that could potentially facilitate efficiencies and cost savings.

**RECOMMENDATION 10 – THAT THE TPL BOARD ISOLATE PROGRAMS AS A DISTINCT SERVICE IN THE TPL BUDGET TO CLEARLY DESCRIBE THE PROGRAMS OFFERED, THE FTES USED TO ADMINISTER PROGRAMS, COSTS ASSOCIATED WITH USE OF THESE FTES AND ANY OTHER COSTS, AND ASSOCIATED PERFORMANCE MEASURES**

The Libraries Act provides that a library board shall seek to provide a comprehensive and efficient public library service that reflects the community's unique needs, may operate special services in connection with a library as it considers necessary, and shall not charge for access to the library or for use of circulation materials.

While TPL's public consultation on the core service review indicated that programs related to reading, learning, and literacy are very important to the general public, TPL's broad interpretation of this categorization of programs has resulted in development of some programs that are only peripherally related to literacy and library purposes, such as programs for health and wellness, business and finance, use of software, career planning, and games and hobbies. In addition, the 27,862 programs offered and their associated staff time and costs to

develop and deliver them are not specifically identified in TPL's budget submission to the City. Since programs are a major service, these should be specifically identified with their associated costs and revenues, if any, along with justification, service usage data, and performance measures.

Decisions about service provision in some areas are decentralized to the individual branch level and there is a significant degree of discretion to tailor services to local neighbourhood needs. A comprehensive set of criteria on which to base service provision decisions and linking these to a specific service plan and budget, would result in pro-active allocation of resources.

The organization's current Strategic Plan document may be seen to potentially foster further expansion of service delivery; encourage further expansion of roles and responsibilities and services rather than be useful as a mechanism which focuses on specific, defined aspects of TPL's programs. It would be helpful for branches to develop specific criteria used to determine the type and quantity of programs offered.

**RECOMMENDATION 11 – THAT TPL INSTALL AUTOMATED SORTERS AT THE CONSOLIDATED DELIVERY HUB AT ELLESMERE IN ORDER TO REALIZE BUSINESS PROCESS EFFICIENCIES**

There is an opportunity to improve efficiencies at the hub operations through automation. DPRA recommends the purchase and implementation of an automated sorter which would allow the sorting machine to read and sort books and then directly deposit them into their appropriate branch bins.

A single sorter, with the capacity to accommodate the Library's daily volume (47,250 items to be sorted per day) provides greater efficiency and capability to handle fluctuations or increases in volume.

Automation would also reduce the staffing requirement at hub operations, with conservative annual savings of \$345,000 in reduced staffing costs. It is suggested that TPL staff monitor the FTE requirements with the introduction of the automated sorter and where/as appropriate reducing staffing complement. The annual maintenance cost of the sorter is estimated at \$120,000 for a net savings of \$225,000.

**RECOMMENDATION 12 – THAT THE TPL BOARD CONTINUE TO IMPLEMENT COST SAVINGS AND EFFICIENCIES AT THE TORONTO REFERENCE LIBRARY**

The Toronto Reference Library (TRL) was not part of the current study. However, many of the processes reviewed for this assignment that are relevant to circulation library branches can and have been applied to the Toronto Reference Library. Significant department and service consolidations within TRL in the last two years have achieved efficiencies and cost savings. The Library's current continuous improvement findings will be applied to TRL activities achieving a cumulative 10% reduction in staffing costs, including the deletion of one management position. Given its size and breadth of service, ongoing continuous improvement initiatives may identify further efficiencies and cost-saving opportunities.

### **RECOMMENDATION 13 – THAT, WHERE POSSIBLE, TPL CONSIDER COST RECOVERY FOR SOME OF ITS SERVICES AND PROGRAMS**

As reported through the public consultation report from the City's Core Service Review, a majority of Toronto residents feel that existing levels of taxes are adequate to operate libraries and there is no need for additional costs for services. However, the language in the legislation does allow for charging for certain services. The library should carefully consider areas where further cost recovery is possible. Further, there is precedent in other jurisdictions for cost recovery. Fees could be charged for selected adult programs, holds that are not picked up, and inter-branch delivery. A range of other options should be explored and confirmed with a legal opinion.

### **RECOMMENDATION 14 – THAT TPL STAFF DEVELOP MORE SPECIFIC DATA TO ENHANCE PLANNING, BUDGETING AND SERVICE DELIVERY IMPROVEMENTS**

While TPL should be commended for its proactive approach and sound judgement in supporting efficiency improvements to its processes, the SES completed by the consulting team revealed that there are some gaps in the data being collected / made available. This data, if it were available, would assist with the identification of future service delivery improvements and budgeting. It is recommended that the following data be collected and made available over the course of the next few years: data related to users; more detailed information on the various programs (where / when delivered and how many participants per program); cost of service and program delivery by branch and type; long-term lease costs as distinct from short term room rentals; and number of customers/patrons (by branch) per hour per day.

### **RECOMMENDATION 15 - MINOR PROCESS EFFICIENCY RECOMMENDATIONS**

The following recommendations (see body of report for further details) offer TPL some individual, smaller-scale enhancements, and efficiency options. However, the cumulative cost saving impact of their implementation may contribute efficiencies and some cost savings.

- A. Standard Truck Size;
- B. Enhance Online Functionality;
- C. Physical Space and Layout Suggestions;
- D. Synchronizing of Holds Picking and Reshelving Processes;
- E. Home Delivery;
- F. Shared Services; and,
- G. Reduction in Internal Mail.

If all of the DPRA consulting team recommendations (i.e. recommendations 5 through 15) are fully implemented, the conservative net savings are estimated to be approximately \$8,602,775 to \$8,820,775. However, there are some recommendations from which savings have yet to be determined, and would be in addition to these estimates. It should also be noted that the savings for each recommendation have been calculated independently. If all recommendations are implemented at once, there may be some duplication in the savings calculations (i.e. branch consolidation and reduction in open hours).

The net savings are independent of the budget savings submitted by TPL to the Toronto Public Library Board. It also takes into consideration the full savings related to any reduction in open hours, since at the time of the SES report; the TPLB had not approved any savings related to reductions in open hours.

The following are the estimated costs and potential savings of the DPRA consulting team's recommendations (i.e. recommendations 5 through 15) for 2012 and beyond.

<b>Summary of Costs and Savings 2012</b>	
<b>Cost:</b>	<i>\$1,810,000 capital</i>
<b>Savings:</b>	<i>\$6,795,775 annual operating</i>

And in addition for future years:

<b>Summary of Costs and Savings beyond 2012</b>	
<b>Cost:</b>	<i>\$ 120,000 annual operating</i>
<b>Savings:</b>	<i>\$3,737,000 – 4,075,000 annual operating</i>
<b>Net:</b>	<i><b>\$3,617,000 – 3,955,000</b></i>

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## **ACKNOWLEDGEMENT OF CONTRIBUTION**

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The Toronto Public Library Service Efficiency Study would not have been successfully completed without the extraordinary efforts, professional attitude, and energy of many individuals (too numerous to list) within the City Manager's Office, Toronto Public Library, and the City's Geospatial Competency Centre over the two months of this undertaking. However, particularly essential contributions were made by the working group comprised of staff from both the City Manager's Office and the Toronto Public Library.

Other Toronto Public Library representatives provided valuable information and assistance related to data collection and facility tours.

While the efforts behind this project were collaborative, the analysis, conclusions, views, and recommendations are those of the consulting team in its role as independent management consultant and do not purport to represent the views or positions of any other organization either internal to the City of Toronto, the Toronto Public Library, or external.



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## 1 - INTRODUCTION

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### 1.1 PURPOSE OF THE REPORT

The purpose of the Service Efficiency Study (SES) for the Toronto Public Library (TPL) is to support the City's efforts to ensure that services do not cost more than they should. By taking a closer look at the services offered, this SES will assist TPL and the City to identify a set of achievable actions to deliver maximum service efficiency savings in the shortest period of time. The Toronto Reference Library was not directly included in the detailed study. However, many of the recommended efficiencies from this assignment can be applied to the Toronto Reference Library. The North York Research and Reference Library was included in this assignment since it also functions as a district branch.

Funding for library services continues to be supported, for the most part, by municipal governments. Toronto is presently experiencing budgetary challenges, as expressed in the City Manager's report to Council dated March 8, 2011. The report indicated that the City should begin immediately to identify significant cost savings for the 2012 budget and future years. This applies equally to the TPL in order to support the City's priorities.

In order to facilitate this process, the City Manager undertook an SES for TPL. The SESs are part of the Toronto Service Review Program, which is intended to help the City Manager and Council identify which services the City should be providing, the level of funding required, as well as how these services should be funded.

The key steps to assess service efficiency as part of the SES included:

- Identifying and assessing costs and cost drivers of current practice;
- Reviewing and assessing services, activities and methods;
- Comparing against service providers in other jurisdictions using comparable and relevant best practices;
- Analysing and comparing service benchmarks and measures, and
- Assessing against other relevant information.

As outlined in the Statement of Work for this project, the specific goals for this assignment included:

- Identify areas of focus and the most appropriate methodologies which bear the greatest potential for cost savings and improved service delivery;
- Assess these areas against best practices in the industry as well as similar jurisdictions to explore service efficiencies, identify cost drivers of current practice;
- Identify and recommend both immediate and longer term opportunities for improved efficiency and cost savings

#### 1.1.1 FOCUS AREA OF STUDY

The scope of the study focused on four major service areas and their function in five representative locations. These areas included consolidation of services; technology strategic

planning; and the movement and shelving of books and other materials between the library and its borrowers and inter-library. As noted in the Statement of Work, the outcome of the study includes recommendations on a service model that is both efficient and effective but one which does not severely compromise service quality or TPL's ability to continue to support its mandate and mission. The recommendations developed as a result of this SES are intended to have an impact (direct and indirect) across all 98 locations that make-up the Toronto Public Library organization.

The consulting team of DPRA Canada Inc. and LeisurePlan International Inc. were selected in late July 2011 to assist the City with the study based on their response to the Request for Proposal issued in the same month.

The City Manager's Office (CMO) designated Project Manager, Library staff, and project Steering Committee established for Service Efficiency Study activities provided assistance in guiding the project.

The study consisted of the following tasks:

- Orientation meeting;
- Review of relevant studies and background information and legislation;
- Over twenty key informant interviews conducted during site visits with key TPL Executive, Management, branch, and hub operations staff;
- Four Focus groups with library staff conducted during site visits;
- Three Working sessions with TPL Executive staff to discuss study progress;
- Benchmarking against other jurisdictions and identification of best practices;
- Development of draft opportunities for improved efficiency and cost-savings;
- Working sessions to discuss recommended opportunities; and
- Documenting the study (final report).

This report documents both the study process and study results.

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## **1.2 STRUCTURE AND ORGANIZATION OF THE REPORT**

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The report consists of 6 Sections. Sections 1 – 2 consists of an introduction and review of project approach and methodology. Section 3 summarizes the background and context for the SES. Section 4 includes key findings related to evaluation and assessment of service efficiencies conducted by the consulting team. Section 5 examines the efficiency of services and includes relevant findings from the jurisdictional review. Section 6 presents a series of observations and recommendations based on the results of the analysis.

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## 2 –APPROACH AND METHODOLOGY

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The Toronto Public Library provides its services in four value streams:

- Administration;
- Library Facility Access;
- Library Collections Use; and,
- Programs and Outreach.

Each of these value streams serves a particular function with processes that may be related. It is important to properly describe and understand these functions and processes in order to conduct an accurate dynamic value assessment of the current service model. Understanding these functions and processes is also critical to the development of viable options and recommendations to streamline the efficiency of TPL service delivery and reduce costs. This section briefly outlines the consulting team's approach to the study and describes the key characteristics or guiding principles of the approach.

The following methods were employed to solicit data and information to guide this assignment:

- A review of City of Toronto and TPL documents – previous studies, policies, strategic plans, staff reports, organizational charts, service delivery models and manuals, reports to Council and Committees, etc.;
- A review of other relevant documents (i.e., reports and studies published by the Canadian Urban Libraries Council, GeoLib Program, and other organizations and academics);
- A review of best practices and lessons learned in library service provision in other Canadian and American jurisdictions similar to Toronto (Montreal, Ottawa, Mississauga, Calgary, Winnipeg, Edmonton, Halifax, Vancouver, New York, Boston, Philadelphia, Denver, Los Angeles and Knoxville);
- Interviews with internal (library employees) and external (librarians from other jurisdictions including Denver, Los Angeles, Knoxville and Boston) stakeholders;
- Site visits, Focus Group discussions, and interviews with staff at locations selected by library staff representative of a variety of operations; and,
- Examination of operational flow of the selected functions to identify opportunities for streamlining operations.

*Note: The discussion that follows is an interpretation by the consultants of what was read in the document review and heard in the interviews and focus groups. The information gathering task of the study is not intended to be a comprehensive record of all comments, nor is it to be used as a program audit, competency study, assessment of personnel or a performance measurement study. Any attempt to use this report in this way would be a misuse of the information and the intent of the study. The purpose of this task is to provide the Study Team with an understanding of the transformational focal points and operational flow of the organization. All information provided by respondents is treated as confidential and no specific comment is attributable to any one person.*

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## 2.1 STAKEHOLDER ENGAGEMENT

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The consulting team's approach to this assignment involved library staff in every step of the process. The consulting team's role was to develop and guide a process that was designed to facilitate the active engagement of key stakeholders who have an interest in the TPL within the City. The degree of engagement varied with the nature of the interest and the constraints of project resources. The role of those with an interest in the TPL was to provide insight and opinion into the current operational flow, the issues it faces, and the opportunities for streamlining operations.

The study approach engaged several different groups, each with an interest in the study. The groups engaged during the course of this study included:

- **City Steering Committee** – The City Manager established a Steering Committee (SC) to oversee all Service Efficiency Studies.
- **Study Group** – A Study Group consisting of representatives from the City Manager's Office and TPL to assist with information gathering and act as a "sounding board" for preliminary findings, options, and recommendations regarding the review.
- **TPL Staff** – TPL staff (management and non-management) were engaged in the study through focus groups and interviews to provide a wide range of advice and comments. Specifically, key personnel provided comments with respect to:
  - a. Operational flows, concerns, and opportunities;
  - b. Orientations on the operations and programs of the individual branches;
  - c. Identification of service efficiencies and/or areas that require attention;
  - d. Business processes; and,
  - e. Advice on ways to reduce costs.
- **Other Stakeholders** – DPRA reviewed the input from other stakeholders collected from other assignments. Specifically, the results of the public consultation completed by the City as part of the Core Services Review; and, output from engagement activities from previous TPL Strategic Planning Processes were considered. Both sources identify stakeholder priorities, service expectations, and desires for TPL.

This report summarizes the involvement and contribution of each group in the study.

### 2.1.1 APPROACH TO THE INTERVIEWS

Interviews with the senior TPL staff were completed by the consulting team staff from August 15<sup>th</sup> to August 17<sup>th</sup>, 2011 during site visits (for details see Table 1). Interviews with external agencies (i.e. Librarians from other jurisdictions) were conducted on August 31, 2011. Interviews were semi-structured, open-ended, in-person and/or over the telephone and lasted between 30 and 180 minutes.

The purpose of the interviews was to explore:

- Roles and duties of the staff responsible for provision of services;
- Technological aspects of service provision;
- Functional relationship within and across the branches;
- Challenges with respect to delivery of job functions;
- Solutions to the perceived challenges;
- Information flow;
- Tendencies (demographics, value streams, demand for programs and services, etc.);
- Organization flow; and,
- Suggested changes to process operation of TPL.

### 2.1.2 APPROACH TO THE FOCUS GROUPS

A focus group involves bringing a small group of people together for a free flowing discussion around topics that are defined by a researcher. Participants are asked to explore an issue, sometimes loosely, sometimes through responding to more focussed questions. The advantage of focus group research, in one respect, is similar to the strengths of any qualitative data collection tool – it allows you to generate very rich, detailed information that is set in a particular context.

For this assignment, focus groups were held with the TPL staff during site visits from August 15<sup>th</sup> to August 17<sup>th</sup> (for details see Table 1). During each session, the DPRA team solicited staff feedback for specific TPL process and operations questions.

The objectives for the focus group sessions with TPL staff were:

- To engage TPL staff in the process and obtain their direct and relevant perspectives;
- To define key TPL activities and business processes (i.e. what is it that the staff do on a day-to-day basis and how they do it); and,
- To define issues/challenges (internal and external) in relation to TPL operational flow, activities, programs and/or services.

**Table 1: Details of the TPL Branch Visits Conducted by the Consulting Team**

DATE	LOCATION	ADDRESS
<b>Monday, August 15</b>	Ellesmere Delivery Hub	1076 Ellesmere Road
	Cedarbrae Library	545 Markham Road
<b>Tuesday, August 16</b>	Eatonville Library	430 Burnhamthorpe Road
	Albion Library	1515 Albion Road
	North York Central Library	5120 Yonge Street
<b>Wednesday, August 17</b>	St. James Town Library	495 Sherbourne Street

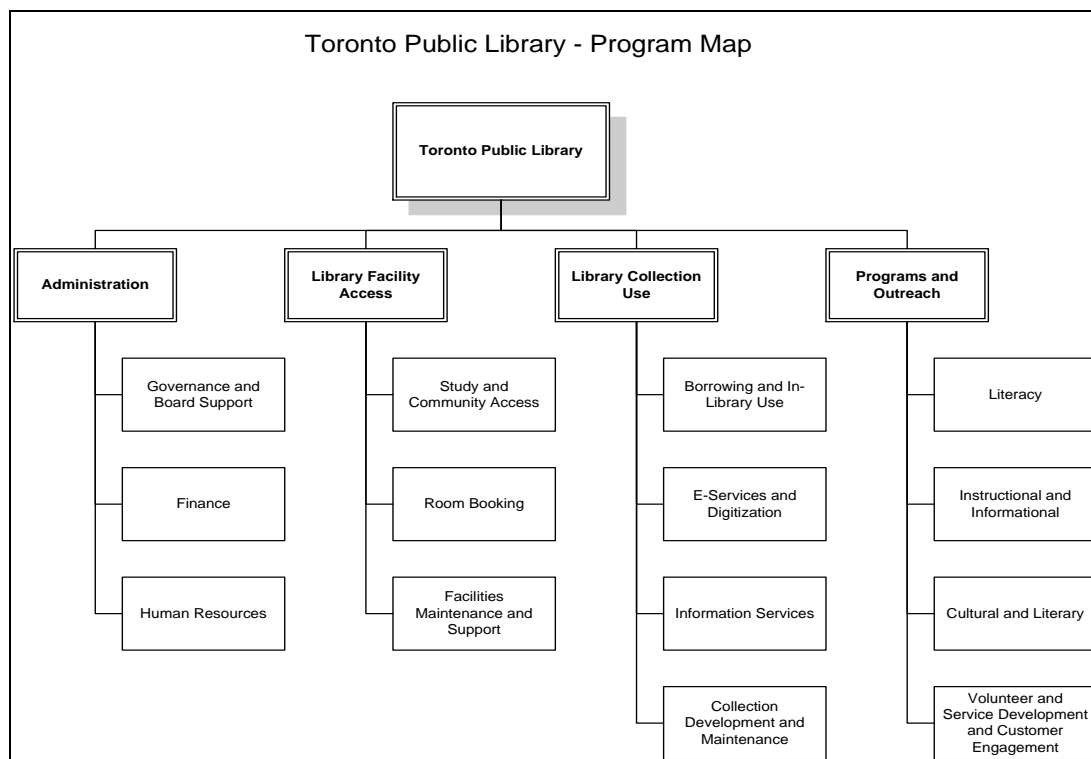
### 3 - BACKGROUND AND CONTEXT

The following section presents an overview of the findings resulting from a high-level scan of the documents received from the City and from TPL. The background and context assisted the DPRA team in developing a high level understanding of the Toronto Public Library (TPL) operational environment in general and service efficiency initiatives carried out to date as well as future areas of service delivery.

#### 3.1 OVERVIEW OF THE TORONTO PUBLIC LIBRARY

Under the governance of the Toronto Public Library Board, TPL is supported by 1,824 staff that provides services through four service areas: Administration; Library Facility Access; Library Collections Use; and Programs and Outreach. Figure 1 (below) illustrates the program mapping for TPL.

**Figure 1: Program Mapping**



#### 3.2 BRANCHES, CIRCULATION AND DISTRIBUTION

The TPL is comprised of 98 libraries made up of 79 neighbourhood branches, 18 district branches<sup>3</sup> and the Toronto Reference Library branch<sup>4</sup>. Figure 2 illustrates the location of the 97

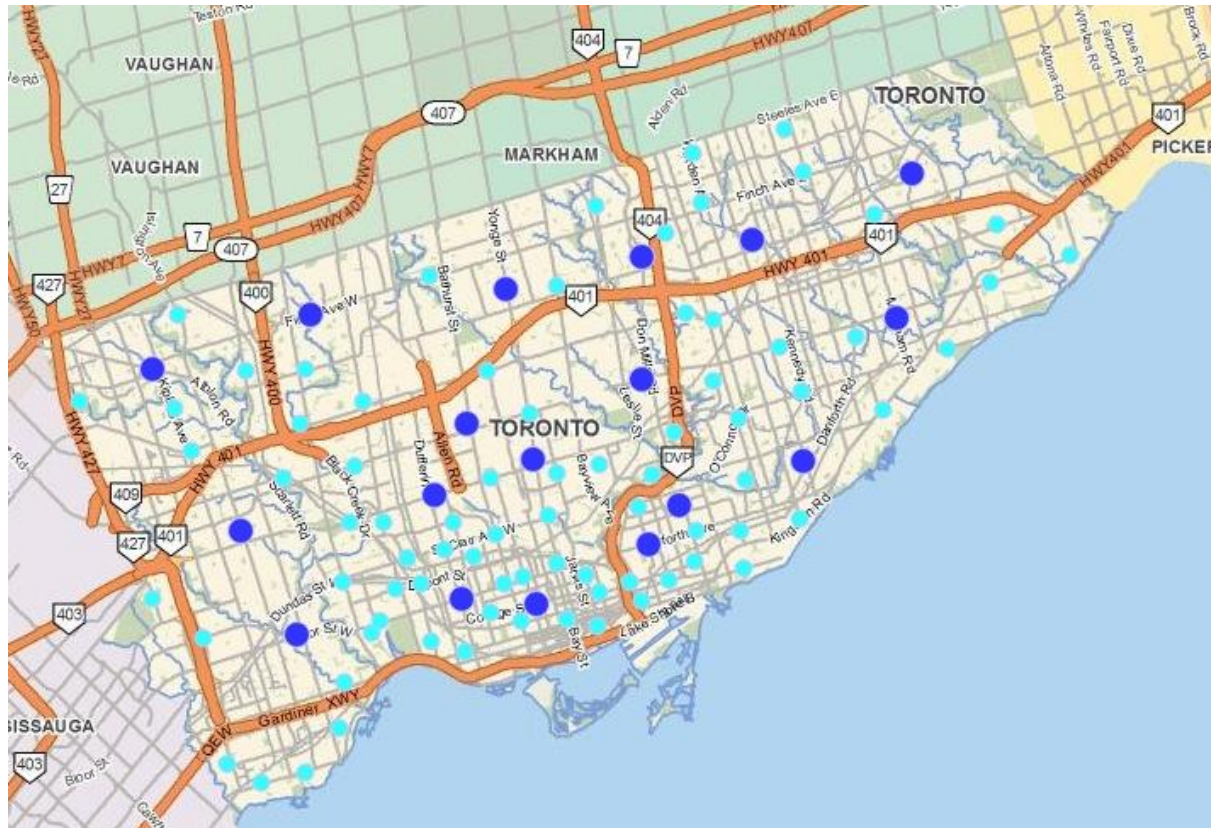
<sup>3</sup> Once of which is the North York Research and Reference branch

<sup>4</sup> According to the TPL website, as of September 15, 2011, the Urban Affairs Library will be relocating to the Toronto Reference Library.



branches across Toronto. The larger dark blue dots represent the 18 district branches; while the smaller, lighter blue dots represent the neighbourhood branches. Note the Toronto Reference Library is not shown on the map below as it was out of scope for the assignment.

**Figure 2: TPL Branch Locations**



The total circulation for TPL was 32,324,416 in 2010. However, circulation at each branch varies.

The circulation by format in 2010 was as follows:

Circulation Type	Totals for 2010
Print	19,433,800 or 60.1%
eTitles	257,715 or 0.8%
Audiobooks	2,313,629 or 7.2%
DVD	7,520,057 or 23.3%
CD	1,398,577 or 4.3%
Other	1,400,638 or 4.3%
Total	32,324,416

### 3.3 KEY TRENDS

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Library staff have trended library use over several years and have determined that library service demand increases with a downturn in the economy and walk-in library use increases with increased availability of e-services. The latter could be due to increased awareness of in-branch library services by people who use the e-services at home and the increasing availability of on-line access in the branches to those who do not have easy access to home computers.

In addition, TPL branch usage has been impacted by:

- The economic downturn in Toronto has been a strong driver for increased use; the trend of increased usage during a recession has been experienced by libraries worldwide;
- Demographic trends in Toronto including income polarization and immigration;
- Access to the Internet and technology for residents for whom the public library is the main access or those who use library computers to augment access at home, school or work;
- The re-opening of several renovated branches with new features to address resident needs including teen rooms, more computer terminals, more study areas, daily news areas, etc. creating a vital community hub;
- An increase in the availability of online resources and electronic collections;
- Increased awareness of library services through media promotion of the library to targeted audiences- including providing information about literacy and cultural programs; and,
- A Library Card Registration campaign resulting in 4.4% increase from 2009 - 2010 in new registrations for a registration rate of 53.2% of Toronto's population.

For 2010, overall circulation was highest on Tuesday and Saturday while per-hour circulation was highest on Sunday followed by Saturday and Monday. The busiest months are July, March, August and October (descending) with February, December, September, and June being the least busy months (ascending order).

Circulation has increased by 6.3% from 2006-2010 with corresponding visits<sup>5</sup> increasing by 7.2%. The library has seen circulation of e-titles, (including e-books) increase by 220% between 2008 – 2010; although these continue to be a very small percentage of the total circulation inventory.

In 2010, 27,862 programs were delivered through TPL branches with 750,220 attendees. Approximately 21,500 of the 27,862 programs were delivered directly by TPL, with the balance delivered by TPL partners. During the period of 2006 – 2010 the number of programs offered increased by 3.0% while attendance increased by 5.5%. It should be noted that during 2009 – 2010 there were also significant increases in the number of programs for seniors (44%) as a result of a strategic focus by the library which is to enhance older adults' quality of life and

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<sup>5</sup> This measure is estimated by counting the number of persons (excluding library staff) who enter -- or, if preferred, leave the library during a typical week. A typical week is one during which the library is open its regular hours (no holidays) and which is neither extraordinarily busy nor slow.



access to lifelong learning. The population of seniors is growing more quickly in the City of Toronto relative to other age groups.

### 3.3.1 LIBRARY SERVICE STANDARDS

The Toronto Public Library Board establishes service standards for TPL. The following observations are provided based on these standards as well as other accepted international standards and best practices that TPL compares itself against.<sup>6</sup>

- The service standard set by the Board of 1 library per 25,000 (min) population with 0.1 open hours per capita is consistently achieved and reflects public demand for open hours as demonstrated in a 2.6 % increase in library visits (2008-2010);
- Toronto Public Library's Collection items per capita includes the extensive research and archival collections of the Toronto Reference Library which are unique among Canadian and American comparators. As a result the standard for TPL is 4.04 which exceeds the average of 2.79 items per capita for Canadian libraries;
- Facilities maintenance and support standards which fall within Municipal By-law and Workplace Health & Safety are not being achieved and TPL is currently experiencing a \$50.0 million state-of-good repair backlog;
- TPL's Circulation per capita of 11.35 comes close to the benchmark of 11.63;
- TPL's current service level of 0.31 new items added per capita is below CULC's 0.35 new items added per capita. However, the collection size is already well above standard;
- TPL's current in library use of collections is 2.89 uses per capita which exceeds the Canadian Urban Libraries Council's (CULC)<sup>7</sup> benchmark of 2.59. In library Use is the use of library materials by customers in the library. The level of in library use reflects the large research and reference collections and archival holdings of the Toronto Reference Library;
- TPL's virtual services are well used with 8.49 virtual visits per capita which is higher than the 5.98 CULC average. This reflects TPL's investment in its online presence, website, integrated catalogue and digitization program to expand access efficiently and meet demand;
- There are 60.70 workstations per 100,000 population measured against the international standard 49.44 workstations per 100,000 population<sup>8</sup> TPL's current service level of 2.2 workstation uses per capita<sup>9</sup> exceeds the benchmark of 1.44 workstation uses per capita set by the CULC. Access to workstations provides efficient access to library collections, increased access to electronic library services and other information sources;
- Through the provision of online services and self-service options and user education sessions, TPL has increased the efficiency of reference service delivery such that TPL's reference questions per capita at 0.88 reference questions per capita is lower than the average of 1.02<sup>10</sup> per capita for other Canadian cities; and
- Organizational employee effectiveness standards are not being consistently achieved with a ranking of Level 3. TPL has a staff training program to achieve strategic objectives.

<sup>6</sup> KPMG Core Service Review Project City of Toronto July 7, 2011.

<sup>8</sup> KPMG Core Service Review Project City of Toronto July 7, 2011.

<sup>9</sup> Average number of workstation users on a typical day (identified by head counts and reservations/sign in) divided by population

<sup>10</sup> KPMG Core Service Review Project City of Toronto July 7, 2011.

Spending on training equals 1.5% of salaries. This amount is comparable to other public sector organizations across Canada at municipal, provincial/territorial and federal levels which range from 1% to 3%.

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## 4 – PROCESS EVALUATION AND ASSESSMENT

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The following section contains an overview of key issues, strengths, observations, and the consulting team's assessment of the collected information arising from interviews, focus groups, site visits, and background research as they pertain to the specific processes to be examined and outlined in the Terms of Reference. The areas examined included:

- Role and Value of Technology;
- Borrowing Books & Other Materials;
- Returning Books & Other Materials;
- Shelving Returned Books & Other Materials; and,
- Inter-branch Delivery.

### 4.1 ROLE AND VALUE OF TECHNOLOGY

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A robust suite of technology services plays an important role in anchoring the delivery of services in urban libraries. In today's changing world, the internet and other technologies have matured into principal sources of information.

The Toronto Public Library Strategic Plan 2008 – 2011 states that “access to technology and digital information is essential to full participation in Canada's social, economic and community life”<sup>11</sup>. The Strategic Plan goes on to add that technology gives service providers new opportunities to deliver services to the communities they serve in more efficient and personal ways.

The TPL's Strategic Plan has, as one of its five foci, the expansion of access to technology and online services. The goals are to<sup>12</sup>:

- Create an outstanding virtual library;
- Ensure access to technology for all; and,
- Build virtual content.

In order to achieve these goals, the Strategic Plan calls for the TPL to<sup>13</sup>:

- Expand access to technology in library branches;
- Offer more content online including downloadable books, videos, and music;
- Make available library content from the website through the digitization of special collections, podcasts of library events, and user-generated content;
- Improve customer service through in-branch and online self-service technologies, including registration, fine payment, and self-serve checkout; and,
- Use technology to engage communities in library services and programs.

<sup>11</sup> Toronto Public Library (2008). Our Shared Stories: Writing the Future of Toronto's Library. Strategic Plan 2008 - 2011

<sup>12</sup> Ibid

<sup>13</sup> Ibid

The decision to steer the TPL in this direction over the recent past is, in part, the response to wide ranging consultations carried out during the development of the TPL's Strategic Plan. One of the most common ideas "heard" during the consultations was the need to maintain strong multi-media and electronic collections and to build and promote the virtual library with in-library internet access.

In 2010, TPL multi-media circulation comprised approximately 35% of the library's total circulation of 32,324,416. Of these, DVDs formed the bulk of the circulation items at 7,520,057 (23.3%). Given the trends in the uptake of e-readers among the public, TPL expects circulation of e-titles to grow as more users adopt e-readers. A report released in December 2010 summarized the following:

- Virtual visits increased from 23,393,920 to 27,003,433 up 15.4% between 2009 - 2010;
- Wireless internet sessions increased 64.7% from 677,364 to 1,114,697;
- Virtual Info Requests increased 106.7% from 33,413 to 69,063; and,
- The number of people using public workstations in branches decreased 2.2% from 6,130,523 to 5,993,062 (due to temporary closure of 3 district libraries for renovation in 2010). This temporary decline has been reversed in 2011.

Virtual services have been an area of interest for TPL; however, barriers to date have been the lack of availability of content to purchase, the fact that not all residents have computers in their homes and those that do, may not have adequate bandwidth, and there is inadequate bandwidth within TPL which ranges branch to branch from DSL to 100 MBs; a significant gap. The download speed is also influenced by customer use of the internet within the branch (i.e. not an IT problem with Symphony). In discussion with TPL's Director of IT, it has been noted that current budgets include funds for upgrading bandwidth through the transition to fiber and a bandwidth capacity of 1GB by the end of 2013. Notwithstanding the issues of content availability and access to computers and bandwidth in residents' homes, this will allow for greater transition to video streaming and virtual services – reducing operating costs for some traditional library collections and associated costs in the longer term, and increase access to customers.

The Toronto Public Library has invested in enhancing its online presence through the redesign of its website and the integrated catalogue in 2010. As a result, visits to the TPL website increased by 15.4% from 2009 to 2010. A key driver of this 15.4% increase is the introduction of full search and discovery capabilities into the main site which fully integrates the catalogue into a single search experience incorporating access to branch information, related services and programs.

There are numerous advantages over the long term for TPL to transition to a greater virtual library system. This could equate to significant savings. Therefore, it is recommended that TPL continue to enhance and increase its virtual library collection and video streaming capacity (i.e. DVDs, e-books, music, magazines, newspapers and periodicals) – based on availability and funding. This may ultimately over the long term facilitate the consolidation of some "physical"

branches and traditional library infrastructure – which has the greatest potential cost savings by reducing facility need and associated operating costs as well as staffing needs/costs as the general public obtain access to computer technology in their own environments. The impact of full implementation of the “virtual library” on the need for a system of physical locations, including the number of branches as well as the level of service provided at each has the potential for significant changes to the manner in which TPL service is delivered and the resources required to do so in the future. This will also reduce the number of holds, therefore reducing the workload and cost driver associated with the holds process – the holds process is discussed in more detail in a later section. Further, it will improve service to clients as they will not have to wait up to seven days for some items – it can be obtained in real time.

Further, TPL migrated to a new Integrated Library System in February 2008 to facilitate efficiencies related to its business process framed by the principles of Lean Six Sigma. The new integrated system along with the implementation of Radio Frequency Identification Technology (RFID – discussed in more detail in Section 4.1.1) will provide TPL the opportunity to expand customer self-service options.

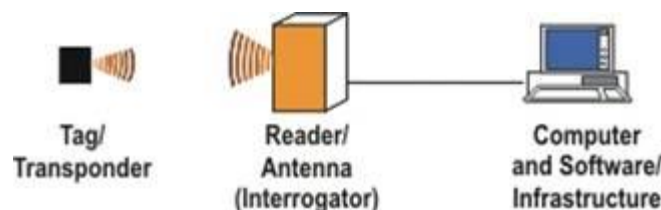
#### **4.1.1 RADIO FREQUENCY IDENTIFICATION TECHNOLOGY (RFID)**

Radio Frequency Identification Technology (RFID) is widely used across libraries world-wide and also in other sectors such as manufacturing, retail, pharmaceuticals and health care. RFID is a generic term that is used to describe a system that transmits the identity (in the form of a unique serial number) of an object wirelessly, using radio waves.

The RFID is like a barcode but is read with an electro-magnetic field rather than by a laser beam. RFID is an advanced technology compared to barcodes. The RFID tag does not have to be visible to be read; instead, it can be read even when it is embedded in an item, such as in the cardboard cover of a book or the packaging of a product. It can also carry a more complex message than a barcode, which is limited to an identification number.

A basic RFID system consists of three components:

- An antenna or coil
- A transceiver (with decoder)
- A transponder (RF tag) electronically programmed with unique information



- The antenna emits radio signals to activate the tag and to read and write data to it.
- The reader emits radio waves in ranges of anywhere from one inch to 100 feet or more, depending upon its power output and the radio frequency used. When an RFID tag passes through the electromagnetic zone, it detects the reader's activation signal.
- The reader decodes the data encoded in the tag's integrated circuit (silicon chip) and the data is passed to the host computer for processing<sup>14</sup>.

As presented in the following section, DPRA's review of other jurisdictions as well as the available technologies to support self-service noted that RFID is the most appropriate, accepted and used technology in libraries across North America. RFID allows for multiple books to be checked out at one time by a customer versus the traditional individual scan of bar code on each item by a staff person.

Details on RFID tags, readers and uses, and lessons learned from other jurisdictions are available in Appendix B.

## **4.2 BORROWING BOOKS & OTHER MATERIALS**

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### **4.2.1 RFID SELF SERVICE**

As presented in the previous section, the use of RFID reduces the amount of time required to perform circulation operations. The most significant time savings are attributable to the facts that information can be read from RFID tags much faster than from barcodes and that several items in a stack can be read at the same time.

The Toronto Public Library implemented RFID technology and self-serve check-out at two pilot locations: Malvern in 2004 and St. James Town in 2005. The initial pilot project was focused on developing experience with RFID technology for circulation and library materials security and developing experience with self-service with check-out. This implementation was limited in scope to include:

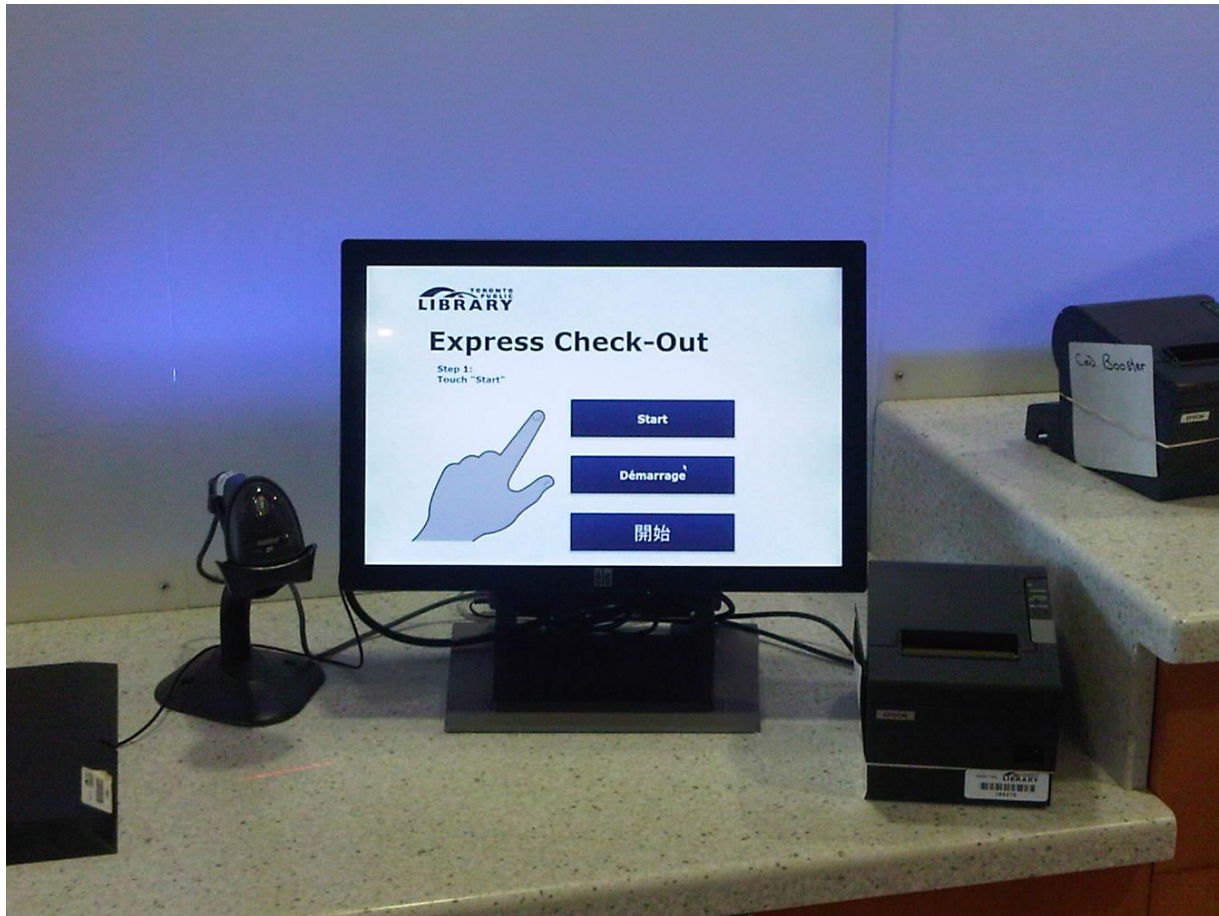
- Self-serve checkout for all formats;
- Library materials security for all formats;
- Self-serve interface available in English, French, Chinese, Tamil or Urdu;
- Interface to the Dynix Integrated Library System; and
- All materials that are checked-out by the public at the pilot locations including holds from other locations

Over 400,000 items have been tagged for Malvern and St. James Town<sup>15</sup>.

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<sup>14</sup> [http://www.aimglobal.org/technologies/RFID/what\\_is\\_rfid.asp](http://www.aimglobal.org/technologies/RFID/what_is_rfid.asp) viewed September 28 2011

<sup>15</sup> Toronto RFID Steering Committee Document, January 26, 2007



Picture of express Check-out terminal from Cedarbrae Branch, TPL

Feedback and analysis from Malvern and St. James Pilot include:

- 73% of all check-out transactions are conducted by customers
- 97% of users reported they would use self-check-out again
- 50% required staff assistance when using the self-check-out. The following are reasons cited:
  - 30% were first time users
    - Better instructions and tip sheets are needed
  - 44% experienced equipment and/or software problems
    - Improvements in equipment, tag performance and resolution of ongoing software problems would eliminate these issues
  - 20% had fines which required staff intervention
    - Would need to implement a system similar to EFTPOS used by the Melbourne City Library which allows for self-serve payment of fees during check-out
  - 20% were borrowing multi-part items requiring staff assistance
    - Identify how to eliminate the need for staff assistance when performing multi-part item check-out

TPL worked at addressing these short-comings to enrich the full benefit of the RFID. The interface has been improved and customers are able to check out multi-part items without assistance. Online self service fine payment will be introduced in 2012. Currently more than 90% of TPL check-outs go through the RFID interface software.

Based on the success of the pilot, TPL began to incorporate RFID into branch renovation projects in 2006 and received one-time capital investment approval for \$6.6 million in 2008 from the City to install RFID in other branches – resulting in a total of 49 branches being equipped with RFID by the end of 2012 (via approved capital investments). In addition, based on circulation statistics and overall efficiencies, an additional 10 branches (i.e. above and beyond the 49) could support RFID self service.

The proposed additional 10 branches are noted in Table 2. It is estimated that 0.5 FTE's are saved based on efficiencies from RFID installation. In contrast, the cost of installing the RFID equipment in each of the 10 respective branches is \$33,569.

The overall return on investment would be a little over one year if the average cost of a PSA FTE is \$62,500 and the total dollar value of the recommended FTE savings is \$312,500. This is slightly less than the \$339,882 RFID cost. Upon realizing the full return on investment, the future savings resulting from fewer FTEs will reduce overall operating costs.

**Table 2: Additional Branches That Can Support RFID Self-Service**

	RFID Benefit / Recommended FTE Savings	Cost of RFID Full Implementation
Gerrard Ashdale	.5	\$33,569
Weston	.5	\$33,569
Wychwood	.5	\$33,569
Forest Hill	.5	\$37,761
Dawes Road	.5	\$33,569
Eglinton Square	.5	\$33,569
College Shaw	.5	\$33,569
Morningside	.5	\$33,569
Maryvale	.5	\$33,569
Port Union	.5	\$33,569
	<b>5.0</b>	<b>\$339,882</b>

DPRA supports TPL's recommended expansion of RFID for efficiencies and long term savings. With these additional 10 locations, the application of RFID at the branch level will be at its most efficient and further expansion to the remaining branches would not be cost effective as the investment in technology – readers/self-serve stations will not translate into cost savings associated with reduced staff time due to low circulation volumes at the remaining branches.

An important consideration in this regard is that, to date, TPL has reallocated the cost savings which have accrued through the implementation of this technology (in the order of 0.5 FTE per branch installation) to extending the open hours of specific branches in accordance with the



Board approved plan for open hours. Subsequent sections of this report assess the issue of branch operational/open hours and schedule (See Section 5), however it is recommended that the current policy/practice should be revised effective immediately and any FTE savings that result from the on-going implementation of RFID throughout the TPL system should be realized through budget reduction and should not be reinvested in general or specifically in expansion of hours of operation from 2012 forward.

#### **4.2.2 OTHER CHECK OUT CONSIDERATIONS**

In some of the older branches such as Albion, the physical space and the layout of the desks and counters inhibit efficiencies and result in more time required to complete processes. Immediate savings could be realized by adjusting the physical spaces (where and as appropriate) to reduce time required to complete business processes. Where and as appropriate means only make adjustment to the physical space if there is minimal/no cost. If it requires a moderate investment, the modification should not be made as the cost would be more than the saving, especially if one considers renovation timing for older branches.

Further, in terms of self service, these stations should be separated (where and as appropriate) from the main counter as it seemed to cause confusion for patrons – as was observed during the branch tours. This was also a lesson learned from other jurisdictions where close proximity of the self-service check out and the traditional check out desk increased uncertainty for users (e.g. Denver – See Appendix B), as well, the traditional checkout counter was shown to inhibit uptake on self-service since a staff member was available to check out their materials. However, in recognition of minimizing costs, TPL installs RFID combo check out stations on existing service desks at many branches. As well, staff can readily monitor several stations and intervene if customer assistance is needed and the customer does not have to move to another station.

Drop box locations in some branches also results in more time required to complete the check in processes as it is a greater distance from the counter than other locations. Again, where and as appropriate, consideration should be given to relocate internal and external drop boxes closer to the sorting rooms. In Albion, the box is located in a small room 75 metres from the sorting area, through the branch, and past the foyer. Relocations would require minor capital investments (where appropriate). We recognize this issue is considered when renovations are planned/completed (e.g. Cedarbrae).

#### **4.2.3 HOLDS PROCESS AND CHECK-OUTS**

In reviewing the various TPL processes, one of the more significant cost drivers is related to holds and inter-branch delivery (via hubs) of the holds to clients. TPL operates 98 branches, and while each branch contains a collection, the library system operates as one floating collection. This means a person can look up a title, and if it is not available at their local branch, it can be put on hold. Once on hold, TPL's IT operating system "Symphony", locates the item and generates a report at a different branch. Staff then print off the report and pull the item from its shelf and mark it for transit, sorting and delivery to the relevant branch and client. This holds process can take up to 7 days.

The holds process typically involves a number of steps including:

1. Identification/customer request for a hold
2. Report generation identifying the hold for a branch
3. Staff pulling the material from the stacks
4. Branch staff printing the wrapper
5. writing the expiry date by hand on the wrapper
6. wrapping the item with a rubber band
7. placing in a bin for pick-up
8. material pick-up and delivery to sorting hub
9. material off-loaded and material sorted by branch
10. sorted material is loaded into truck and delivered to branch
11. branch staff check in material and load it on a trolley
12. staff take the trolley and place "holds" items on special shelves marked "Holds"
13. email or telephone notification to customer that requested material is available for pick up
14. If a customer does not collect the item put on hold, then the item is returned to the shelf (at its "home" branch, i.e. reverse the above noted process). Similarly, when the customer returns materials after use, the reverse process also invoked.



*Picture of Specially Designated Holds Stack in Library Branch*

Customers can have a maximum of 60 holds at any one time. Over 80% of those customers with holds have fewer than ten at a time. TPL does not charge customer to place an item on hold, in accordance with the Public Libraries Act. If an item is not picked up in 7 days, then it is removed from the holds shelf and cancelled on the customer's account. Given the fact that placing items on hold and thereafter reshelving them is a labour intensive process, it would be advisable to reduce the number of items that an individual may place on hold. This would mean that fewer items are transported between branches, less handling and sorting which would in turn reduce unit costs. Further, there is precedent (i.e. Mississauga and Richmond Hill Public Libraries respectively) to charge a fee to customers who do not pick up hold items within the 7 day time limit.

TPL staff noted that through its holds efficiency work, charging a fine for holds not picked up was investigated. A number of pre-requisites were identified and are planned for implementation including a more robust notification system; a customization for the Library's software to automatically charge a 'not picked up' fine to customers' borrower records; and changes to the website and circulation system to improve holds processing and delivery. Once these pre-requisites are implemented in 2012, staff is reporting to the Library Board on the feasibility of a fine for holds not picked up.

The holds process as it currently operates could be augmented to be more efficient and effective. Upon printing the holds report, staff picks the items off the shelf, then fills in a slip by hand and wraps it around the book with an elastic. This process can take time, slips can be lost and hand writing can be illegible, hence resulting in errors. Instead of Symphony generating a printout report, it is recommended that it print out labels. Then as the staff person picks the items off the shelf, the labels can be applied directly to the hold item at the time of picking. Labels eliminate errors associated with lost slips and illegible hand writing. In addition, check in stations should be equipped with similar processes so that when a book is returned, the system would recognize if there is a hold on it and print a label. This item would then more quickly be sorted and placed in the bins for delivery to the hub. TPL has been examining such options called "8-up" and "1-up". In discussion with IT, they have confirmed the system capacity to implement such an efficiency (based on recent upgrades). TPL has a planned pilot for the 8-up and DPRA supports such action.

#### **4.3 RETURNING BOOKS & OTHER MATERIALS – AUTOMATED SORTERS**

Circulation material that is returned to the library goes through a series of steps before either ending up on the shelf, in transit to another branch or being placed on hold for a customer to collect. A typical material return (either dropped off by a customer at a branch, in person or delivered by staff) takes between 1 to 7 days (including delivery) to complete its cycle.

Once the material has been received, the next step is sorting. This is an ongoing process for TPL. Upon receipt, the staff member will scan the item and read the screen to determine which route to direct the item. The sorting process varies and depending on the number of steps could take up to 1 hour to complete.

To improve the manual, labour intensive sorting process, automated sorters (which utilize RFID technology) can be installed to reduce the time requirements as well as reduce staffing needs. An automated check-in and sorting system means that customers return their library materials through an automated material drop located in the branch. The Automated Materials Handling System checks in the material and sorts it via a conveyor belt system, which separates materials by destination both within and outside of the branch<sup>16</sup>. Benefits to the customer include no waiting in line to return library materials, faster filling of holds and the faster return of library materials to the shelves. Benefits to staff include reduced materials handling and increased branch efficiency.



*Picture of Self Service Book Return Sorter – Cedarbrae Branch TPL*

<sup>16</sup> That is, it was a “hold” item which now must be returned from whence it came; or, it has been put on hold by someone else and must be shipped to a different branch.





*Picture of Automated Sorting machine at Cedarbrae Branch TPL (Sorting Room)*

#### **4.3.1 CEDARBRAE BRANCH SORTER PILOT PROJECT**

The Toronto Cedarbrae Branch was selected for a pilot project using RFID automated check-in and materials handling system. The June 2011 document evaluating the automated sorting system produced the following findings:

- The sorter has the capacity to handle the busyness at Cedarbrae and other busy TPL branches including North York central Library (NYCL), Fairview, Agincourt and Richview;
- For TPL's busiest branches, staff savings of approximately 2.5-4.5 FTE can be realized where a sorter is installed;
- Materials handling is dramatically reduced where a sorter is installed, creating a healthier workplace;
- The sorter standardizes the check-in workflow because processes are mechanized; and
- Customer service enhancements resulting from the sorter include: accurate check-in, no backlogs and customer receipts for returns.

DPRA has reviewed and supports TPL's direction to continue to install automated sorters in other branches including NYCL (\$380,000), Richview (\$310,000), Agincourt (\$310,000) and Fairview (\$290,000) – with returns of investment of 1 to 2 years each. The anticipated FTE savings for each installation are: Cedarbrae = 2.5 @ \$70,000/year; NYCL = 3 @ \$70,000/year; Richview = 3 @ \$70,000/year; Agincourt = 3 @ \$70,000/year and Fairview = 4.5 @ \$70,000/year. Once the return on investment is fully appreciated, the annual savings (less maintenance costs) derived through the implementation of the automated sorters at these three branches will be \$740,000. As noted in the self-service discussion, these savings realized by TPL should not be re-invested to increase operating hours. Rather, the savings should be used to reduce the existing operating costs/budget.

Presuming that similar successes and efficiencies observed at Cedarbrae are also realized at North York, Richview, Agincourt and Fairview, the DPRA consulting team supports consideration of future investments in sorting automation at several other busy locations with adequate space for a sorter installation and based on circulation statistics continuing as per current trends. These short term investments will result in further long term savings and support greater expansion of a virtual library system. The use of in branch sorters would also need to be coordinated with sorters if installed at the delivery hub.

Other Information regarding check-out processes and the use of automated sorters is located in Appendix C – which includes findings from other jurisdictions and the consulting team’s research.

## **4.4 SHELVING RETURNED BOOKS & OTHER MATERIALS**

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### **4.4.1 SYNCHRONIZING OF HOLDS PICKING AND RESHELVING PROCESSES**

Based on the review of staff processes involved with the location and selection of hold items on the shelves and the reshelving of returned items, the DPRA team suggests examining the feasibility of synchronizing and/or refining the processes for pulling holds off the shelf with the reshelving of materials. This would mean staff are only doing the route through the branch once.

In contrast, TPL staff have investigated the feasibility of linking the processes for pulling holds off the shelf with the reshelving of materials. From TPL's perspective, this single pass through the library could in fact delay the filling of holds and would require synchronization with delivery schedules and holds pick list generation and it would not be advisable to implement.

The TPL report substantiating the investigation by TPL staff noted above was not provided to DPRA during this study.

### **4.4.2 HIGH SPEED INVENTORY**

A unique advantage of RFID systems is their ability to scan books on the shelves without tipping them out or removing them. A hand-held inventory reader can be moved rapidly across a shelf of books to read all of the unique identification information. Using wireless technology, it is possible not only to update the inventory, but also to identify items which are out of proper order.

The Denver Public Library (DPL) noted that it is now possible for the small branches to do a full inventory scan within a few hours and for the first time the central library is performing a full inventory audit. For DPL the ability to scan books on the shelves so rapidly and effectively has proven to be one of the most critical advances provided by RFID.

TPL is currently testing wands. The DPRA consulting team encourages TPL to further investigate the application of the technology in place in this manner to improve the efficiency of this

function and associated staff activities throughout all branches with RFID technology in place or planned to be implemented in the immediate short term future.

#### **4.5 INTER-BRANCH DELIVERY**

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The current procedures and practices that support the holds process and the movement of items from branch to branch offer opportunities to improve the efficiency associated with a number of steps and to realize cost savings through a number of initiatives.

##### **4.5.1 MERGING OF THE TWO HUBS**

There are currently two hubs that support inter-branch deliveries. The Front Street hub is a smaller operation and supports south branches, while the Ellesmere hub (a former Scarborough library branch) supports the east, north and west branches. DPRA supports the work by TPL aimed at merging the hubs into one operation located at the Ellesmere facility. This will increase efficiencies associated with consolidating the processes and resources in a single location. Being in one location allows for greater quality assurance and quality control, and ability to monitor and adjust processes and efficiencies.

Delivery routes are examined and adjusted on a regular basis for efficiencies by the facilities service coordinator. It would be advantageous to review the current routes and delivery schedules as recommendations discussed in the subsequent sections associated with standardized fleet equipment and installation of sorters at the hub are implemented. These improvements may result in efficiencies associated with travel routes, frequency of pickup/deliveries as well as capacity/trip.

##### **4.5.2 TRUCK CAPACITY**

Currently there are two sizes of trucks used for the delivery routes between the hubs to all library branches, 16 and 18 foot trucks. To achieve efficiencies and to ensure that loading does not exceed MOT regulations, TPL is standardizing on 18 foot trucks. TPL has been working with Fleet Services to work towards standardization on 18 foot trucks. It is the consulting team's understanding that as the trucks are replaced as part of the refresh cycle Fleet Services is acquiring the necessary 18 foot vehicles for the Library.

##### **4.5.3 AUTOMATION AND INSTALLATION OF SORTERS AT MERGED HUB**

The delivery hub operations include 34.6 FTEs. A typical shift includes 12 sorters, 12 drivers and two lead hands. It is important to note that drivers and sorters are interchangeable which is a service efficiency. The entire operation is manual – from loading and unloading trucks, to staging, to sorting. While the processes are manual, they are efficiently completed.



*Picture of Ellesmere Hub, TPL – shows manual sorting stations and bay doors 1, 2 and 3*

However, there is an opportunity to improve efficiencies at the hub operations through automation. DPRA recommends the purchase and implementation of an automated sorter which would read and sort materials directly into bins for the branches. A single sorter, with the capacity to accommodate the Library's daily volume (47,250 items to be sorted per day) provides greater efficiency and capability to handle fluctuations or increases in volume.

This would also reduce the staffing allocations required at the hub operations, with conservative annual savings of \$345,000 in reduced staffing costs. The annual maintenance cost of the sorter is estimated at \$120,000, for a net savings of \$225,000.





*Picture of Ellesmere Hub, TPL – shows manual sorting stations and shows bay door 3 and 4s*

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## 5 – EFFICIENCY OF SERVICES

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### 5.1 TORONTO PUBLIC LIBRARY OBLIGATIONS AND EVOLUTION

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The Toronto Public Library is governed by the Library Board, established under the City of Toronto Act and deemed established under the Public Libraries Act, whose mandate is to “provide a comprehensive and efficient library service that reflects the community’s needs”.

The legislation indicates that libraries are to be open to the public and that the board shall not require a charge for admission. Given that libraries are legislated entities under the *Public Libraries Act*, the use of the library’s collection is therefore mandated. What is not mandated is provision of e-services although this has been found to be a useful and essential means of providing services to the Library’s customers. For the purposes of section 23 (2) (a) of the Act, Regulation 976, section 2 outlines the prescribed classes of circulating material and includes the following: books with hard, soft and paper covers, periodicals, newspapers, audio materials designed for the handicapped, sound recordings, audio and video cassettes, tape recordings, video discs, motion pictures, film strips, film loops, micro materials in all formats, computer software, multi-media kits. However, it does not dictate the extent to which these circulating materials be fulfilled (i.e. which motion pictures, which audio cassettes/DVD's).

Toronto Public Library provides collections in a variety of formats which reflect the interests and needs of the diverse communities of Toronto. As new formats have emerged (e.g. ebooks, DVDs) they have been introduced into the collection just as older formats have been removed from the collection (e.g. cassettes, filmstrips). All public libraries in all parts of the world carry a variety of formats, in response to the reality that informational and entertainment content is presented in a variety of ways in today’s multimedia environment.

The legislation does not specifically identify “programs and outreach services” as mandatory services. Section 20 (a) of the *Public Libraries Act* makes provision for the Board to provide a “comprehensive library that reflects the community’s unique needs” which could encompass “programs and outreach services” to community members in order to identify their needs and the manner in which the Library could respond to them. In the case of TPL, programs could be limited to community needs respecting library services, not necessarily other indirect community needs, while still fulfilling its mandate.

The *Public Libraries Act* gives power to Library Boards to impose fees for services that do not include the reservation and borrowing of circulating materials or the use of reference and information services as determined by the Board. Fees may be imposed for the use of library facilities not in use for public library purposes as well as charges to persons who do not reside in the area of the Board’s jurisdiction (i.e. outside of Toronto).

To support public library service, TPL offers computer access, free internet access including wireless, and free web basics, email and basic word processing classes in many locations.<sup>17</sup> In addition, groups can reserve and use meeting rooms at locations with the available space. Groups can rent space at TPL facilities for between \$95 - \$185 per day depending on the location. In 2010, TPL reported 7,275 external bookings and 22,000 internal bookings of its meeting spaces.

#### **5.1.1 LIBRARY PROGRAMS:**

At its meeting of October 26-27, 2011 City Council directed the City Manager to review TPL programs to determine where reductions could be implemented.

The Library provides a number of programs and classes that seek to meet the unique community needs that individual branches consider necessary. In terms of aggregate numbers, TPL offered 27,862 programs with a total attendance of 750,220 (519,187 children) in 2010. Of the 27,000+ programs offered annually, the significant majority (approximately 21,500) are delivered internally by TPL staff, while the balance (approximately 6,000 programs) is delivered by partners (i.e. outside resource people). Partner programs do not directly cost the library; the only cost is the use of space to operate a small kiosk or working session.

As one would expect, literacy programs are a major focus of programming for the Library. Storytime and family literacy programs build early reading and literacy development skills in pre-school children, and class visits for children and youth encourages reading and library use. Literacy tutoring is available for adults in several library locations. Cultural, literary, informational and instructional programs engage members of the community with the library and its collections and services and provide alternative ways of learning and accessing information. Author readings, book clubs and summer reading clubs promote and support reading and collection use; information programs support job seekers and business owners and residents with learning activities.

Approximately 60% of the programs are for children, 25% of which are co-sponsored (i.e. not delivered by TPL). In terms of programs for adults, 50% of these are co-sponsored (ESL, Literacy, computers, job skills, etc.). There is no charge for these programs.

The TPL website lists the following programs:

- Kids and family programs;
- Author talks and lectures;
- Writer's groups;
- Business, legal and personal finance support;
- Career and Job search support;
- Computer and Library training;
- Newcomer and ESL programs;
- Health and Wellness programs;
- Hobbies, crafts and games;

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<sup>17</sup> Specific information or needs assessment justifying such specific programs were not available and/or provided by TPL.

- Appel salon programs which provide a venue for discussion and debates by prominent thinkers;
- Thought Exchange programs; and,
- Writers in residence programs and workshops.

There are also a number of areas in which the Toronto Public Library collaborates with other City agencies to provide services and run programs for residents of the City's priority neighbourhoods. For example, TPL provides the Sun Life Financial Museum and Arts Pass program in partnership with the cultural venues throughout the City which provides passes to numerous attractions in the City such as Casa Loma, the Royal Ontario Museum, and the Museum of Inuit Art. The actual cost of this partnership to the Toronto Public Library could not be established for this study. Further, no information was available to the consulting team that linked such programs and services to the TPL mandate. According to TPL staff, the funding for this program is provided by the Toronto Public Library Foundation. The Foundation was established to benefit the Library directly and the TPL itself is the usual recipient of donations rather than a provider of donations to other organizations. Since the Foundation receives in kind support from TPL, such donations are indirectly provided in part by TPL.

Programming is offered by all public libraries to support use of library collections and services. The TPL Strategic Plan 2008 – 2011 provides a framework for the development and delivery of all TPL programs; the Plan is developed through analysis of community demographics and needs established through consultation with stakeholders and partners in an attempt to prevent a duplication of programs.

Programs that address broad community needs (e.g. pre-school literacy) are developed at the system level and use standard modules which are adapted to suit local needs. Specific examples include: Ready for Reading, TD Summer Reading Club and WordOut! and the Summer Reading Club for teens. Using Strategic Plan themes as a guide, branches may develop local programs to address local community needs and program ideas and evaluations are shared across the system. Increasingly, programs are offered both in-library branches and online to expand access and create efficiencies.

The Library works with community partners to provide access to programs that address community needs efficiently e.g. ESL programs are delivered in partnership with school boards and settlement agencies.

The DPRA consulting team commends TPL for its work in relation to programs. While TPL's public consultation on the core service review indicated that programs related to reading, learning, and literacy are very important to the general public, TPL's broad interpretation of this categorization of programs has resulted in development of some programs that are only peripherally related to literacy and library purposes, such as programs for health and wellness, business and finance, use of software, career planning, and games and hobbies. In addition, the 27,862 programs offered and their associated staff time and costs to develop and deliver are not specifically identified in TPL's budget submission to the City. Since programs are a major

service, these should be specifically identified with their associated costs and revenues, if any, along with justification, service usage data, and performance measures. This direction is supported by the program map developed in consultation with TPL staff by the City shown in Figure 1.

Decisions about service provision in some areas are decentralized to the individual branch level and there is a significant degree of discretion to tailor services to local neighbourhood needs. A comprehensive set of criteria on which to base service provision decisions and linking these to a specific service plan and budget, would result in pro-active allocation of resources.

The DPRA consulting team were not able to identify the cost incurred by the TPL directly related to the program roles and services. As noted above, a portion of TPL programs is funded by the Toronto Public Library Foundation or partners, which is a positive approach; however there is currently a lack of information that would compare the funding received from partners to the costs incurred. As a result, there is the potential for duplication and overlap between the programs which TPL provides and those available in the community and provided by others.

While the provision of programs at the branches is a common aspect of the provision of library services in many jurisdictions, it should be planned and implemented and ultimately evaluated if it is to ensure a focused delivery of service within an established framework and within allocated financial resources. For these reasons the DPRA consulting team recommends that TPL review the program provision and support function system wide (i.e. specific programs offered at each branch annually) and the costs/FTEs associated with providing such programs. This may require staff to maintain a record of the hours needed for all the functions related to programs (i.e. marketing, planning, logistics, development of any materials, development of lesson plans, preparation time, delivery time, and any follow up initiatives). This is a fundamental consideration to ensure the efficient management of the provision of programs as well as to evaluate its effectiveness.

Toronto Public Library Foundation raises funds to support (in part) the delivery of programs.

#### **5.1.2 TORONTO PUBLIC LIBRARY FOUNDATION**

Toronto Public Library Foundation (TPLF) was established in 1997 as a registered charity. Its mission is to provide essential resources for the enhancement of Toronto Public Library and to allocate funds to priority needs not supported by municipal funding for TPL.

The Foundation believes in the social benefits of a strong and healthy public library system. TPLF fosters relationships with people of vision to provide Toronto's Library with improved and expanded collections, enhanced programs and services, and revitalized community spaces.

Since 1997, TPLF has raised over \$47 million in support of Toronto Public Library priority needs. Examples include the TD Summer Reading Club, a multi-year \$1.9 million cash commitment that has grown from a local to a national initiative.

The Foundation's long-term goal is to build an endowment fund that will generate sufficient income to support enhanced library programs, collections and services in perpetuity.<sup>18</sup>

### 5.1.3 PROGRAM FUNDING FOR OTHER JURISDICTIONS IN NORTH AMERICA

Other Public Library systems receive similar support as TPL receives from Toronto Public Library Foundation for subsidizing program delivery. In Philadelphia, the website lists a wide variety of programs including Adult Education Classes, Business Resources, among others. There is no indication of charges on the Programs reviewed. The number of participants is regulated through a pre-registration or sign-up system. The website provides a contact phone number for registration. The Free Library of Philadelphia funds some of the programs e.g. Computer Classes through the *Library Services and Technology Act* (LSTA) Funds from the Office of Commonwealth Libraries<sup>19</sup>. Approximately, 20,000 programs are offered to both children and adults with a total attendance of about 400,000 community members. The Philadelphia Public Library has faced serious cut-backs to its funding and even considered shutting down in 2009. Programming continues to be offered free of charge.

The Boston Public Library provides programs "Free to All"<sup>20</sup>. Approximately 12,000 programs are carried out each year free of charge. The Library raises funds through several fundraising groups including:

- Associates of the Boston Public Library - a community-based organization dedicated to expanding the role of the Boston Public Library in the intellectual life of the City.
- Boston Public Library Foundation - mission is to enhance the public visibility of and to raise public and private funds for the revitalization of the Boston Public Library.
- Branch Library Friends Groups
- Young Professionals of the Boston Public Library

The Chicago Public Library provides a large number of programs in collaboration with cultural and educational partners, such as the Chicago Public Schools, Chicago's museums, non-profit organizations, sister city departments and the private funding community. Some of the programs include *One Book, One Chicago*, *Great Kids Museum Passports* and *Teacher in the Library*, which have become benchmarks for library programs across the country<sup>21</sup>. Some of the Programs are funded through grants from private corporations through the Chicago Public Library Foundation. The Chicago Public Library does not charge for its programs, hence requires funding support from other sources outside of the tax-base.

Each of these large US public library systems offer significantly fewer programs than TPL as a result of limited funding. Similar to TPL, each obtains some program funding sources outside of the municipal government for the programs that are offered.

Although TPL staff reason that programs are delivered primarily by existing staff in each branch, delivering the volume of programs currently offered takes staff away from other library duties

<sup>18</sup> [http://tplfoundation.ca/about\\_us](http://tplfoundation.ca/about_us)

<sup>19</sup> <http://libwww.freelibrary.org/calendar/calbydate.cfm?ID=30745&type=15>

<sup>20</sup> <http://www.bpl.org/general/donations.htm>

<sup>21</sup> <http://www.chipublib.org/eventsprog/programs/index.php>



creating a need to retain staff levels. Therefore there is a cost attached to delivering this volume of programs that should be identified in the TPL budget submission to the City to inform the City what services are being funded.

The TPL Board should also consider limiting the programs offered to those that are most closely related to the core library purposes. This should include a specific examination of programs related to business, legal and personal finance; career and job search; health and wellness; and hobbies, crafts and games. Where there is an offset to costs through partner support or programs provided by others, then these resources should be identified.

TPL's budget submission to the City should isolate the programming function and report the following:

- Identify and justify program categories
- Assign an FTE resource and cost
- Identify the link to the TPL purpose
- Performance measures including attendance

## **5.2 ASSESSMENT OF LEVEL OF PROVISION, LOCATION, AND DISTRIBUTION OF LIBRARY BRANCHES (AND SERVICES)**

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### **5.2.1 TPL EXPERIENCES**

Upon amalgamation, there were 100 library facilities, which ranged in size and design orientation and age of facility. Part of the mandate for the newly created TPL, was to examine efficiencies in staffing and the location/efficiencies of the various library branches. TPL staff completed a comprehensive analysis grounded in the principles of Lean Six Sigma to determine the required staffing levels and most appropriate locations for library branches. This work considered a significant majority of the accepted qualitative and quantitative scientific factors noted in the previous sub-section.

Since amalgamation, a number of actions have been implemented in an effort to harmonize the supply or provision of library services. First, was the establishment of a hierarchy of service provision in terms of reference, district and neighbourhood branches with an intended catchment area and focus of service delivery. Second, was the examination of the hours of operation or open hours and recognition that there was historical variation in service hours across Toronto and efforts were made to establish targets for each type of branch in terms of open hours per week. Third was the updating/renovation of some branches to meet standards of service. Fourth, was an examination for consolidation of services in concert with branch renovations. Fifth, was an assessment of branch performance and utilization to identify possible locations for closure – this resulted in one branch being closed.

It should also be noted that the system of physical facilities is supported by the Bookmobile service which allows the TPL to bring library service to neighbourhoods of high need and which may not have a neighbourhood branch within a catchment area. Further, TPL operates a home

delivery service so customers who cannot easily leave their home can still obtain library materials.

As noted earlier, TPL's circulation materials are considered "one collection" and therefore is accessible to any customer regardless of catchment area or residence within the City. This effectively means that each patron can access services at each branch regardless of size of branch. Further, as TPL increases its virtual library, this will also provide another degree of access to services.

TPL has continued to apply such factors (usage – i.e. circulation, visits, in-library use of materials, work station users, information requests, programs; overlapping service areas; and, branch size) when determining footprint and location of branches – in particular with renovations of older buildings. Such capital projects consider opportunities to build larger District branches, options to build joint facilities, various technological changes (RFID, automated sorters), specific community needs, and demography.

The previous section identified the legislative obligation framework for TPL services. In terms of an assessment of the adequacy of level of service provision the quantitative and qualitative aspects of branch planning, distribution and location should be considered as these have implications to public access to services. The results of such analysis may identify existing areas of Toronto that may be under- or over-served in terms of access to library branches and will inform the assessment of the adequacy of the existing footprint of the TPL system.

### **5.2.2 DISTRIBUTION AND SERVICE CATCHMENT AREAS**

Recall, TPL is comprised of 98 libraries made up of 79 neighbourhood branches, 18 district branches and the Toronto Reference Library branch. To determine the appropriate number of branches necessary to maintain an excellent library circulation service for all Toronto residents, there are several considerations:

- 1) Distance to travel to any branch
- 2) Density of the population in the service area and demographics
- 3) Size of other branches in the area
- 4) Current demand measured by circulation and visitor counts.

#### **5.2.2.1 Travel Distance:**

Scientific literature notes that distance travelled to access library services is one of the most important considerations in the planning, development and maintenance of library facilities. As a result, the planning (and assessment) of the distribution of library branches typically includes the establishment of a hierarchy of branch types (with each type of branch serving different functions, and population base) with an identified or defined catchment area for service delivery expressed in terms of either distance from the branch or population size. In Toronto, there are typically three main tiers of branches. Tier 1 – Research and Reference branches (specialized collections), whose catchment area covers the entire City; Tier 2 – District branches which are larger (size and collections), and can support greater population/customer base – the larger branches entice customers to come from greater distances to access services and



programs (2.5 kilometre radius); and, Tier 3 – Neighbourhood branches, which are smaller in size, collections, and capacity and will attract customers from a closer proximity (1.6 kilometre radius walking distance).

Using a radius in estimating a catchment area is a method used by various library systems. Christine Koontz, a leading expert in this field, stated that “we know that the average library customer will not travel over two miles.”<sup>22</sup> In its guiding principles in determining catchment area, the Greater Victoria Public Library Board states that in an urbanized area, a library location should be available to all citizens within 2.5 kilometres of where they live.<sup>23</sup> The same standard was used for libraries in Edmonton: “branches will be located not more than 5 kilometres apart, thereby enabling each to have a service area radius of approximately 2 to 2.5 kilometres”.<sup>24</sup> Also, it is noted that there are exceptions in instances where natural and human engineered barriers (like rivers or major highways) affect resident travel patterns; however, no approach is recommended on how to calculate distances between branches in those cases.

In Nova Scotia, larger distances are recommended: “catchment area populations can be defined by drawing around each service point a circle, 5-15 kilometres in diameter (depending upon local conditions), and applying the appropriate census data to the area.”<sup>25</sup> According to the library standards for the State of Wisconsin, this distance is even greater and is measured as a 15-minute driving time in metropolitan areas.<sup>26</sup> These larger distances are not necessarily applicable to densely populated metropolitan areas such as Toronto.

Figures 3a and 3b illustrate the location, distribution and catchment area for TPL branches. The circle around each branch represents the catchment area (suggested service area) for that branch: neighbourhood branches (small dots) have a catchment area of 1.6 kilometres and district branches (large dots) have a catchment area of 2.5 kilometre radius<sup>27</sup>. These TPL catchment areas reflect the desired intent of ensuring convenient and accessible service distribution based on pedestrian access (walkability) to a library branch. Figure 3a shows all branches and their service areas assuming 1.6 kilometre radius. Figure 3b shows district branches at 2.5 kilometre radius and neighbourhood branches with 1.6 kilometre radius.

TPL’s 97 circulation branches provide service access to all Toronto residents. Note, areas not covered by the circles represent non-residential areas (e.g. parks, open spaces, industrial lands, etc.). Any neighbourhoods that do not fall within a catchment area are serviced by the Bookmobile operated by TPL. The Bookmobile also offers continuing service to branch locations that are closed for renovations.

<sup>22</sup> *ibid.*

<sup>23</sup> Greater Victoria Public Library Board. 2006. *GVPL Guidelines for Service/Facility Standards*.

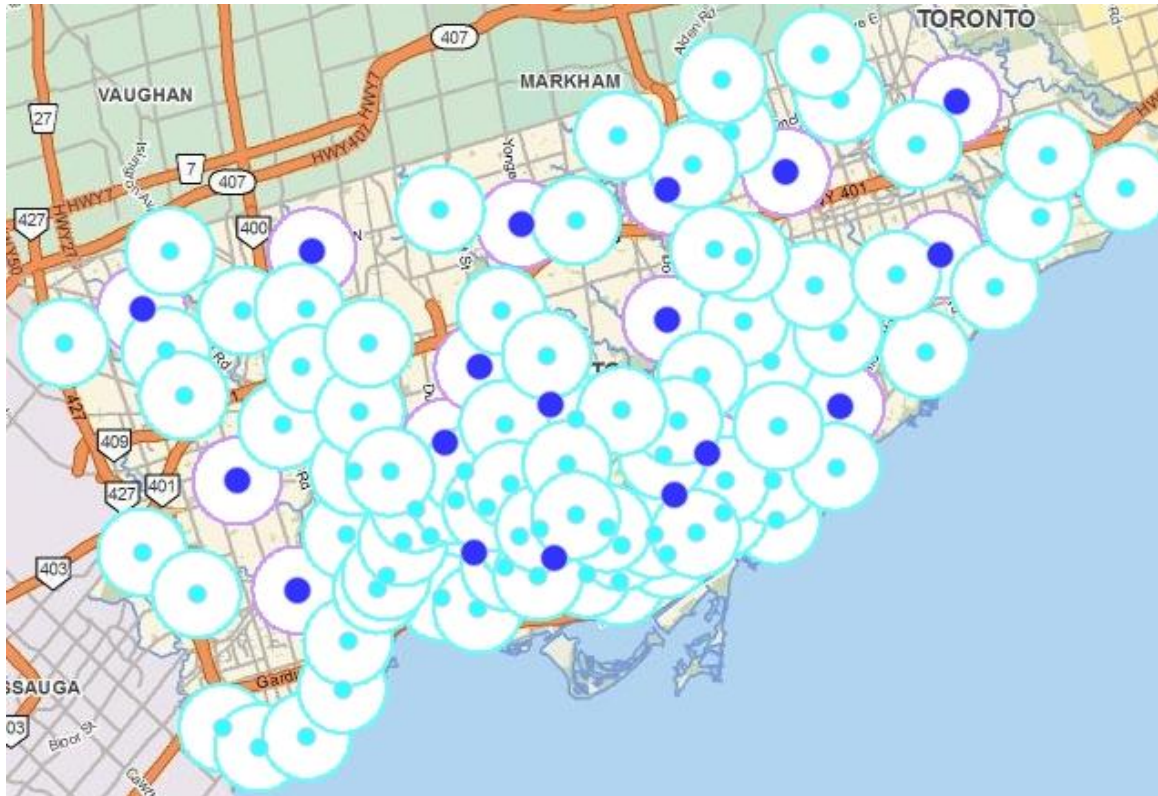
<sup>24</sup> Government of Alberta, Municipal Affairs. *Standards & Best Practices for Public Libraries in Alberta*; pp. 65-66.

<sup>25</sup> Government of Nova Scotia, Department of Education. *Standards for Nova Scotia Regional Public Libraries*. September 2001.

<sup>26</sup> Government of Wisconsin, Department of Public Instruction. *Wisconsin Public Library Standards*. 2010. p.33

<sup>27</sup> The catchment areas are defined by accepted scientific research and locational theory standards. The 1.6 and 2.5 kilometre radii are primarily defined by accepted walking distances for a client to access the service. Note, a district radius is used for the North York and Toronto Reference Library branches and they both have significantly larger catchment areas and would otherwise skew the diagram.

**Figure 3a: Catchment Area Coverage (1.6 km. for all branches)**



Note that distance between branches cannot be considered in isolation of an assessment of the density of the local population and the capacity of the surrounding branches. Although there are obvious overlaps in service areas particularly in the downtown area, the branches are generally small and the population dense. A greater number of branches are needed in these areas to satisfy the service demands.

**Figure 3b: Catchment Area Coverage (2.5 km. for district branches and 1.6 km. for neighbourhood branches)**



It is evident from Figures 3a and 3b that all residents of Toronto have convenient access to library services. However, as discussed later in this section, the other 3 considerations to assess the number of branches and locations are:

- Density of population
- Capacity of neighbouring branches
- Demand as determined by current circulation and number of visitors

#### **5.2.2.2 Demographics and Population Density**

Another important quantitative factor that should be considered when determining the utilization for a library branch (i.e. needed or not needed) is the current and projected population of the area. For example, in Alberta, in order to support a viable and cost effective branch library operation a minimum existing population of 20,000, with the potential to grow to 30,000 or 35,000 within five years is necessary. This criterion is consistent with the practices of most other large Canadian public libraries.<sup>28</sup> TPL neighbourhood branches are designed and intended to serve populations of a minimum of 25,000 residents as outlined in the Service Delivery Model and growth is managed within the context of available space and services available at each location. TPL district branches are designed to serve immediate neighbourhood populations as well as the larger district populations of a minimum of 100,000 residents.

<sup>28</sup> *op. cit.* Government of Alberta.

In addition to the distance to the branch, factors such as age, income, education level, ethnicity, ownership of home, family status are all highly correlated with library use. When plotted on the map (applying GIS tools) these factors can assist in determining where actual and potential library customers live and which branch they use.<sup>29</sup> Examples of when knowledge of geographic boundaries of branches is required may include the need to open a new branch (to determine where service falls off at surrounding branches), closing a branch (to determine which branches will be impacted), or dramatic change in population composition (influx of non-English speaking residents requiring new materials and services).

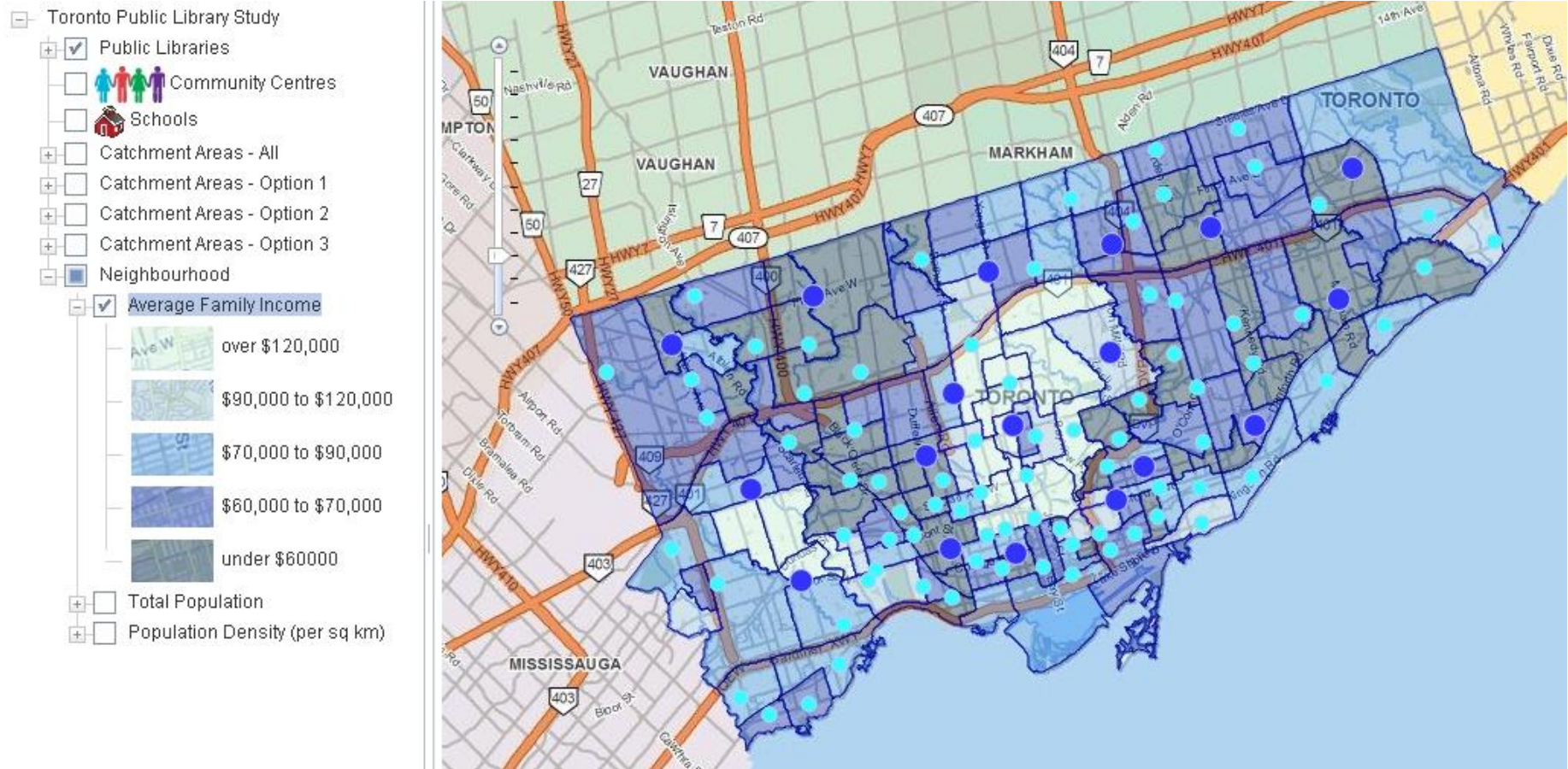
Figure 4 below illustrates family income. While households with incomes of varying ranges use libraries, they are traditionally used more often and regularly by households with lower family incomes. Currently, the location of TPL's 97 circulation branches provides access across Toronto (i.e. not including the Toronto Reference Library). However, any consolidation of services must consider any impact on neighbourhoods with lower family incomes.

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<sup>29</sup> Koontz, Christine. Public Library Site Evaluation and Location: Past and Present Market-Based Modelling Tools for the Future. *Library & Information Science Research* 14, 1992, pp. 379-409.



**Figure 4: Family Income**



Other factors to consider when locating or consolidating branch locations are population and population density. Population by neighbourhood defines the total number of possible clients to be served. Density should also be considered as it articulates the concentration of potential clients as well. Figure 5 illustrates total population by neighbourhood. The largest population numbers are found outside of the downtown core, with the exception of the population growth from the condominium developments along the waterfront.

**Figure 5: Total Population by Neighbourhood**

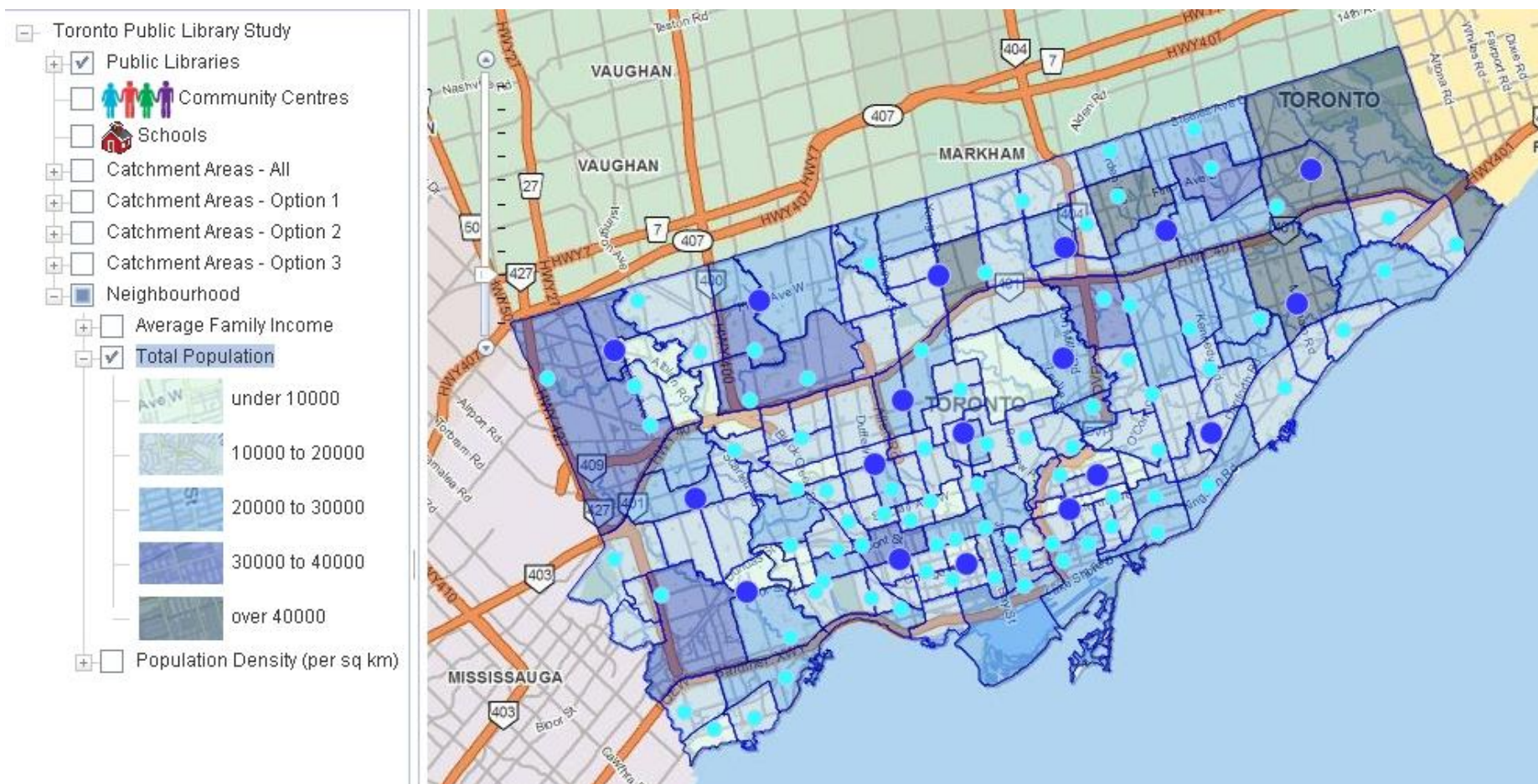
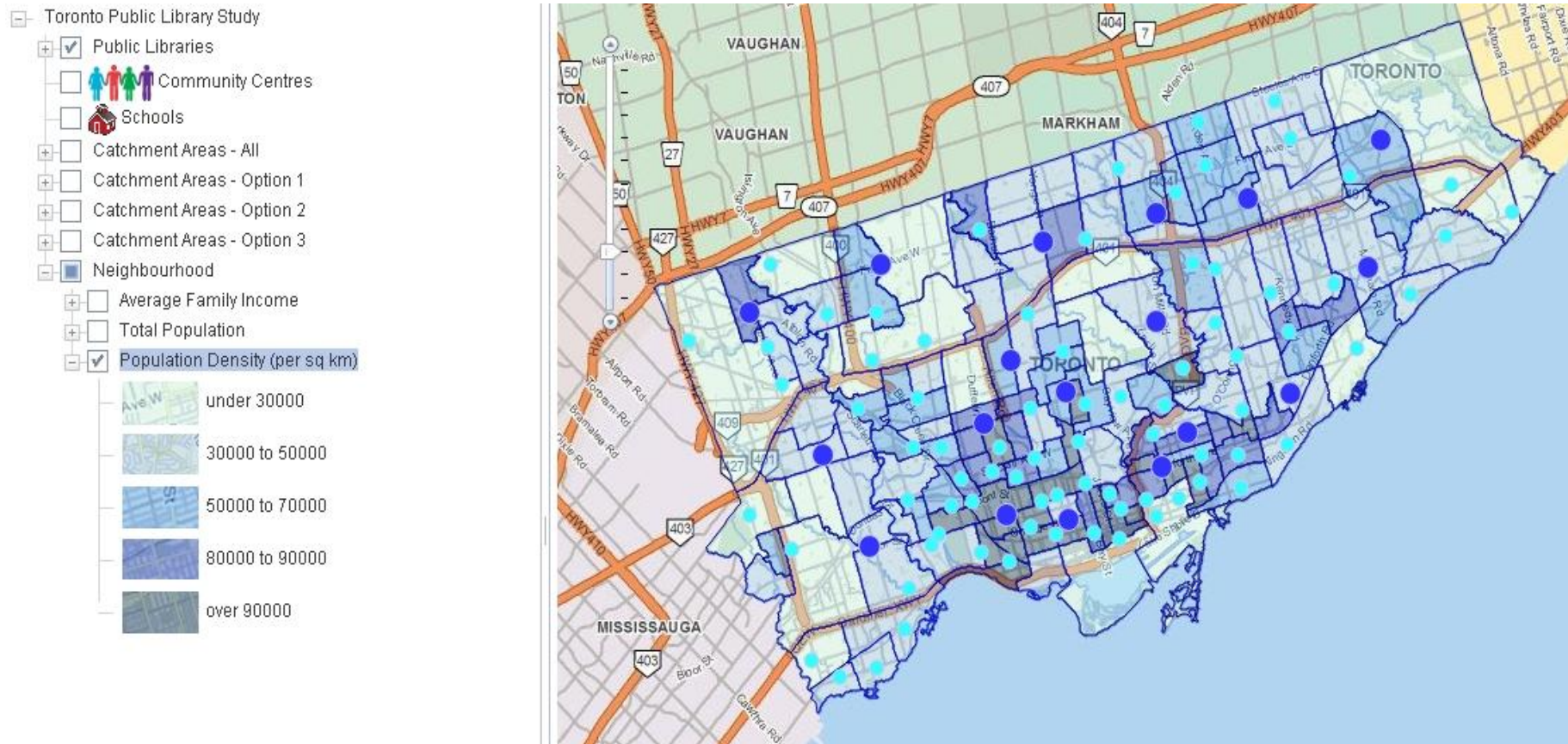




Figure 6 illustrates the population density. As anticipated, density is greatest downtown, with exceptions in the suburban areas (e.g. Yonge and Sheppard/Finch corridor which has seen extensive construction of condominiums in the last 15 years).

**Figure 6: Population Density**



The population density and relatively smaller size of older libraries in the downtown core explain the need for overlapping geographic service areas.

### 5.2.2.3 Qualitative Approach

In addition to the quantitative items presented in the previous sub-section, the following qualitative factors are recommended by South Carolina State University to further assess the efficiency and effectiveness of service delivery for a library branch:

1. Image/Visual Quality - quality of the existing neighborhood surrounding the library needs to complement rather than detract from the library.
2. Ease of Access - Assess inherent ease of pedestrian, vehicular, bicycle and service access to the site.
3. Geography - Evaluate proximity to other civic services, schools and transit.
4. Visibility - prominent location is required to attract a large number of people to the library.
5. Demographic Patterns - largest percentage of all people to be served will have access to the library frequently in the normal pursuit of their activities.
6. Site Capacity - large enough to provide a sufficient square or rectangular library "footprint"; the required parking for users, staff and volunteers; future expansion; and the necessary allowances for setbacks, zoning requirements and suitable landscaping.
7. Tie-Breaker Criteria - Site-Related Costs. If several sites are ranked equally, or nearly so, in all of the criteria, then site-related costs should serve as a "tie-breaker" to finalize the selection of a library site.<sup>30</sup>

## 5.3 POTENTIAL SERVICE CONSOLIDATIONS

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TPL is a proactive organization focused on business process efficiencies and effectiveness. This is reflected in TPL's investment in Lean Six Sigma and continual commitment to service excellence for its clients. A key aspect of sound judgment and good business decisions includes examining the effectiveness of branch operations and whether any should be consolidated (or identify new locations) to better serve changing neighbourhood needs.

In 1999, a rationalization study was completed which included a review and analysis of TPLs branches including usage, overlapping service areas (one or more branches in less than a 1.6 kilometre radius), branch sizes of less than 10,000 square feet and catchment populations of less than 25,000. The 25 lowest scoring/performing branches that could be considered for consolidation has not significantly changed between 1999 and 2011.

With respect to population, the analysis took into consideration the existing population as well as any projected population growth. Facilities were considered based on TPL's service delivery model which notes a minimum branch size of 10,000 square feet. In terms of usage, the analysis examined the following:

- Circulation;
- Visits;
- In-library use;

<sup>30</sup> South Carolina State Library. *Information about Site Selection Considerations*. No Date.  
[http://www.statelibrary.sc.gov/docs/Facility/Site\\_Selection.pdf](http://www.statelibrary.sc.gov/docs/Facility/Site_Selection.pdf)



- Workstation users;
- Information requests; and
- Programs.

As in business, where there are instances of lower than average performance, consolidation of services in fewer locations does not decrease services, but rather increases efficiency of operations and saves the costs of maintaining overlapping service areas. To determine the number of branches necessary to maintain an excellent library service to all Toronto residents, there are several considerations:

- 1) Distance to travel to any branch
- 2) Density of the population in the service area and demographics
- 3) Size of other branches in the area
- 4) Current demand measured by circulation and visitor counts.

Based on accepted scientific methods and measurement standards (both qualitative and quantitative) used to determine the feasibility and possible consolidation of services based on utilization and (under) performance, DPRA, in consultation with TPL staff, identified 15 branches that were underperforming.

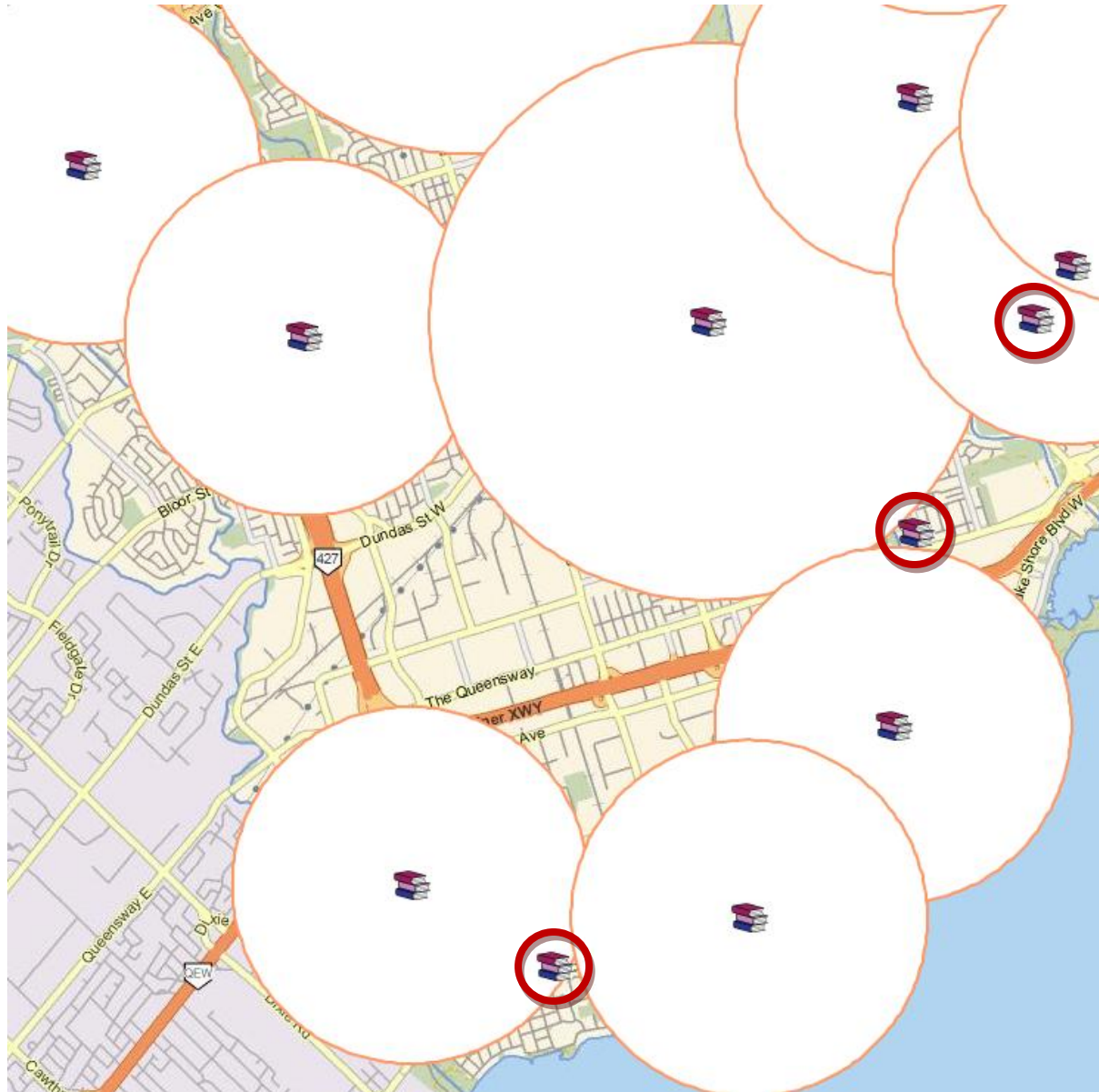
1. Swansea
2. Todmorden
3. Davenport
4. Northern Elms
5. Queen/Saulter
6. Taylor Memorial<sup>31</sup>
7. St. Clair/Silverthorn
8. Victoria Village
9. Evelyn Gregory<sup>32</sup>
10. Long Branch
11. Perth/Dupont
12. Mount Pleasant
13. Humber Bay
14. Pleasant View
15. Jones

When plotted on the service area map, 14 of the above branches overlap service areas with other neighbouring branches. Figure 7 shows examples of 3 such branches and the neighbouring branches that could provide service. Because performance and usage of these branches are the lowest in the library system, consolidation of services with other branches that are still within a convenient walking distance would lead to greater efficiency and better use of resources. Some of the collection could be added to other branches, eliminating duplication, and staff levels adjusted to ensure services are maintained.

<sup>31</sup> Will require a legal review

<sup>32</sup> Consider for closure only after renovation of Mount Dennis

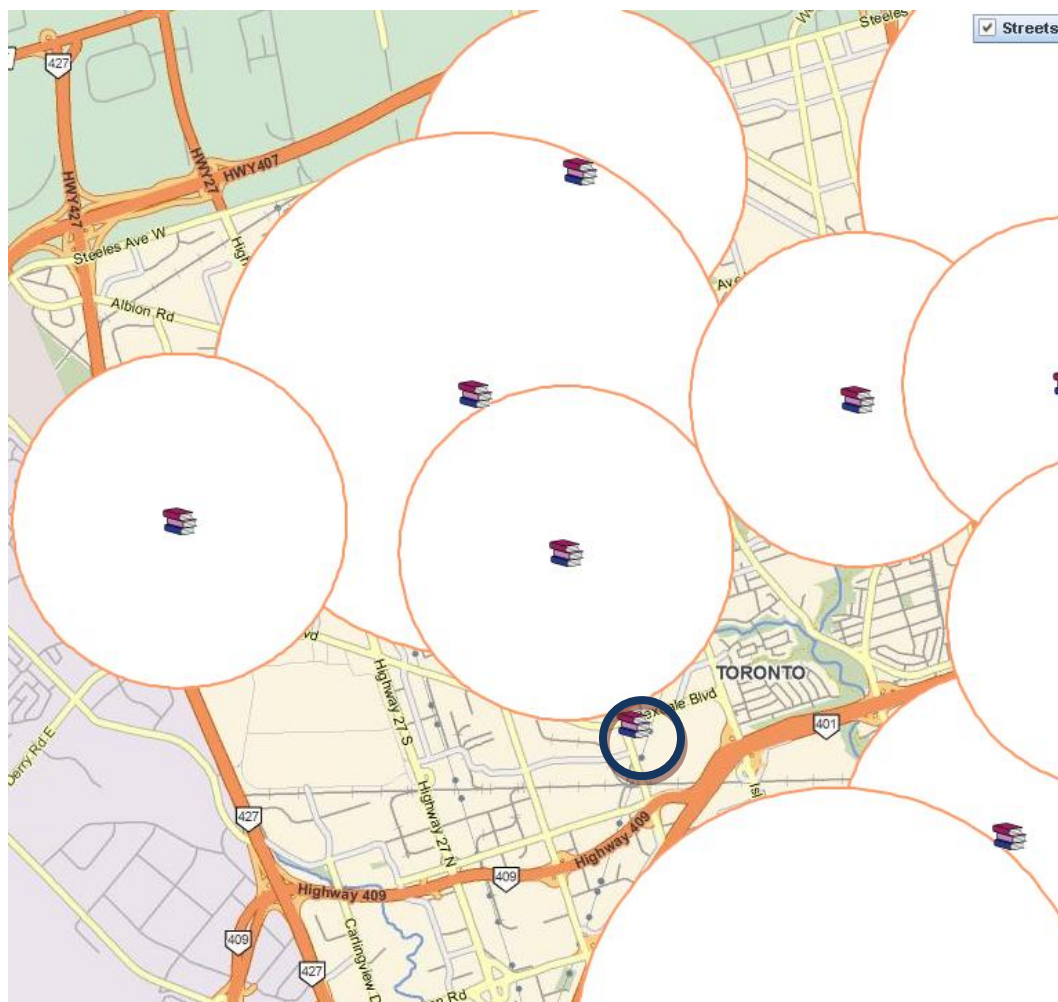
**Figure 7: Examples of Branch Consolidations Not Impacting Service Coverage and Access**



In Figure 7 above, the Humber Bay branch (middle red circled stack of books) sits on the periphery of two other branches. This could suggest it not be considered for consolidation (as presented for Northern Elm in Figure 8), however the neighbourhood has more open space and industrial lands resulting in lower total population and lower population densities compared to other areas of the City. Further, the neighbourhood experiences moderate average family income levels. Therefore, the cumulative effect on the local population is minimal given close proximity to three other branches.

Northern Elm is 4<sup>th</sup> on the list of branches with low performance and utilization. However, in contrast to the other 14 branches noted above, Figure 8 below shows that Northern Elm falls just outside the service area of other branches. In addition this area represents a lower family income neighbourhood. However, if desired by TPL or the Board, Northern Elms (a smaller leased facility), could be considered for consolidation as Rexdale is nearby and is a larger owned facility. But this would also require support from the Bookmobile. While the Bookmobile would ensure access to the collections for residents, it would not facilitate relatively easy access to study space, computers, internet access and programs.

**Figure 8: Northern Elm Service Coverage and Access**



At its meeting of October 26-27, 2011 City Council received a recommendation to consider rationalizing the footprint of libraries to reduce service levels or closing some branches; however, it is the DPRA consulting team's understanding that this does not rule out consideration of consolidation of services, given a solid business case. DPRA's assessment and analysis (based on the provided and available data) suggests that service levels could be maintained if the following branches were consolidated with neighbouring branches as follows:

1. Swansea to be consolidated with: Runnymede, Brentwood (currently under renovation), High Park and Annette Street;
2. Todmorden Room to be consolidated with: S. Walter Stewart and Pape/Danforth;
3. Davenport to be consolidated with: Wychwood, and Dufferin/St.Clair;
4. Queen/Saulter to be consolidated with: Riverdale, Pape/Danforth, and Gerrard/Ashdale
5. Taylor to be consolidated with: Main St and Albert Campbell;
6. St.Clair/Silverthorn to be consolidated with Annette St and Dufferin/St.Clair;
7. Victoria Village to be consolidated with: Eglinton Square, Maryvale and McGregor Park;
8. Evelyn Gregory to be consolidated with: Mount Dennis and Maria A. Shchuka;
9. Long Branch to be consolidated with: Alderwood and New Toronto;
10. Perth/Dupont to be consolidated with: Bloor Gladstone, Annette St and Dufferin/St.Clair;
11. Mount Pleasant to be consolidated with: Northern District, Deer Park and Leaside;
12. Humber Bay to be consolidated with Mimico Centennial and Brentwood (currently under renovation);
13. Pleasantview to be consolidated with Fairview and Bridlewood; and,
14. Jones to be consolidated with: Gerrard/Ashdale, Riverdale, and Pape/Danforth.

As noted above, even though Northern Elms ranks fourth in terms of underperformance, given the demographic circumstances (lower family income, significantly high proportion of newcomers), physical geographic barriers and limited proximity to other branches, it is not recommended for consolidation at this time by the DPRA consulting team. However, if desired by TPL or the Board, Northern Elms (a smaller leased facility), could be consolidated with Rexdale and serviced by the Bookmobile. While the Bookmobile would ensure access to the collections for residents, it would not facilitate relatively easy access to study space, computers, internet access and programs.

Consolidations would not result in significant reductions in service or access as the populations are located in areas that are serviced by other branches. However, to ensure there is no significant reduction in library service, some of the potential savings may need to be redirected to neighbouring branches to support increased usage at the remaining branches. This may reduce the projected savings. The net operating costs for each of the top 15 underperforming branches are noted in Table 3, and provide an indication of the approximate net savings that could potentially be realized as a result of consolidation.

**Table 3: Operating Costs of 15 Lowest Performing TPL Branches**

Rank	Branch	Branch Salaries & Benefits	Other Operating Costs	Gross Operating Costs	Total Revenues	Net Operating Costs
1	Swansea	66,784	7,976	74,760	(2,400)	72,360
2	Todmorden Room	67,591	8,665	76,256	(3,828)	72,428
3	Davenport	202,140	34,716	236,856	(12,417)	224,439
4	Northern Elms	233,676	94,655	328,331	(11,139)	317,192
5	Queen/Saulter	204,298	59,703	264,001	(9,899)	254,102
6	Taylor	248,114	44,296	292,410	(13,243)	279,167
7	St.Clair/Silverthorn	225,474	31,783	257,257	(6,336)	250,921
8	Victoria Village	206,956	45,587	252,543	(10,685)	241,858
9	Evelyn Gregory	426,850	54,427	481,277	(11,765)	469,512
10	Long Branch	338,276	39,595	377,871	(15,726)	362,145
11	Perth/Dupont	234,570	26,043	260,613	(8,702)	251,911
12	Mount Pleasant	243,798	37,262	281,060	(19,007)	262,053
13	Humber Bay	253,284	26,909	280,193	(12,509)	267,684
14	Pleasant View	256,527	48,578	305,105	(18,820)	286,285
15	Jones	419,372	40,147	459,519	(18,416)	441,103

## 5.4 SCHEDULE AND HOURS OF OPERATION

Amalgamation resulted in variations in open hours at the various library branches located across the City. TPL, under the leadership and direction of its Board has worked towards harmonizing open hours by branch type (based on size and utilization). TPL has reinvested its savings from RFID (approximately \$4 million) to support the implementation of its open hours vision – increasing Library hours weekly by 1,482 hours. 321 hours per week were added between 2006 and 2010 at no additional cost, by utilizing savings in other areas. Since the increase in open hours, 41 branches are currently open between 60-69 hours per week; and 21 branches are currently open between 50-59 hours per week. Thirty-four (34) branches are currently open for a standard 40-49 hours per week. Two small branches are currently open for 28 hours per week. The majority of the branches that are open for the largest number of hours are research and reference libraries, the district branches (i.e. Tiers 1 and 2), and the busiest neighbourhood branches. The majority of the smaller neighbourhood branches are open fewer hours per week. Table 4 provides information on the visits and circulation per open hours per day of the week, while Table 5 provides a breakdown of open hours by day of the week.

TPL data indicates that overall activity is highest in the afternoon (1-6 pm), followed by evenings (6-8:30 pm). Lowest activity occurs in the morning (9 am to 1 pm).

**Table 4: Visits and Circulation per Hour Open by day of the Week – TPL 2010**

Day of the Week	Number of Visits	Average Visits per Hour Open	Total Circulation	Circulation per Hour Open
Sunday	475,265	127.8	975,802	266
Monday	2,756,496	94.3	4,344,240	150
Tuesday	3,280,831	68.2	6,060,993	128
Wednesday	3,213,276	67.0	5,124,925	108
Thursday	3,079,198	64.5	4,954,037	105
Friday	2,730,312	67.9	4,447,762	111
Saturday	2,816,833	72.8	5,832,149	152

Source: TPL Open Hours Document July 27, 2011

**Table 5: Open Hours by Day of the Week – TPL 2010**

Day of the Week	Open Hours Per Year	Percent of Total (%)	# of Branches Regularly Open	# of Branches Regularly Closed	Ave. Hours Open per year per branch	Ave. Hours open per Week per branch
Sunday	3,668.0	1%	27	72	136	2.6*
Monday	28,957.5	11%	62	37	467	9.0
Tuesday	47,520.5	19%	99	0	480	9.2
Wednesday	47,497.0	19%	99	0	480	9.2
Thursday	47,134.0	19%	99	0	476	9.2
Friday	39,917.5	16%	97	2	412	7.9
Saturday	38,347.0	15%	97	2	395	7.5

Source: TPL Open Hours Document July 27, 2011

The tables illustrate that activity varies by day and hour due to the number of branches open and the number of hours open. This is the case on Sunday, which is the busiest per hour with 27 branches open for 3.5 hours. (\*Note that the table above indicates an average of 2.6 hours on Sunday; the difference is due to temporary closures during the year.) This is a reflection of users' pattern of personal and family time which is typically highest on weekends. As well, patterns of use for students are high at the beginning of the week and trail off as the weekend approaches. Tuesday to Thursday have fewer visits per hour despite being open the most number of hours per week. This suggests that there is a need to re-examine the schedule of the open hours to ensure that they are consistent with community needs/demand and pattern of use.

Based on the total annual hours open, TPL ranks first when compared to other cities. However when examining average hours open per branch, TPL ranks 5<sup>th</sup> behind Montreal, Calgary, Edmonton and Mississauga which are open on average more than TPL (Table 6). The population served per branch is one of the lowest across Canada. This could be due to the relatively smaller size of neighbourhood branches. The current location and size of branches reflects the strategies developed by each of the former municipalities prior to amalgamation in 1998 where

the strategy, especially in the downtown core, was to provide small branches to serve the immediate neighbourhood.

**Table 6: Annual hours of Service - Selected Canadian Public Libraries**

Library Name	Population	Total Annual Hours for all Branches	Rank	Number of Branches	Population per branch	Average Annual Hours Open per Branch (total hours/total branches)	Rank
Toronto Public Library	2,755,800	270,527	1	98	28,120	2,760	5
Montreal Bibliotheque	1,620,693	125,769	2	44	36,833	2,858	3
Ottawa Public Library	908,390	79,113	3	33	27,527	2,397	6
Mississauga Library System	730,000	52,100	4	18	40,555	2,894	2
Calgary Public Library	1,042,892	51,164	5	17	61,347	3,009	1
Edmonton Public Library	782,493	47,830	6	17	46,029	2,813	4
Winnipeg Public Library	675,100	46,867	7	20	33,755	2,343	7
Halifax Public Libraries	372,858	31,869	8	14	26,632	2,276	8

Source: Canadian Urban Libraries Council. 2009 Canadian Public Library Statistics

The results of the Toronto Public Library community consultation for the City's core services review indicated that maintaining a full range of library services is required to meet residents' needs. When respondents were asked to rank the most important services to maintain with three choices only, conveniently located branches across the City ranked first (46.5%) followed by up to date collections (35.8%) and a range of open hours third (17.7%) and 68.9% ranked range of hours as least important. However, when asked what should be considered in making service decisions regarding the Library in the future, only 4.4% of respondents noted access to the Library (branches and hours); and when asked an open-ended question about what they would like the Library to consider in future, 8% mentioned access to the Library (branches and hours).

This suggests that while there would be some initial concern with reducing hours, overall more residents could accept this direction and change (over time). It would follow that users would be satisfied to have libraries open at the highest demand times (Saturday, Sunday, and Monday) and may accept reduced hours when the demand is lowest (Tuesday to Friday). However, impacts and reactions to service reductions including open hours reductions are not known, and TPL experience has shown that there is significant opposition to any reduction in library service levels.

One can conclude that these considerations combined with an increase in virtual library services and access results in a diminished "need" or requirement for branches to be physically open more hours or indeed the current number of hours. This however has not been the experience of TPL to date as use of library services and collections has not necessarily diminished as access to resources online has increased.

It is recommended that TPL re-examine open hours to ensure that they are more closely aligned to customer needs and patterns of behaviour and library use and that TPL should reduce the open hours to realize cost savings. This could entail a shift in the open hours to the periods of highest demand (i.e. afternoon, evenings and weekends).

#### 5.4.1 EXPENDITURES

For further perspective on this issue, one must consider how TPL compares to other jurisdiction in terms of total expenditures.

Table 7 illustrates total expenditure per capita for each jurisdiction. With \$67.5 per resident, TPL is only behind Vancouver (\$77.4) in this category. Calgary and Mississauga per capita expenditures (\$41.4 each respectively) are the lowest of the compared jurisdictions.

**Table 7: Expenditures of Selected Canadian Public Libraries**

Library Name	Total Expenditures/ Capita	Rank	Salaries & Benefits (% of Expense)	Rank	Materials Expenditure (% of Expense)	Rank
Vancouver Public Library	\$77.4	1	63.8%	5	12.0%	2
Toronto Public Library	\$67.5	2	74.6%	1	9.2%	8
Halifax Public Libraries	\$60.9	3	66.9%	3	8.1%	7
Edmonton Public Library	\$60.5	4	50.7%	8	11.8%	3
Ottawa Public Library	\$50.8	5	60.6%	7	10.2%	4
Montreal Bibliotheque	\$43.1	6	61.6%	6	9.7%	6
Winnipeg Public Library	\$42.7	7	49.5%	9	9.9%	5
Calgary Public Library	\$41.4	8	67.9%	2	16.3%	1
Mississauga Library System	\$41.4	9	64.5%	4	7.9%	9

Source: Canadian Urban Libraries Council. 2009 Canadian Public Library Statistics

TPL salaries and benefits as a percentage of total expenses (74.6%) is highest when compared to other large Canadian urban public library organizations: Calgary is second highest (67.9%), followed by Halifax (67.9%) and Mississauga (64.5%). Contrasted against materials expenditure as a percentage of total expenses, TPL ranks 8<sup>th</sup> (9.2%), while Calgary is 1<sup>st</sup> (16.3%) followed by Vancouver (12.0%). Note that Mississauga, Winnipeg and Ottawa report their expenditures differently by not including support services (e.g. HR, IT, Facilities, and Finance) hence its costs are comparably lower.



Percentage of expenditure per capita on library materials is a key measure of a library's provision of materials to serve the local population. In this category, TPL is the 2<sup>nd</sup> lowest per capita behind Mississauga. Mississauga Library's per capita spending on collection materials (\$3.3) is the lowest amongst comparator libraries; however this has resulted in a new strategic goal in its new business plan to increase collection funding levels which will result in an increase in the provision rate.<sup>33</sup> TPL's existing collection is already the largest among comparator libraries.

Further, Table 8 provides selected statistics on visits and per capita data. TPL is 3<sup>rd</sup> highest in number of visits per capita and 3<sup>rd</sup> highest in number of staff per capita.

**Table 8: Per Capita Statistics for Selected Canadian Public Libraries**

Library Name	Visits/ Capita	Total Visits	Total Staff/ 1000 residents	Salaries & Benefits/ Capita <sup>[1]</sup>	Materials Expenditures per Capita	Total Expenditures per Capita
Toronto Public Library	6.4	17,554,470	0.90	\$50.3	\$6.2	\$67.5
Calgary Public Library	5.3	5,554,980	0.71	\$28.1	\$6.7	\$41.4
Ottawa Public Library	5.5	5,005,050	0.77	\$30.8	\$5.2	\$50.8
Edmonton Public Library	7.2	5,623,814	0.73	\$30.7	\$7.1	\$60.5
Mississauga Library System	6.1	4,449,550	0.64	\$26.8	\$3.3	\$41.4
Winnipeg Public Library	4.1	2,771,358	0.59	\$21.2	\$4.3	\$42.7
Vancouver Public Library	10.8	6,439,349	1.36	\$49.4	\$9.3	\$77.4
Halifax Public Libraries	6.0	2,251,504	1.22	\$40.7	\$5.0	\$60.9

Source: Canadian Urban Libraries Council. 2009 Canadian Public Library Statistics

Note: Due to inconsistencies, relevant statistics from Montreal Bibliotheque were excluded from this analysis

Data can be influenced by the variation in compensation, cost of living, and collective agreements for full time and part time staff

Vancouver Public Library is serving more clients than the city proper. The smaller population number for Vancouver proper influences the costs per capita data.

Staff costs per capita are the highest of the comparable cities. TPL costs as well as those of other jurisdictions are influenced by various variables including labour market dynamics (e.g. regardless of sector, wages for similar positions are higher in Toronto), cost of living considerations, availability and commitment from volunteers, compensation terms in collective agreements for full and part time positions, surrounding populations and physical geography (e.g. Vancouver attracts more visits from outlying municipalities as well as those persons who work downtown but live outside of the city proper).

Second the data would suggest that TPL has more than adequate staffing levels given the number of visits per capita. Third, one could infer that the number of visits per capita could be increased by simply shifting hours of operation to higher demand times of the days (i.e. evenings and weekends) and reduce morning open hours and off-peak weekdays.

<sup>33</sup> City of Mississauga. Mississauga Library System Business Plan and Budget 2011-2014. <http://www.mississauga.ca/file/COM/H2011-2014MississaugaLibraryApprovedBusinessPlan.pdf>

In response to City Council's direction to reduce budgets by 10%, TPL has been examining the issue of reducing open hours (as a component of the 10% budget reduction). TPL is proposing open hours reductions of 7% of the current total hours open, including closures on Sunday, the busiest day of the week as measured in circulation per hour.

Given the growth and value of a virtual library, comments by residents from TPL's core services review consultations that more open hours are least important of three key issues, and service demand patterns, the DPRA consulting team suggests that the following weekly hours allocation per branch type would more appropriately meet peak customer demand times Monday through Sunday. This could mean no/minimal morning service on weekdays, or closures on off-peak weekdays and greater hours on high peak times (afternoons, evenings and weekends) across all branches. Such a shift in open hours to be consistent with customer peak demand times may result in a transitional scheduling challenge for staff, however over time it is achievable. The following proposal is made for TPL and the City's consideration:

- **Research and Reference Branches (2):** 56 hours per week (Monday through Sunday);
- **District Branches (17):** 56 hours per week (Monday through Sunday);
- **Neighbourhood Branches (32):** 48 hours per week (Monday through Sunday); and,
- **Neighbourhood Branches (47):** 40 hours per week (Monday through Sunday).

Assuming this proposal is accepted, it would result in a 35,164.5 hour savings per year (or 13%) compared to current total hours open but more focussed on peak customer demand periods. Presuming a direct 13% saving of overall operating labour costs (i.e. related to Monday through Saturday and Sunday costs), the annual savings would be \$10,097,285. However, the direct reduction of hours may not correlate directly with staff reductions as there are certain business functions that will be required regardless of the number of open hours (i.e. minimum staffing thresholds). Hence, the net savings will likely be in the range of \$7,000,000. The calculation does not directly take into consideration premium pay for late evenings and Sundays since it is unclear as to how many hours would be associated with late evening and Sundays.

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## **6 - OBSERVATIONS, CONSIDERATIONS AND RECOMMENDATIONS**

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The following observations, considerations and recommendations are based upon the consulting team's analysis and triangulation across the various lines of evidence. These lines of evidence included background documentation, jurisdictional comparisons and interviews, branch and hub tours, discussions (interviews and focus groups) with key Toronto Public Library (TPL) staff, and other data sources provided to the DPRA team. Based on the analysis, the following are the consulting team's observations and considerations to facilitate Board and Council decision-making related to TPL process efficiencies, effectiveness, and potential consolidations as per the Statement of Work (SOW).

This report documents both the study process and study results based on a limited scope and timeline: this is not an in depth comprehensive assessment. The observations, findings and recommendations are approximations and meant to guide TPL to complete further evaluation.

The calculations and numbers presented in this report are based on the information and documentation provided to the DPRA consulting team during the SES. During the completion of the analysis and the development of this report, some of the report numbers/information and documentation have been updated by TPL, hence may not be consistent with data presented in recent publications released since the development of this report.

Each specific recommendation includes a description/rationale; the estimated cost implication of the recommendation – or potential cost savings to TPL and the City of Toronto; the priority compared to other recommendations with respect to implementation (low, medium or high); the estimated timing for implementation; and the identification of points to consider with respect to implementation (i.e. risk).

The following observations, considerations and recommendations are cognizant of the efforts and commitment of TPL related efficient and effective operations, data collection and management, and proactive identification of process efficiencies. TPL is a quality work environment driven and framed by its investments and commitments to Lean Six Sigma principles. However as with any organization, there is room for enhancements, consolidations and improvements directed to increased efficiency of processes and service provision.

The recommendations section is divided into two subsections: first, are select recommendations put forward by TPL to its Board for approval in response to City Council's request for 10% budget reductions. These TPL recommendations are consistent with DPRA research during the execution of the SES, and therefore, the DPRA consulting team supports. The detailed budget savings related to the recommendations submitted by TPL to the Board are not included as they are detailed in the October 2011 Board Meeting package.

Section 6.2 includes further recommendations noted by the DPRA consulting team resulting from this SES.

## **6.1 RECOMMENDATIONS NOTED BY TPL (AND INCLUDED IN ITS 2012 BUDGET) AND SUPPORTED BY DPRA CONSULTING TEAM**

### **RECOMMENDATION 1 – THAT THE TPL BOARD CONSOLIDATE THE TWO INTER-BRANCH DELIVERY HUBS INTO ONE AT ELLESMERE**

There are currently two hubs that support inter-branch deliveries. The Front Street hub is a smaller operation and supports the south branches, while the Ellesmere hub (a former Scarborough library branch) supports the east, north, and west branches.

DPRA supports the work by TPL aimed at consolidating the hubs. Consolidation will not only increase efficiencies but will ensure that the process is centralized into one location. Having operations centralized to one location allows for greater control, increased Quality Assurance and Quality Control (QA/QC), and an enhanced ability to monitor and adjust processes and efficiencies as and when needed. It will also facilitate reductions in the size of the fleet, eliminate trips between hubs<sup>34</sup>, and further optimize delivery routes<sup>35</sup>. A reduction in delivery routes also reduces fleet operations and maintenance costs.

### **RECOMMENDATION 2 – THAT TPL STREAMLINE THE HOLDS PROCESS BY IMPLEMENTING A NEW LABEL TECHNOLOGY**

The holds process as it currently operates could be augmented to be more efficient and effective. The current process resembles the following: upon printing the holds report, the staff “picks” the item in question off the shelf, fills in a hold/delivery slip by hand, and wraps it around the book with an elastic band. This process can take time, slips can get lost and hand-written notes can be illegible which, in turn, can result in errors.

Instead of printing out reports, it is recommended that labels be printed. Then, as the staff person “picks” the items off the shelf, the labels can be applied directly to the hold item at the time of picking. Labels eliminate errors associated with lost slips and illegible handwriting. In addition, check in stations should be equipped with similar processes so that when a book is returned, the system would recognize if there is a hold on the item being returned and print a label, as needed. This would ensure that the item is sorted in a more expedited fashion and placed in the appropriate bins for delivery to the necessary hub.

### **RECOMMENDATION 3 – THAT THE TPL BOARD CONTINUE INVESTING IN SELF-SERVICE AND AUTOMATION (WHERE FEASIBLE) TO REALIZE LONG-TERM OPERATING COST SAVINGS**

DPRA’s review of other jurisdictions and the available technologies to support self-service found that Radio Frequency Identification (RFID) is the most appropriate, accepted, and used technology in libraries across North America. TPL, from 2003 to 2007, installed and piloted RFID technology in 9 library locations. Based on the success of the pilot, TPL received a one-time capital investment approval for \$6.6 million from the City to install RFID in 40 other branches in

<sup>34</sup> The frequency of trips between the Front Street hub and Ellesmere hub will be reduced, allowing for a re-configuration of routes and a reduction of one truck and driver per shift

<sup>35</sup> Routes are examined and adjusted on a regular basis for efficiencies by the facilities service coordinator.

2008. This capital investment is scheduled to be implemented by the end of 2012. In addition, based on circulation statistics and overall efficiencies, an additional 10 branches could support RFID self-service.

DPRA supports the TPL recommendation for the expansion of RFID for efficiencies and long term savings both related to self service at 10 additional branches as well as the installation of three automated sorters at North York Central Library, Richview and Agincourt.

Further, DPRA supports the TPL recommendation that FTE savings should not be reinvested in opening for longer hours and that the FTE savings from the 2012 implementations also not be re-invested: these savings should be realized to reduce the budget.

To facilitate these investments, TPL will need to transfer \$1 million from the virtual branch service project in 2011 and \$0.3 million from the multi-branch project in 2012.

**RECOMMENDATION 4 – THAT THE TPL BOARD UNDERTAKE A REVIEW OF MANAGEMENT AND ADMINISTRATION TO DETERMINE FURTHER EFFICIENCIES**

The current management complement is less than 4% of the total workforce and less than 5% of the total FTE count. When combined with other exempt positions, the total exempt group represents under 5% of the total workforce and approximately 6% of the total FTEs. TPL has completed a management review and is reducing exempt staff by 6 FTEs in 2012.

## **6.2 ADDITIONAL RECOMMENDATIONS RESULTING FROM SERVICE EFFICIENCY STUDY**

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In addition to supporting the proactive efforts of TPL regarding business process efficiencies and effectiveness, the DPRA consulting team offer the following additional service efficiencies and enhancements based on the research and analysis completed as part of the Service Efficiency Study.

**RECOMMENDATION 5 – THAT THE TPL BOARD CONTINUE TO DEVELOP STRATEGIES TO INCREASE THE VIRTUAL LIBRARY AND VIDEO/ AUDIO STREAMING AND CAPACITY**

There are numerous advantages over the longer-term for TPL to transition to a greater virtual library system. This could equate to significant savings. Therefore, it is recommended that TPL continue to develop strategies to further enhance and increase its virtual library collection, video streaming capacity (i.e. DVDs, e-books, music, magazines, newspapers, and periodicals), and maximize on-line transactional services. This may ultimately reduce the need for some “physical” branches and traditional library infrastructure – which has great potential cost savings given that it will reduce facility need along with associated operating costs and staffing needs/costs. It is important to note that the expansion of the virtual library is limited to availability of materials and funding.

The impact of full implementation of the “virtual library” on the need for a system of physical locations, including the number of branches as well as the level of service provided at each, has the potential for significant changes to the manner in which TPL service is delivered in the long

term and the resources required to do so. This will also reduce the number of holds, therefore reducing the workload and costs associated with the holds process. Further, it will improve service to clients as they will not have to wait up to seven days for some items – it can be obtained in real time. There has been significant growth in the development and use of TPL's virtual services, and there has been increased use of traditional library materials and traffic in branches. In fact, the use of technology and virtual services has been the way in which TPL has managed increasing demand without additional staff. As stated in the City Manager's Council report *Toronto's 2007 Performance Measurement and Benchmarking* on April 29 and 30, 2009:

*The Toronto Public Library's virtual branch is its online face providing e-services that extends and integrates with all other library services. The use of technology extends service 24/7 remotely and conveniently, which not only makes it easier for customers to find information, it has also allowed the Library to manage increasing demand in an effective and efficient manner without additional staff.*

*Demand for technology based services has increased dramatically with the shift to electronic sources of information, access to increasingly rich digitized content, the availability of downloadable e-content, and the rise of user generated content and social networking sites. Web 2.0 technology is offering new opportunities to reach residents, deliver service and engage online community participation in collaborative learning, programming and discussions.*

*Access to the Library's 1,922 public workstations, office software applications and high speed internet computers is an essential feature of 21<sup>st</sup> century public library service. The demand now extends to wireless service, increased bandwidth to support multimedia, and laptop lending to allow increased access to the online world of information.*

This has been an area of interest for TPL. However, barriers to date have been the lack of availability of content to purchase, the fact that not all residents have computers in their homes and those that do, may not have adequate bandwidth, and there is inadequate bandwidth within TPL which ranges branch to branch from DSL to 100 MBs; a significant gap. The download speed is also influenced by customer use of the internet within the branch (i.e. not an IT problem with Symphony). In discussion with TPL's Director of IT, it has been noted that current budgets include funds for upgrading bandwidth through the transition to fiber and a bandwidth capacity of 1GB by the end of 2013. Notwithstanding the issues of content availability and access to computers and bandwidth in residents' homes, this will allow for greater transition to video streaming and virtual services – reducing operating costs for some traditional library collections and associated costs in the longer term, and increase access to customers.

Recommendation 5: THAT THE TPL BOARD CONTINUE TO DEVELOP STRATEGIES TO INCREASE THE VIRTUAL LIBRARY AND VIDEO/ AUDIO STREAMING AND CAPACITY	
Cost:	Current City Funding
Savings:	<i>Multi-faceted. The considerations will be reducing the need for multiple copies of items which must be placed against cost for ability to stream content, availability of and residents' access to computers and bandwidth for streaming. There may be potential eventually to reduce some shelving space in the branches which will allow for more computer work stations as it is phased in. Further, as customers become more comfortable with the virtual library, the savings could increase exponentially in popularity which would reduce workload at every branch. Quantifying the savings is difficult, but when streaming is fully implemented in the longer term could be significant.</i>
Priority:	Medium
Timing:	2012-2013
Risk:	Nil – Low

#### **RECOMMENDATION 6 – THAT THE TPL BOARD REVIEW SCHEDULE OF OPEN HOURS TO ENSURE CONSISTENCY WITH PEAK CUSTOMER DEMAND FOR GREATER EFFICIENCY AND BETTER CUSTOMER SERVICE**

As noted and detailed in Section 5.2, customer activity varies by day and hour due to the number of branches open and the number of hours open. This is the case on Sunday, which is the busiest per hour with 27 branches open for 3.5 hours. This is likely a reflection of user patterns and the fact that personal leisure time is typically highest on weekends.

Thursdays and Fridays appear to have fewer visits per hour despite being open a significant number of hours per week. This suggests that while it is beneficial to offer customers access to library services and materials at the branches, there is a need to examine the schedule of the open hours to ensure that those hours are consistent with community needs and patterns of use, as well as determining the number of “required” open hours for a particular branch. The results of the community consultation for the City’s core service review also support the notion that residents do not need branches open more hours.

TPL's staff costs are higher than other jurisdictions. Further, the average number of visits per capita is lower than many municipalities. This indicates that TPL has more than adequate staffing levels given the number of visits per capita.

Given the growth and value of a virtual library, comments by residents from the core services review consultation, and service demands during afternoons/evenings/weekends, the DPRA consulting team suggests that TPL consider rescheduling branch hours to better align to peak customer demand times.

In response to the City’s direction to reduce budgets by 10%, TPL has been examining the issue of reducing open hours (as a component of the 10% reduction). TPL is proposing open hours



reductions of 7% or 19,444 hours of the current total hours open. Based on research and analysis completed as part of the SES, the DPRA consulting team is recommending additional reductions of open hours per year in order to realize additional budget savings.

The following weekly hour allocation, per branch type, is proposed as a way of meeting and accounting for peak customer demand times. It should be noted that this rescheduling could mean no/minimal morning service on weekdays, closures on off-peak weekdays, and greater open hours during high/peak times (i.e., afternoons, evenings, and weekends) across all branches. Such a shift in open hours to be consistent with customer peak demand times may result in a transitional scheduling challenge for staff, however over time it is achievable.

- **Research and Reference Branches (2):** 56 hours per week (Monday through Sunday);
- **District Branches (17):** 56 hours per week (Monday through Sunday);
- **Neighbourhood Branches (32):** 48 hours per week (Monday through Sunday); and,
- **Neighbourhood Branches (47):** 40 hours per week (Monday through Sunday).

Assuming this proposal is accepted, it would result in a 35,164.5 hour savings per year (or 13%) compared to current total hours open but more focussed on peak customer demand periods. Presuming a direct 13% saving of overall operating labour costs (i.e. related to Monday through Saturday and Sunday costs), the annual savings would be \$10,097,285. However, the direct reduction of hours may not correlate directly with staff reductions as there are certain business functions that will be required regardless of the number of open hours (i.e. minimum staffing thresholds). Hence, the net savings will likely be in the range of \$7,000,000. The calculation does not directly take into consideration premium pay for late evenings and Sundays since it is unclear as to how many hours would be associated with late evening and Sundays.

Recommendation 6: THAT THE TPL BOARD REVIEW SCHEDULE OF OPEN HOURS TO ENSURE CONSISTENCY WITH PEAK CUSTOMER DEMAND FOR GREATER EFFICIENCY AND BETTER CUSTOMER SERVICE	
<b>Cost:</b>	<i>Current City Funding</i>
<b>Savings:</b>	<i>\$7,000,000 Note - The calculation does not directly take into consideration premium pay for late evenings and Sundays since it is unclear as to how many hours would be associated with late evening and Sundays.</i>
<b>Priority:</b>	<i>Medium</i>
<b>Timing:</b>	<i>2012</i>
<b>Risk:</b>	<i>Medium - High. There will be push back from customers with the cutting back of branch hours. However, there is a need to re-examine hours of operation overall and shift of open hours to ensure that the operational hours correspond to the most peak times of public use. Libraries have evolved to become cultural and community gathering places, hence it will be more difficult to manage customer expectation. The implementation of branch consolidations outlined in recommendation 7 would increase the risk.</i>

## **RECOMMENDATION 7 – THAT THE BOARD CONSIDER CONSOLIDATING THE SERVICES OF SOME BRANCHES WITHOUT COMPROMISING SERVICE DELIVERY, AND SUPPORT EFFECTIVE BUSINESS MANAGEMENT**

Based on accepted scientific methods and measurement standards (both qualitative and quantitative) used to determine the feasibility and possible consolidation of services based on utilization and (under) performance, DPRA, in consultation with TPL staff, identified 15 branches that were underperforming.

As in business, where there are instances of lower than average performance, consolidation of services in fewer locations does not decrease services, but rather increases efficiency of operations and saves the costs of maintaining overlapping service areas. To determine the number of branches necessary to maintain an excellent library service to all Toronto residents, there are several considerations:

- 1) Distance to travel to any branch
- 2) Density of the population in the service area and demographics
- 3) Size of other branches in the area
- 4) Current demand measured by circulation and visitor counts.

There are instances where consolidation does not directly affect service delivery, because other branches overlap with the service area and neighbouring branches have the capacity to absorb additional demand. However, there are other instances where, regardless of performance and utilization; consolidation would result in a service gap in particular neighbourhoods. In the latter cases, consolidation of branches is not recommended even though the branch still performs below average. However, alternatives such as consolidation supported by the Bookmobile could be considered to ensure access to service to local residents.

While there appears to be overlap in some areas serviced by branches in the downtown area of Toronto, they are smaller branches serving the densest population of the City. Each is well utilized; as such, consolidation of small branches in close proximity is not an effective strategy, given that surrounding branches would not have the capacity to absorb the increase in customers without building larger branches.

DPRA's assessment and analysis (based on the provided and available data) suggest the following consolidations:

1. Swansea to be consolidated with: Runnymede, Brentwood (currently under renovation), High Park and Annette Street;
2. Todmorden Room to be consolidated with: S. Walter Stewart and Pape/Danforth;
3. Davenport to be consolidated with: Wychwood, and Dufferin/St.Clair;
4. Queen/Saulter to be consolidated with: Riverdale, Pape/Danforth, and Gerrard/Ashdale
5. Taylor to be consolidated with: Main St and Albert Campbell;
6. St.Clair/Silverthorn to be consolidated with Annette St and Dufferin/St.Clair;
7. Victoria Village to be consolidated with: Eglinton Square, Maryvale and McGregor Park;
8. Evelyn Gregory to be consolidated with: Mount Dennis and Maria A. Shchuka;
9. Long Branch to be consolidated with: Alderwood and New Toronto;

10. Perth/Dupont to be consolidated with: Bloor Gladstone, Annette St and Dufferin/St.Clair;
11. Mount Pleasant to be consolidated with: Northern District, Deer Park and Leaside;
12. Humber Bay to be consolidated with Mimico Centennial and Brentwood (currently under renovation);
13. Pleasantview to be consolidated with Fairview and Bridlewood; and,
14. Jones to be consolidated with: Gerrard/Ashdale, Riverdale, and Pape/Danforth.

Northern Elms ranks fourth in terms of underperformance; however, given the demographic circumstances of the neighbourhood (i.e., lower family incomes, significantly high proportion of newcomers, etc.); physical geographic barriers; and limited proximity to other branches, it is not recommended for consolidation at this time. However, Northern Elms could be considered for consolidation with Rexdale in addition to support from the Bookmobile. While the Bookmobile would ensure access to the collections for residents, it would not facilitate access to study space, computers, internet access and programs.

The consolidations proposed above would not lead to significant reductions in library service or access given that the affected populations are located in areas which are serviced by other branches within walking distance. The net operating costs for each of the 15 underperforming branches are noted in Table 3, and provide some savings that could potentially be realized as a result of consolidation.

Rank	Branch	Branch Salaries & Benefits	Other Operating Costs	Gross Operating Costs	Total Revenues	Net Operating Costs
1	Swansea	66,784	7,976	74,760	(2,400)	72,360
2	Todmorden Room	67,591	8,665	76,256	(3,828)	72,428
3	Davenport	202,140	34,716	236,856	(12,417)	224,439
4	Northern Elms	233,676	94,655	328,331	(11,139)	317,192
5	Queen/Saulter	204,298	59,703	264,001	(9,899)	254,102
6	Taylor	248,114	44,296	292,410	(13,243)	279,167
7	St.Clair/Silverthorn	225,474	31,783	257,257	(6,336)	250,921
8	Victoria Village	206,956	45,587	252,543	(10,685)	241,858
9	Evelyn Gregory	426,850	54,427	481,277	(11,765)	469,512
10	Long Branch	338,276	39,595	377,871	(15,726)	362,145
11	Perth/Dupont	234,570	26,043	260,613	(8,702)	251,911
12	Mount Pleasant	243,798	37,262	281,060	(19,007)	262,053
13	Humber Bay	253,284	26,909	280,193	(12,509)	267,684
14	Pleasant View	256,527	48,578	305,105	(18,820)	286,285
15	Jones	419,372	40,147	459,519	(18,416)	441,103

The net operating cost efficiencies from these proposed consolidations are estimated to be approximately \$3,682,000. If Northern Elms is consolidated, then, saving would increase to approximately \$4,000,000.

**Recommendation 7: THAT THE BOARD CONSIDER CONSOLIDATING THE SERVICES OF SOME BRANCHES WITHOUT COMPROMISING SERVICE DELIVERY, AND SUPPORT EFFECTIVE BUSINESS MANAGEMENT**

<b>Cost:</b>	<i>Nil – NOTE that any severance and wind down costs would be offset by the sale/disposal of properties and leases (as appropriate – e.g. Swansea, Todmorden are examples of properties that cannot be sold) which would accrue to the City. The City could ensure that TPL transition costs are recovered from such proceeds.</i>
<b>Savings:</b>	<i>\$3,682,000 (not including Northern Elms). \$4,000,000 (including Northern Elms) <b>Note – if the open hours are reduced the savings for branch consolidations will be less than noted here.</b></i>
<b>Priority:</b>	<i>Medium - High</i>
<b>Timing:</b>	<i>Strategy, planning and public consultation 2012-2013 Service Consolidations beyond 2012</i>
<b>Risk:</b>	<i>Medium - High.</i>

**RECOMMENDATION 8 – THAT THE BOARD DEVELOP A NEW STRATEGIC PLAN FOR THE LIBRARY WITH CONSIDERATION OF CITY PRIORITIES AND THE FISCAL CONTEXT**

Toronto Public Library's strategic plan is the primary method by which the Board fulfils its legislated mandate to provide a comprehensive and efficient public library service that reflects the community's unique needs. It is through this planning process that the Board establishes consensus on the business objectives of the Toronto Public Library.

The Library's strategic planning process ensures that the Library continues to fulfil its mandate and mission to meet the changing needs of the residents of Toronto within the context of Council direction and priorities and the Library's budget.

The development of a new strategic plan provides an opportunity to work with Council, the City, stakeholders and residents to determine what library services and service levels address community needs within the context of the City's priorities and fiscal environment.

**Recommendation 8: THAT THE BOARD DEVELOP A NEW STRATEGIC PLAN FOR THE LIBRARY WITH CONSIDERATION OF CITY PRIORITIES AND THE FISCAL CONTEXT**

<b>Cost:</b>	<i>Current City Funding</i>
<b>Savings:</b>	<i>\$0</i>
<b>Priority:</b>	<i>Medium</i>
<b>Timing:</b>	<i>Strategic Planning Process Starts in 2012</i>
<b>Risk:</b>	<i>Nil</i>

**RECOMMENDATION 9 – THAT THE CITY MANAGER INCLUDE LIBRARIES IN THE CURRENT STUDY OF PUBLIC SPACES TO ASSESS OPPORTUNITIES FOR SHARED FACILITIES WITH OTHER PROVIDERS OF PUBLIC SPACES.**

Libraries, schools, community centres, and service agencies (e.g. youth centres, YMCA, newcomer associations, etc.) all attempt to provide a range of services in response to community needs. Given that they all provide community space and there are similarities in

some business functions across such entities, there is merit in examining whether there are further opportunities for joint use facilities or the grouping of some of the services being provided by these separate entities for cost saving and efficiency purposes. The Social Development, Finance and Administration (SFDA) Division completed some of this work as part of another assignment.

It is recommended that the City work cooperatively with TPL to expand the scope of the original research to include library branches and better examine the feasibility of an integrated service delivery model that could potentially facilitate efficiencies and cost savings.

Recommendation 9: THAT THE CITY MANAGER INCLUDE LIBRARIES IN THE CURRENT STUDY OF PUBLIC SPACES TO ASSESS OPPORTUNITIES FOR SHARED FACILITIES WITH OTHER PROVIDERS OF PUBLIC SPACES.	
<i>Cost:</i>	<i>Current City Funding</i>
<i>Savings:</i>	<i>TBD as an output of the study – long term</i>
<i>Priority:</i>	<i>Medium</i>
<i>Timing:</i>	<i>2012</i>
<i>Risk:</i>	<i>Nil - Low</i>

**RECOMMENDATION 10 – THAT THE TPL BOARD ISOLATE PROGRAMS AS A DISTINCT SERVICE IN THE TPL BUDGET TO CLEARLY DESCRIBE THE PROGRAMS OFFERED, THE FTES USED TO ADMINISTER PROGRAMS, COSTS ASSOCIATED WITH USE OF THESE FTES AND ANY OTHER COSTS, AND ASSOCIATED PERFORMANCE MEASURES**

The Libraries Act provides that a library board shall seek to provide a comprehensive and efficient public library service that reflects the community's unique needs, may operate special services in connection with a library as it considers necessary, and shall not charge for access to the library or for use of circulation materials.

While TPL's public consultation on the core service review indicated that programs related to reading, learning, and literacy are very important to the general public, TPL's broad interpretation of this categorization of programs has resulted in development of some programs that are only peripherally related to literacy and library purposes, such as programs for health and wellness, business and finance, use of software, career planning, and games and hobbies. In addition, the 27,862 programs offered and their associated staff time and costs to develop and deliver are not specifically identified in TPL's budget submission to the City. Since programs are a major service, these should be specifically identified with their associated costs and revenues, if any, along with justification, service usage data, and performance measures. This is consistent with the Program Map developed by the City in consultation with TPL staff shown in Figure 1 of this report.

Decisions about service provision in some areas are decentralized to the individual branch level and there is a significant degree of discretion to tailor services to local neighbourhood needs. A comprehensive set of criteria on which to base service provision decisions and linking these to a specific service plan and budget, would result in pro-active allocation of resources.

The organization's current Strategic Plan document may be seen to potentially foster further expansion of service delivery; encourage further expansion of roles and responsibilities and services rather than be useful as a mechanism which focuses on specific, defined aspects of TPL's programs. It would be helpful for branches to develop specific criteria used to determine the type and quantity of programs offered.

**Recommendation 10: THAT THE TPL BOARD ISOLATE PROGRAMS AS A DISTINCT SERVICE IN THE TPL BUDGET TO CLEARLY DESCRIBE THE PROGRAMS OFFERED, THE FTES USED TO ADMINISTER PROGRAMS, COSTS ASSOCIATED WITH USE OF THESE FTES AND ANY OTHER COSTS, AND ASSOCIATED PERFORMANCE MEASURES**

<b>Cost:</b>	<i>Current City Funding</i>
<b>Savings:</b>	<i>TBD, likely \$50,000 - \$100,000 per year to reduce by at least 25% and consolidate programs</i>
<b>Priority:</b>	<i>Medium</i>
<b>Timing:</b>	<i>Planning 2012 Program Changes 2013</i>
<b>Risk:</b>	<i>Medium. Some program participants may need to seek alternatives.</i>

**RECOMMENDATION 11 – THAT TPL INSTALL AUTOMATED SORTERS AT THE CONSOLIDATED DELIVERY HUB AT ELLESMERE IN ORDER TO REALIZE BUSINESS PROCESS EFFICIENCIES**

There is an opportunity to improve efficiencies at the hub operations through automation. DPRA recommends the purchase and implementation of an automated sorter which would allow the sorting machine to read and sort books and then directly deposit them into their appropriate branch bins.

A single sorter, with the capacity to accommodate the Library's daily volume (47,250 items to be sorted per day) provides greater efficiency and capability to handle fluctuations or increases in volume.

Automation would also reduce the staffing requirement at hub operations, with conservative annual savings of \$345,000 in reduced staffing costs. It is suggested that TPL staff monitor the FTE requirements with the introduction of the automated sorter and where/as appropriate reducing staffing complement. The annual maintenance cost of the sorter is estimated at \$120,000 for a net savings of \$225,000.

**Recommendation 11: THAT TPL INSTALL AUTOMATED SORTERS AT THE CONSOLIDATED DELIVERY HUB AT ELLESMERE IN ORDER TO REALIZE BUSINESS PROCESS EFFICIENCIES**

<b>Cost:</b>	<i>Automated sorter = \$1,690,000 Plus annual capital and maintenance costs of \$120,000</i>
<b>Savings:</b>	<i>\$345,000 annually in reduced staffing costs</i>
<b>Priority:</b>	<i>Medium – High</i>
<b>Timing:</b>	<i>2012</i>
<b>Risk:</b>	<i>Medium. While the short term investment is high, the investment will be recouped in 6.5 years. No funding has been identified in the 10 year Capital Budget</i>

## **RECOMMENDATION 12 – THAT THE TPL BOARD CONTINUE TO IMPLEMENT COST SAVINGS AND EFFICIENCIES AT THE TORONTO REFERENCE LIBRARY**

The Toronto Reference Library (TRL) was not part of the current study. However, many of the processes reviewed for this assignment that are relevant to circulation library branches can and have been applied to the Toronto Reference Library. Significant department and service consolidations within TRL in the last two years have achieved efficiencies and cost savings. The Library's current continuous improvement findings will be applied to TRL activities achieving a cumulative 10% reduction in staffing costs, including the deletion of one management position. Given its size and breadth of service, ongoing continuous improvement initiatives may identify further efficiencies and cost-saving opportunities.

In addition, the efficiency study did not include an assessment of the administrative and management functions of the overall Toronto Public Library System. This should be assessed as part of the cross-cutting administrative services efficiency study to be conducted by the City Manager.

<b>Recommendation 12: THAT THE TPL BOARD CONTINUE TO IMPLEMENT COST SAVINGS AND EFFICIENCIES AT THE TORONTO REFERENCE LIBRARY</b>	
<i>Cost:</i>	<i>Current City Funding</i>
<i>Savings:</i>	<i>TBD – assume \$150,000</i>
<i>Priority:</i>	<i>Medium</i>
<i>Timing:</i>	<i>Beyond 2012</i>
<i>Risk:</i>	<i>Low</i>

## **RECOMMENDATION 13 – WHERE POSSIBLE, TPL SHOULD CONSIDER COST RECOVERY FOR SOME OF ITS SERVICES AND PROGRAMS**

As reported through the public consultation report from the City's Core Service Review, a majority of Toronto residents feel that existing levels of taxes are adequate to operate libraries and there is no need for additional costs for service. However, the language in the legislation does allow for charging for certain services. The library should carefully consider areas where further cost recovery is possible. Further, there is precedent in other jurisdictions for cost recovery. Fees could be charged for selected adult programs, holds that are not picked up, and inter-branch delivery charges. A range of other options should be explored and confirmed with a legal opinion.

TPL is currently assessing the feasibility of the following cost recovery fees.

- Online payment charges: an added function on TPL's website to enable users to pay fines and fees online. The cost to administer and maintain this new user fee is \$0.019 million annually. This user fee is at full cost recovery with estimated revenue of \$0.019 million per year.
- Facility rentals for movie shoots: additional revenue of \$0.010 million and estimated cost of \$0.010 million annually is anticipated by allowing movie shoot access to library facilities.

In addition, TPL should consider establishing user fees for programs that meet all of the following criteria:



- Designed for adults; and
- Not directly related to use of the library, its materials, and literacy; and
- Conducted in branches that are not primarily low income neighbourhoods.

Programs not directly related to use of the library, its materials and literacy might include programs related to:

- Business, legal and personal finance
- Career and job search
- Newcomer and ESL
- Health and wellness

**Recommendation 13: THAT, WHERE POSSIBLE, TPL CONSIDER COST RECOVERY FOR SOME OF ITS SERVICES AND PROGRAMS**

<i>Cost:</i>	<i>TBD</i>
<i>Savings:</i>	<i>\$500,000 plus minimal saving through reductions between staff and customer interactions</i>
<i>Priority:</i>	<i>Low</i>
<i>Timing:</i>	<i>2013</i>
<i>Risk:</i>	<i>Nil - Low</i>

**RECOMMENDATION 14 – THAT TPL STAFF DEVELOP MORE SPECIFIC DATA TO ENHANCE PLANNING, BUDGETING AND SERVICE DELIVERY IMPROVEMENTS**

While TPL should be commended for its proactive approach and sound judgement in supporting efficiency improvements to its processes, the SES completed by the consulting team revealed that there are some gaps in the data being collected / made available. This data, if it were available, would assist with the identification of future service delivery improvements and budgeting. It is recommended that the following data be collected and made available over the course of the next few years: data related to users; more detailed information on the various programs (where / when delivered and how many participants per program); cost of service and program delivery by branch and type; long-term lease costs as distinct from short term room rentals; and number of customers/patrons (by branch) per hour per day.

**Recommendation 14: THAT TPL STAFF DEVELOP MORE SPECIFIC DATA TO ENHANCE PLANNING, BUDGETING AND SERVICE DELIVERY IMPROVEMENTS**

<i>Cost:</i>	<i>Current City Funding</i>
<i>Savings:</i>	<i>TBD as an output of the study – long term</i>
<i>Priority:</i>	<i>High</i>
<i>Timing:</i>	<i>2012 and beyond</i>
<i>Risk:</i>	<i>Nil</i>

**RECOMMENDATION 15 - MINOR PROCESS EFFICIENCY RECOMMENDATIONS**

The following recommendations offer individual, smaller scale enhancements and efficiencies. However, the cumulative cost saving impact of their implementation may contribute efficiencies and some cost savings.

### ***A - Standard Truck Size***

Currently there are two sizes of trucks used for the delivery routes between the hubs to all library branches, 16 and 18 foot trucks. To achieve efficiencies and to ensure that loading does not exceed MOT regulations, TPL is standardizing on 18 foot trucks. TPL has been working with Fleet Services to work towards standardization on 18 foot trucks. It is the consulting team's understanding that as the trucks are replaced as part of the refresh cycle, Fleet Services is acquiring the necessary 18 foot vehicles for the Library.

### ***B - Enhance Online Functionality***

TPL has recently upgraded its server for Symphony. This new capacity and processing power should allow for efficiencies on numerous processes. Currently, customers can access the TPL collection on line but cannot fully manage their accounts. TPL plans to expand its online functionality to include account creation, account management, paying fines, etc.

This transition to "self-service" would reduce some of the staff time spent on such transactions over time. While the overall time spent on these tasks is minimal, hence saving would be limited, it would be more consistent with TPL's current direction and vision (as per strategic plan and mandate) related to self-service and Lean Six Sigma principles as well as improving customer service.

Further such online capacity more easily supports the City and TPL's commitment for multilingualism (as an international city).

### ***C - Physical Space and Layout Suggestions***

In some of the older branches such as Albion, the physical space and the layout of the desks and counters inhibit efficiencies and results in more time required to complete various library processes. Saving could be realized by adjusting the physical spaces and equipment/furniture/fittings layout (where and as appropriate – i.e. does not involve financial investment until a branch is slated for renovation) to reduce time required to complete business processes.

Further, in terms of self service, these stations should be separated (where and as appropriate) from the main counter as it seemed to cause confusion for patrons and staff uncertainty whether a client required assistance. However, in recognition of minimizing costs, TPL installs RFID combo check out stations on existing service desks at many branches. As well, staff can readily monitor several stations and intervene if customer assistance is needed and the customer does not have to move to another station.

Drop box locations in some branches also results in more time required to complete the material check in function as the box is physically located further from the counter than other locations. Again, where and as appropriate, consideration should be given to relocate internal and external drop boxes closer to the sorting rooms. In Albion, the box is located in a small room 75 metres from the sorting area, through the branch, and past the foyer. Relocations would require minor capital investments (where appropriate). We recognize this issue is considered when renovations are planned/completed (e.g. Cedarbrae).

***D – Synchronizing of Holds Picking and Re-shelving Processes***

Staff could link the processes for pulling holds off the shelf with the reshelving of materials. This would mean staff are only doing the route through the branch once.

In contrast, TPL staff have investigated the feasibility of linking the processes for pulling holds off the shelf with the reshelving of materials. From TPL's perspective, this could in fact delay the filling of holds and would require synchronization with delivery schedules and holds pick list generation and it would not be advisable to implement.

The TPL report by TPL staff substantiating the investigation noted above was not provided to DPRA during this study.

***E - Home Delivery***

The home delivery program serves an important function. However, it could be useful to examine the criteria for eligibility and the processes for home delivery to identify efficiencies. This would include the quantification of the program's fully burdened costs and monitoring to then determine service and cost efficiencies. This recommendation is in addition to the efficiencies identified by TPL with the consolidation of Home Delivery to the North York branch.

***F - Shared Services***

DPRA supports the shared services concept between the City and its agencies for "back office" administrative functions (e.g. payroll). This should result in some efficiencies and cost savings. The consulting team's experience and research for other assignments regarding shared services models for Toronto show that these measures have resulted in efficiencies.

***G – Reduction in Internal Mail***

Currently Internal mail is handled by delivery and sorting staff associated at the hubs. Internal mail consumes 35% of one FTE daily. Efforts should be made to reduce the amount of hard copies of documents being shipped through internal mail. In some cases, opportunities exist to scan and electronically transfer files across TPL.

Recommendation 15: Minor Process Efficiency Recommendations	
<b>Cost:</b>	<i>Current City Funding</i>
<b>Savings:</b>	<i>These recommendations collectively equate to potentially 4 FTEs or \$250,000</i>
<b>Priority:</b>	<i>Medium - Low</i>
<b>Timing:</b>	<i>2012-2013</i>
<b>Risk:</b>	<i>Nil - Low</i>

### 6.3 SUMMARY OF COSTS AND SAVINGS

The following are the estimated costs and potential savings of the DPRA consulting team's recommendations (i.e. recommendations 5 through 15) for 2012 and 2013. *Note – if the recommendations for both open hours reductions and branch consolidations are implemented, the overall savings will be less than noted here (i.e. double counting).*

Summary of Costs and Savings 2012	
<b>Cost:</b>	<i>\$1,810,000 capital</i>
<b>Savings:</b>	<i>\$6,795,775 annual operating</i>

And in addition for future years:

Summary of Costs and Savings beyond 2012	
<b>Cost:</b>	<i>\$ 120,000 annual operating</i>
<b>Savings:</b>	<i>\$3,737,000 – 4,075,000 annual operating</i>
<b>Net:</b>	<i><b>\$3,617,000 – 3,995,000</b></i>

# Appendix A: Bibliography

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NOTE: The DPRA Consulting team also had access to internal documents that were not released for publication

# **Appendix B: Additional RFID Technology Information**

## **RFID Tags**

RFID is not a single technology; there are hundreds of different RFID products on the market today, and new ones appearing constantly. There are various types of RFID tags. What varies is the amount of information the tag carries, the range in which it can be read, the frequency of its radio waves, its physical size, and of course its cost. Read/write tags, which are chosen by most libraries, can have information changed or added and “bits” set for security. All of the tags used in RFID technology for libraries are “passive.” The power to read the tags comes from the reader or exit sensor, rather than from a battery within the tag. Simply, RFID tags are intelligent bar codes that can talk to a networked system to track materials or products. The RFID tags communicate with an electronic reader that detects every item almost instantly and send this information to the larger network.

The library application of the RFID technology will likely have the longest-lived tags of any other sector, since books can remain on shelves and circulate over decades, while retail products have a short shelf life and even debit cards rarely are issued for more than four or five years. Libraries may also need tags that, although inexpensive, can be reprogrammed and may even need to have more than one “lifetime,” for example in the case of an item that is moved into storage or is sent to another library through inter-library loan.

TPL currently uses media specific tags be used for tagging DVD’s, CD’s and other media that are of higher risk for theft and it is recommended that these media tags continue to be used. Media tags can be applied directly on the DVD versus on the outside casing. The cost of media tags has decreased along with the quality of the tag allowing for improved scanning accuracy.

The main advantages of RFID for libraries are:

- Self-service – resulting in reduced need of staff resources, resulting in saving;
- Facilitates greater security for library materials (in particular DVDs and CDs) as each tagged item will sound an alarm if it is not checked out prior to leaving the branch;
- Higher volume branches using RFID can be equipped with RFID automated sorters to streamline check in and reshelving processes; and
- High speed inventory management and updating
- Reduced materials handling for staff resulting in a healthier workplace and fewer repetitive strain injuries

## **RFID Readers and Uses**

A typical system includes several different kinds of readers, also known as sensors when installed at library exits. These are radio frequency devices designed to detect and read tags to obtain the information stored thereon. The types of readers include staff workstations for circulation desk charging and discharging, patron self-charging stations, and longer-range walk-through exit sensors to detect and read an RFID tag passage for purposes of determining whether it is a charged (authorized/no alarm) or discharged (non-authorized/alarm) event. It is also possible to install a reader in a book drop to discharge materials as they pass the reader. Finally, there is a portable device that consists of a scanning gun attachment to read a group of items on the shelves for purposes of locating missing and misplaced items.

### **RFID Tagging Lessons Learned**

The DPRA consulting team has assembled the following lessons learned and best practices from other jurisdictions to further enhance TPL's knowledge base related to the full migration of RFID technology:

- Weeding to reduce costs
  - Cut the costs of tagging by undertaking a rigorous weeding program before commencing conversion. Remove old stock, determine how many years' worth of magazines to keep and if non-circulating collection requires tagging.
  - Use of the Library Information Management System (LIMS) to understand borrowing patterns
    - By generating reports examining which items were regularly borrowed and which hardly left the library, LIMS is able to undertake extensive weeding prior to tagging its collection, which helped keep costs down.
- Basing order of conversion on collection usage, not floor plan
  - Bayside Library Service (Australia) undertook the conversion process moving left to right through its shelves, collection by collection. It realized the value of converting the collection based on usage patterns.
- Temporary closure of branches during tagging when possible
  - The Denver Public Library found that the amount of time and quality of tagging was greatly enhanced in the branches that were temporarily closed during the tagging process.
- Use the more expensive media tags on DVD's, CD's and other media items
  - The Denver Public Library initially tagged their media collection using standard tags put on the outside casing but have seen a large number of these items stolen by savvy thieves who quickly realized how to beat the system
- Remembering new items and catching returns
  - Having a controlled process in place for managing the tagging of new items and being able to handle items being returned that have not yet been tagged.
- A critical success factor is ensuring that the RFID system works correctly with the existing Library Information Management System
- Positioning Self Loan Stations
  - Bayside Library Service identified a number of factors around the positioning of Self Loan Stations. First was that they had to be a minimum of three metres away from security gates so as not to interfere with each other's function. The position of power and network points was also an obvious but critical factor; they had to be available yet protected from tiny fingers
  - Location relative to staffed help desk. The Denver Public Library remodeled their central library and saw a decrease in the use of self-check-out from 85% down to 65%. They attribute the decrease to the new location of the staffed help desk versus the self-service stations. They are now attempting to address this issue and again increase their self-service rate.



- Adequate signage and having available help personnel/greeters during the early stages
- Security Mechanism
  - Libraries may look to RFID as a security mechanism. In one method, the tag that is used has a special "security bit" that can be switched from "checked-in" to "checked-out." The exit gates at the library read each tag as the user passes out of the library and sounds an alarm if the bit is not in the "checked-out" state. The check-in function resets the bit.
  - The Denver Public Library has customized the security mechanism to also have internal library room security gates where for instance, all media items are in a room that is secured such that material may enter the room but media items must be checked out before they can be removed from the room. Items on hold are handled in a similar manner.

# **Appendix C: Additional Information Regarding Automated Sorters**

### Findings from Other Libraries – Automated Sorters

- Seattle Public Library<sup>36</sup>
  - Staff is freer to work with the public versus doing repetitive, labor-intensive work that is now done by the automated sorter
  - Material once sorted by hand locally is now dumped into a Smart Bin and brought to central for sorting
  - When a branch receives a bin full of 130-150 returned items, they can all be checked in with a single click
- Denver Public Library
  - The implementation of RFID and automated sorters has allowed DPL to provide the same level of service with a reduction in FTE at its busiest locations
  - Automated sorting only implemented in the branches with the highest circulation volume and physical room to accommodate the sorters so only three branches out of 24 have automated sorters
    - Without a high enough circulation volume and physical room without remodeling DPL felt the sorters would not be cost beneficial

### Items to Considering Regarding Installation of Automated Sorting System

- What branches to implement automated sorting system
  - *Physical logistics* – is there space for the automated sorting system. The sorting system takes up considerable room so branches may need to be remodeled to accommodate the sorter
  - *Circulation volume* – is their enough volume to be able to achieve benefit from the added efficiency
- How large of a sorter is required i.e. how many bins
  - The larger the sorter the increased cost and additional space that is required
  - Too small of sorter and no benefit may be achieved
    - The Denver Public Library installed a 3-bin sorter at a branch and found that the sorting is not detailed enough to provide benefit and that the bins still need to be manually sorted after the initial automated pre-sort

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<sup>36</sup> <http://www.libraryjournal.com/article/CA633326.html#FeedingtheBeast>