



Toronto Public Health Capital Budget and Plan Request

2016-2025



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EXECUTIVE SUMMARY

This report provides an overview of the Toronto Public Health (TPH) 2016 Capital Budget and 2017-2025 Capital Plan and Forecast.

TPH is submitting a 2016-2025 Capital Budget and Plan request of \$28.476 million, including a 2016 Capital Budget of \$3.852 million and future year commitments of \$4.558 million and a 2017-2025 Capital Plan and Forecast of \$20.066 million. The Debt Affordability Target provided by the City for TPH is \$3.392 million in 2016, \$3.388 million in 2017, \$3.363 million in 2018, \$3.373 million in 2019, \$3.400 million in 2020 and, \$11.100 million for 2021 to 2025 for a total of \$28.016 million. TPH will receive 100% Provincial funding for one IT project (Infectious Disease Control Information System) for \$0.460 million in 2016.

The 10-Year Capital Budget and Plan request will provide funding for nineteen Information and Technology (IT) projects that support improvement of service delivery with the development and enhancement of systems while complying with Provincial mandatory reporting requirements. There is no additional operating impact associated with these nineteen IT projects.

Table 1: 2016-2025 Capital Budget and Plan Request

Toronto Public Health 2016 - 2025 Capital Budget and Plan Request (\$000's)											
	2016 Budget Request	Commitments/Plan				Total 2015 - 2019	2019-2023 Forecast				
		2017	2018	2019	2020		2021	2022	2023	2024	2025
2016 Budget & Future Year Commitments	3,852	2,846	1,712			8,410					
2017 - 2025 Plan and Forecast (Estimates)		542	1,651	3,373	3,400	8,966	3,000	2,500	2,200	1,700	1,700
Total Plan and Forecast	3,852	3,388	3,363	3,373	3,400	17,376	3,000	2,500	2,200	1,700	1,700
Provincial Funding (100%)	460					460					
Debt Affordability Target	3,392	3,388	3,363	3,373	3,400	16,916	3,000	2,500	2,200	1,700	1,700
Over/(under) Debt Target	0	0	0	0	0	0	0	0	0	0	0

Demand for public health services and the business support for those services continue to grow. Technology is required to extend TPH's capacity to provide service in a timely way while fiscal constraints require human resources to be maintained or reduced. Service metrics and reporting with real time data are an increasing expectation. Professionals also expect to use tools that allow them to provide more services most effectively and enable them to access information, upload data and report on services, costs, performance metrics and other requirements. TPH uses a number of technology systems to assist in delivering services. TPH requires the means to monitor various information and metrics to ensure standards are being met within acceptable boundaries and to demonstrate accountability.

The Ontario Public Health Organizational Standards includes the requirement to develop and implement an IT strategy for each public health unit. An IT Strategy for TPH was completed in 2014 which defines the strategic IT priorities from 2014 to 2018.

When programs are directed to do more with the same or fewer resources, it is critical that the organization provide the IT tools to increase efficiency. Audit requirements, performance metrics and the need to demonstrate effective management of resources requires a planned realistic approach in providing tools that enable timely and efficient reporting.

Toronto Public Health is, in certain cases, required to use specific forms of information technology and certain systems to collect and share information with other jurisdictions through provincially developed systems. TPH, as with all health units in Ontario, is also required by law to collect and report critical information related to communicable and reportable diseases within mandated timelines and formats prescribed by the province.

The Capital Budget and Plan presented below outlines a series of projects designed to improve TPH's ability to share required information and improve accountability through effective and timely information collection as well as assisting in more efficient delivery of programs and services to and on behalf of the residents of Toronto.

RECOMMENDATIONS

The Medical Officer of Health recommends that:

1. City Council approve a 2016 Recommended Capital Budget for Toronto Public Health with a total project cost increase of \$5.550 million and a 2016 cash flow of \$4.327 million and future year commitments of \$4.558 million. The 2016 Capital Budget is comprised of the following:
 - a) New cash flow funding for:

- i) Three new sub-projects and five change in scope sub-projects with a 2016 total project cost increase of \$5.550 million that requires an increase in cash flow of \$1.805 million in 2016 and future year commitments of \$2.033 million in 2017; and \$1.712 million in 2018; and
 - ii) Five previously approved sub-projects with a 2016 cash flow of \$2.047 million and future year commitments of \$0.813 million in 2017.
 - b) 2015 approved cash flow for four previously approved sub-projects with carry forward funding from 2015 to 2016 totalling \$0.475 million;
2. City Council approve the 2017-2025 Capital Plan for Toronto Public Health totalling \$20.066 million in project estimates, comprised of \$0.542 million in 2017, \$1.651 million in 2018, \$3.373 million in 2019, \$3.400 million in 2020, \$3.000 million in 2021, \$2.500 million in 2022, \$2.200 million in 2023; \$1.700 million in 2024; and \$1.700 million in 2025; and
 3. The Board of Health forward this report including the attachment to the City's Budget Committee for its consideration during the 2016 budget process.

The figures forming the basis of the Recommendations are shown in the table below.

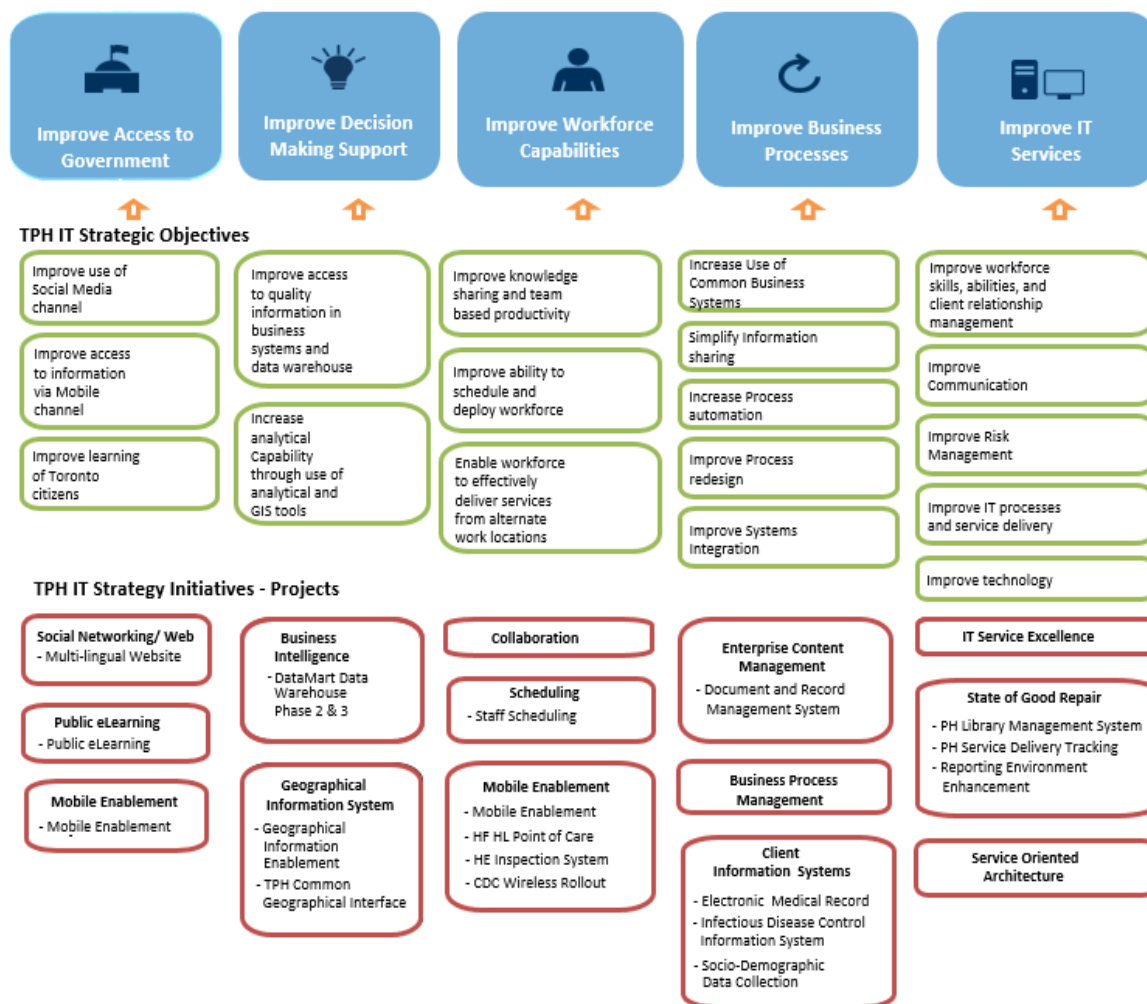
Table 2: 2016-2025 Capital Budget and Plan Request

2016 - 2025 Capital Budget and Plan Request												
(\$000's)												
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total 2016-2020	Total 2017-2025
Gross Expenditures												
2016 FY Commitments	2,047	813									2,860	
2017 New/Change in Scope & Future Year Commitments	1,805	2,033	1,712								5,550	
Total Plan and Forecast	3,852	2,846	1,712								8,410	4,558
Projected Carry Forward to 2016	475											
Total 2016 Cash Flow	4,327											
2017-2025 Capital Plan		542	1,651	3,373	3,400	3,000	2,500	2,200	1,700	1,700		20,066

IMPACT OF THE TPH IT STRATEGIC PLAN ON THE CAPITAL PROGRAM

The Capital Program is integral to the achievement of the following TPH business driven IT Strategic goals and objectives contained in the TPH IT Strategy (2014-2018) through the funding of various initiatives and projects identified in the IT Strategy:

Chart 1: TPH IT Strategy Goals, Objectives, and Initiatives/projects



OVERVIEW CAPITAL BUDGET AND PLAN

2016-2025 Capital Budget and Plan

The 2016 Capital Budget process requires City Divisions and its Agencies, Boards and Commissions (ABCs) to submit a 10-Year Capital Budget and Plan within the debt affordability and capital targets established for each of the 10 years. City Divisions and ABCs must develop their 10-Year Capital Budget and Plan based on these debt targets.

As shown in Chart 1, the TPH IT Strategy (2014-2018) identifies five IT Strategic goals and 18 supporting objectives to be achieved. The TPH IT Strategy also identifies 14 initiatives to realize these strategic goals and objectives.

As described below, various projects support the achievement of each of the five TPH IT Strategic Goals and associated objectives.

1. *Improve Access to Government services*

Information Technology plays an important role in meeting the public’s demand for access to TPH information and services. To satisfy this need, TPH plans to: improve the use of Social Media channels and mobile devices; and provide additional distance learning opportunities.

- The **Public Health Multilingual Web Site** project will create a translated website of public health related information that is accessible in languages targeted to specific audiences to improve sharing of information.
- The **Public eLearning** project will implement a system to enhance the ability to create, deliver and manage public health eLearning for Toronto citizens.
- The **Mobile Enablement** project will, in part, provide mobile applications for use by the public to provide information pertaining to pre and post-natal support, health alerts, and agencies providing public health services.

2. *Improve Decision-making Support*

Information technology has a key role in supporting TPH’s objectives of service excellence and accountability by: improving access to quality information in business systems and data warehouses; and strengthening analytical capabilities through use of various analytical and GIS tools.

- ☑ Phase 2 and 3 of the **Datamart Data Warehouse** project will expand the use of City wide business intelligence and GIS tools for query, reporting and analysis tools to better monitor performance and analyze trends to adjust programs and meet mandatory Ministry of Health and Long-Term Care reporting requirements in a timely manner.

3. *Improve Workforce Capabilities*

In support of TPH's commitment to excellence by ensuring continuous improvement in organizational performance, TPH strives to provide tools and systems that staff need to enhance performance and provide high quality service to clients. Workforce capabilities will be enhanced by: improving knowledge sharing and team based productivity; improving staff's ability to schedule and deploy resources; and enabling staff to effectively deliver services from alternate work locations.

- ☑ The **HF/HL Point of Care** project will implement wireless devices which will allow communication with the TCHIS-*Toronto Community Health Information System* and synchronize data between the mobile units and the TCHIS database.
- ☑ The **Healthy Environments Inspection** project will include the rollout of mobile application and devices to Food Safety, Pools and Spas and develop a mobile application to support Rabies investigations and Bed Bug inspections.
- ☑ The **CDC Wireless Rollout** project will enable staff in Vaccine Preventable Disease (VBD), TB and Personal Service Setting (PSS) components of the Control of Infectious Disease /Infection Control (CID/IC) program to enter and access information remotely while in the field and improve service delivery of the Communicable Disease Control (CDC) portfolio.
- ☑ The **Staff Scheduling** project will deliver a staff scheduling system, incorporating internal staff and external Agency staff information, location of services, and rule requirements, to maximize efficiency and flexibility and allow for improved reporting, analytics and communication with stakeholders.

4. *Improve Business Processes*

To improve business processes, TPH needs to capitalize on opportunities to automate work through increasing the use of common business systems and through process automation, redesign and system integration.

- ☑ The **Electronic Medical Records** project will deliver a client information system to provide a comprehensive electronic record of patients' health-related information for those seen in sexual health and methadone clinics creating efficiencies in business processes and improved client care.
- ☑ The **Infectious Disease Control Information System (IDCIS)** project will implement a provincially mandated national public health information system. This system will encompass an immunization information system, a vaccine ordering and distribution system, health alerts, and a case, contact, and outbreak management system for reportable diseases. TPH is partnering with the Province to develop a system that will meet both their requirements and the complex needs of the City of Toronto.

5. *Improve IT Services*

Being a strategic enabler in the delivery of TPH services, it is critical that information technology services are continually improved. This will be accomplished by improving: workforce skills, abilities, client relationship management; stakeholder communication; the management of risk; IT processes and service delivery; and information technology for continued optimal use.

- ☑ The **Library Management System** project will implement a new Public Health Library Management system to replace a system that has reached its end of life and provide staff with functionality that is currently not available within the existing system including providing staff with the ability to index various formats of materials such as YouTube videos and Internet sites
- ☑ The **Toronto Preschool Speech and Language** project will implement a new employee work scheduling and client management system to replace an obsolete DANIC system.
- ☑ The **Public Service Delivery Tracking** project will replace systems that have reached their end of life due to technical obsolescence, with current technology standards. These systems assist with the tracking of activities pertaining to Eat Smart, Health Options at Work, One-on-one Mentoring, Condom Distribution System, and tracking Provincial grants

CAPITAL PROJECT SUMMARIES AND FUNDING DETAILS

The funding for the TPH 2016-2025 IT Capital Budget and Plan is summarized in the table below:

Table 3: Summary of Major Capital Initiative (excludes Carry Forward Funding)

	2016 Rec. (\$000s) Budget	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan	2023 Plan	2025 Plan	2016-2025 Total
2016 Budget and Future Year Commitments											
Ongoing Projects											
Infectious Disease Control Information System	460										460
HF/HL Point of Care	564										564
CDC Wireless Rollout	970										970
Healthy Environments Inspection (Mobile)	870										870
TPH Datamart Data Warehouse-Phase 2	739	882									1,621
New Projects Beginning 2016											
Library Management System	60	1,243									1,303
Electronic Medical Record	60	416	1,339								1,815
Staff Scheduling	129	305	373								807
Subtotal	3,852	2,846	1,712								8,410
2017-2025 Plan And Forecast (Estimates)											
Future Projects											
Public Health Multilingual Website		255	252								507
Socio-Demographic Data Collection and Reporting		287	572	634	346						1,839
Datamart Data Warehouse Phase 3			827	554							1,381
TPH Common Geographical Interface				1,073							1,073
Public eLearning				312	729	300					1,341
Public Health Service Delivery Tracking				800	726	800					2,326
Inspection Management					1,599	1,504	1,496	787			5,386
Mobile Enablement						396	386	538	562	540	2,422
Reporting Environment Enhancement							618				618
Document and Records Management System								684	868	868	2,420
Geographic Information Enablement								191	270	292	753
Subtotal		542	1,651	3,373	3,400	3,000	2,500	2,200	1,700	1,700	20,066
Grand Total	3,852	3,388	3,363	3,373	3,400	3,000	2,500	2,200	1,700	1,700	28,476

PROJECT SUMMARIES

Ongoing Projects

1. Infectious Disease Control Information System project - 2012 to 2016 (\$0.460 million)

This 100% provincially funded project uses TPH expertise and diverse requirements to assist in the on-going development and implementation of the pan-Canadian Panorama System for infectious disease control. As one of six Builder health units in the province, TPH's involvement is funded by the Ministry of Health and Long Term Care and includes developing the implementation approach, product evaluation, configuration, data migration, and reporting to ensure that the solution meets our requirements and aligns with our business processes.

Implementing this system will provide TPH with a comprehensive, inter-operable integrated public health information system that, once fully implemented, will replace existing obsolete systems and provide Ontario's public health professionals – provincially and locally with: 1) a common immunization registry, improving the understanding of immunization coverage vaccine rates and strengthening immunization programs; and 2) a shared view of vaccine inventory, increasing the efficiency of vaccine delivery and the redistribution of vaccines during an outbreak – supporting timely and rapid response to a vaccine shortage in one area or another in the province.

As part of the ICON (Immunization Connection Ontario) pilot, TPH will implement a web interface for the public to submit immunization records and the Ministry will provide tools to allow health units to validate client and immunization data collected from their websites against existing Panorama records, and import the data electronically into Panorama.

2. HF/HL Point of Care project - 2013 to 2016 (\$0.564 million)

This project will implement wireless devices which will communicate securely with the TCHIS (Toronto Community Health Information System) and synchronize data between the mobile units and the TCHIS database. Implementing this project will: 1) increase quality of care through enabling professional staff to have access to materials, documents, health promotion literature and related policies and procedures on-site during a home visit; 2) improve accuracy of documentation by reducing the time gap between client interaction and documentation of these interactions; 3) improve compliance with documentation guidelines, standards and policies; 4) provide increased accountability with information contained within the customer record; 5) increase quantity of care through Point of Care (POC) access by enabling staff to spend a greater proportion of each work day engaged in program and service delivery; and 6) enhance the infrastructure of the TCHIS system to improve reliability and reduce risk of inoperability.

3. **Communicable Disease Control (CDC) Wireless Rollout project - 2014 to 2016 (\$0.970 million)**

This project will enable staff in the Vaccine Preventable Disease (VPD), TB and Personal Service Settings (PSS) components of the Control of Infectious Disease /Infection Control (CID/IC) program to enter and access data directly from health information management systems while in the field. Wireless technology will be used to improve Communicable Disease Control (CDC) business processes and service to clients.

4. **Healthy Environments (HE) Inspection System project 2014 to 2016 - (\$0.870 million)**

This project will implement a mobile application and wireless devices for Food Safety and Health Hazard (Pools & Spas and Rabies), Bed Bugs, Special Events and Mobile Premises inspectors/ investigators leveraging the corporate Remote Computing System (RCS) solution.

5. **Datamart / Data Warehouse Phase 2 project - 2015 to 2017 (\$1.621 million)**

Building on the accomplishments of phase 1, this project will support further improvements in reporting, performance measurement and decision making across twenty (20) additional data sources within TPH programs. Implementing this project will enhance TPH operations by allowing stakeholders to better monitor performance and analyze trends to adjust programs and meet mandatory Ministry of Health and Long-Term Care reporting requirements in a timely manner.

New Projects Beginning in 2016

1. **Library Management System - 2016 to 2017 (\$1.303 million)**

This project implements a new Public Health Library Management system to replace a system that has reached its end of life and migrate data to the new system. The new system will provide staff with functionality that is currently not available within the existing system including providing staff with the ability to index their own formats of materials such as YouTube videos and Internet sites, setting up personalized information products, providing inventory control processes over various pamphlet services, document request capabilities, and advanced search capability.

2. **Electronic Medical Records - 2016 to 2018 (\$1.851 million)**

This project will replace a system that has reached its end of life with a new client information system to provide a comprehensive electronic record of patients' health-related information for those seen in sexual health and methadone clinics creating efficiencies in business processes and improved client care.

3. **Staff Scheduling - 2016 to 2018 (\$0.807 million)**

This project will deliver a staff scheduling system, incorporating internal staff and external fee for service agency staff information, location of services, and rule requirements, to maximize efficiency and flexibility and allow for improved reporting, analytics and communication with stakeholders. Solutions that can offer these types of capabilities are typically offered through Workforce Management Systems (WMS). These types of solutions cover all the processes required to forecast labour needs, schedule and deploy the

workforce, track the nature and amount of time worked, and manage the total cost of labour.

Future Projects

1. **Public Health Multi-lingual Website - 2017 to 2018 (\$0.507 million)**
This project will create a translated website of public health related information that is accessible in languages targeted to specific audiences to improve sharing of information and access to services.
2. **Socio-Demographic Data Collection and Reporting - 2017 to 2020 (\$1.839 million)**
This project will implement an automated mechanism to collect socio-demographic data across TPH programs and integrate with service data residing in various systems in order to better understand client needs and improve decision making around service delivery.
3. **Datamart Data Warehouse - Phase 3 – 2018 to 2019 (\$1.381 million)**
Building on the accomplishments of phase 2, this project will support further improvements in reporting, performance measurement and decision making across twelve (12) additional data sources within TPH programs. Implementing this project will enhance TPH operations by allowing stakeholders to better monitor performance and analyze trends to adjust programs and meet mandatory Ministry of Health and Long-Term Care reporting requirements in a timely manner.
4. **TPH Common Geographical Interface - 2019 (\$1.073 million)**
This project will develop a reusable system that will facilitate the integration of mapping information from various providers within applications. Although this system is being developed for use by TPH, it can be used across the City where there is a similar need.
5. **Public eLearning - 2019 to 2021 (\$1.341 million)**
Leveraging corporate and proven available solutions, this project will implement a system to enhance the ability to create, deliver and manage public health eLearning for Toronto citizens. System components will include registration, content design and development, payment handling and reporting. e-Learning modules include online training for: 1) community agency staff to administer nutrition screening; 2) public education on breast feeding and infant feeding; and 3) agency resources on immunization clinic protocols.
6. **Public Health Service Delivery Tracking - 2019 to 2021 (\$2.326 million)**
This project will replace systems that have reached their end of life due to technical obsolescence, with current technology standards. These systems assist with the tracking of activities pertaining to Eat Smart, Health Options at Work, One-on-one Mentoring, Condom Distribution, and tracking Provincial grants.

7. Inspection Management - 2020 to 2023 (\$5.386 million)

This project will replace the existing Healthy Environments and Communicable Disease Control inspection applications with a single application that provides enhanced inspection management functionality and will utilize current technology such as cloud computing.

8. Mobile Enablement - 2021 to 2025 (\$2.422 million)

This project will deploy mobile functionality to Public Health professionals to access and enter client and service data while in the community for: 1) the needle exchange, sexually transmitted infections, and Communicable Disease liaison programs; and 2) the Dental and Oral Health programs while also providing dental screening and services in the mobile dental clinic. This project will provide mobile applications for use by the public to provide information pertaining to pre and post-natal support, health alerts, and agencies providing public health services. Mobile technology will be used to improve business processes and service to clients.

9. Reporting Environment Enhancement - 2022 (\$0.618 million)

This project will replace the obsolete reporting environment with a new standard technical framework for creating operational reports, redesign & enhance reporting application utilized by the Communicable Disease Control and Healthy Environments programs.

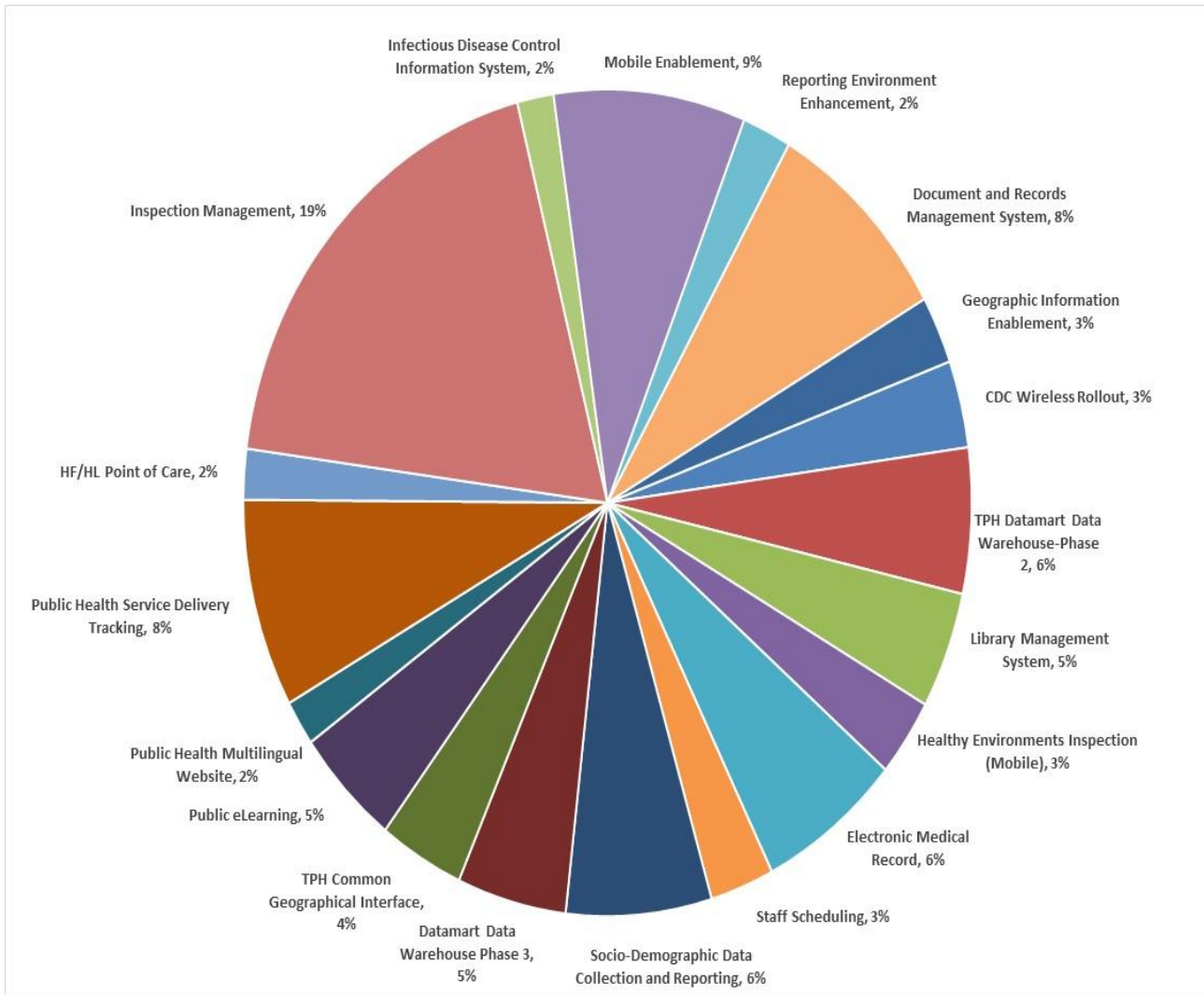
10. Document and Records Management System project - 2023 to 2025 (\$2.420 million)

This project will extend the use of the Enterprise Document Management System to Public Health users to organize and efficiently search, share, revise, and store electronic information contained in documents. The solution will enable TPH to streamline operational processes by enabling programs to electronically handle all incoming inquiries/requests and subsequent outgoing responses. It will introduce electronic workflow process management, which will enable staff and management to automate selected work processes, improve document version control, document tracking and approval along with enhanced systems integration.

11. Geographic Information Enablement - 2023-2025 (\$0.753 million)

This project will enhance the capacity to display location based information geographically (on maps) including reading ward profiles, health surveillance query information, and heat maps (e.g. identifying who is vaccinated in an area) and create a secure Geographic Information System (GIS) for managing and protecting data with sensitive Personal Health Information. Enhanced GIS capability within TPH, including health statistics related to wards and neighbourhoods, will provide valuable inputs into decision making for service provision.

Chart 2: Breakdown of \$28.476 Million 10 Year Capital Budget and Plan



OPERATING BUDGET IMPACT OF 10 YEAR CAPITAL PLAN

Approval of the 2016-2025 Recommended Capital Plan will not impact future year Operating Budgets. The cost of new system maintenance and support will be fully absorbed within the existing TPH Operating Budget using program efficiency and service realignment realized through the implementation of IT capital projects.

The projects listed in the tables below will be completed in 2016 and will yield, beginning 2017, the following service enhancements after efficiencies are applied against operating costs.

TPH will realize some efficiencies by mid to late 2016 for the HE Inspection and CDC Wireless Rollout projects. These early efficiencies will be immediately reinvested into sustainment (i.e. IT resources, licensing fees and data plan costs). It will not be until 2017/18 when TPH will generate sufficient additional efficiencies to reinvest in service.

Table 4: Operating Impact of Completed Capital Projects

Project Name: HE Inspection (Mobile)		
	FTEs	\$ (000s)
A. Financial Benefits (savings/efficiencies)		
Salary		
Reduced time to prepare for food safety inspections	5.4	540.00
Reduced time to prepare for pool & spa inspections	0.7	68.00
Reduced data entry and filing	3.3	254.00
Total Financial Benefits	9.4	\$ 862.00
B. Annual Operating Costs		
Salary		
Support ongoing operation of mobile devices for HE inspectors	1.0	100.00
Support and maintain mobile applications including modifications	0.8	88.00
Non Salary		
Data & Connectivity for additional Mobile Devices		7.00
Total Operating Costs	1.8	\$ 195.00
Gross Savings	7.6	\$ 667.00
C. Savings Applied to Service Enhancements		
Salary		
Perform additional 2,687 inspections per year	6.1	608.00
Improve customer service and data entry	0.7	55.00
Total Service Enhancement Costs	6.8	\$ 663.00
Net Savings	0.8	\$ 4.00

Project Name: CDC Wireless Rollout		
	FTEs	\$ (000s)
A. Financial Benefits (savings/efficiencies)		
Salary		
Reduced time for VPD Support Assistants in performing post immunization clinic data entry activities	1.3	91.00
Reduced time for VPD Registered Practical Nurses to record Cold Chain inspection results	0.2	19.00
Reduced travel and office preparation time for Public Health Inspectors who perform PSS inspections	1.1	110.00
Reduced time for Support Assistant Bs to enter PSS inspection results	0.4	30.00
Reduced time for TB Home Visitors and Registered Practical Nurses to record charting information	0.9	65.00
Total Financial Benefits	3.9	\$ 315.00
B. Annual Operating Costs		
Salary		
IT Support for ongoing operation of mobile devices and mobile application	1.2	122.00
Non Salary		
Data & connectivity costs for mobile devices		29.50
Total Operating Costs	1.2	\$ 151.50
Gross Savings	2.7	\$ 163.50
C. Savings Applied to Service Enhancements		
Enter additional 6,600 records per year as required by the Immunization School Assessment Program	0.4	30.00
Perform an additional 57 day nurseries visits per year	0.1	5.50
Perform an additional 450 PSS inspections, re-inspections, complaint inspection and enforcement	0.5	49.00
Provide clerical support for an additional 450 PSS inspection processes	0.3	24.00
Perform an additional 1,100 home visits per year for TB clients	0.7	55.00
Total Costs-Progress Towards Service Compliance	2.0	\$ 163.50
Net Savings	0.7	-

For the Point of Care project the implementation of e-documentation functionality will be phased in during the first half of 2016 after the completion of the device roll-out. Given the magnitude of the change that this represents for many front line service providers, this will involve a fairly steep learning curve for most users. TPH will realize some efficiencies by mid to late 2016, and these early efficiencies will be immediately reinvested into sustainment (i.e. IT resources, licensing fees and data plan costs). It will not be until 2017/18 when TPH will generate sufficient additional efficiencies to reinvest in service. In 2017, TPH will be able to measure efficiencies to confirm the projections (given that the estimates are based on a relatively small project).

Project Name: HF HL Point of Care		
	FTEs	\$ (000s)
A. Financial Benefits (savings/efficiencies)		
Salary		
Reduced time to travel back to office to retrieve/enter client/service information	14.0	1,378.30
Total Financial Benefits	14.0	\$ 1,378.30
B. Annual Operating Costs		
Salary		
IT Support for ongoing operation of mobile devices for CDIP/HC/HF POC Users (ATSS2)	1.0	98.00
Program Support for ongoing training, Quality & professional compliance for CDIP/HC/HF POC Users (2 EU PHNs)	2.0	196.00
IT Support and maintain mobile applications including modifications (SI1)	1.0	108.00
Subtotal Salary	4.0	\$ 402.00
Non Salary		
Annual Data & Connectivity costs for Mobile Devices (350*\$570)		199.50
Device sustainment cost/YR (350x\$300/2)		52.50
Annual MDM licensing (350x\$35/2)		6.13
Subtotal Non Salary		\$ 258.13
Total Operating Costs	4.0	\$ 660.13
Gross Savings	10.0	\$ 718.18
C. Savings Applied to Service Enhancements		
The following service improvements are required by Ontario Public Health Standards:		
Expand postpartum mood disorder support program to add 3 service sites in west neighbourhood improvement areas		128.88
Expand services at 13 TPH breastfeeding clinics by one half day per week in each clinic providing breastfeeding counselling as required by Ontario Public Health Standards.		104.72
Provide 20 additional group parenting education programs as required by Ontario Public Health Standards to 300 families increasing the reach of group parenting education program to 75% on neighbourhood improvement areas (from current level of 40%)		128.88
Provide an additional 250 sexual health promotion education sessions to 3,750 students required to support implementation of new provincial health education curriculum		67.13
Provide 4 additional Healthy Schools Substance Misuse youth peer leadership programs for 50 peer leaders within neighbourhood improvement areas		42.96
The following service improvements also support the City's poverty reduction strategy:		
Increase outreach and service provision to 8 schools in neighbourhood improvement areas to deliver healthy eating, physical activity and injury prevention services		107.40
Increase outreach and support to an additional 3 youth serving agencies throughout Investing in Youth Engagement program reaching approximately 165 youth from priority populations, including aboriginal youth, LGBTQ2S youth, youth involved with the law, under housed youth and youth in transition in accordance with OPHS and prioritized in TPH Strategic Plan		48.33
Provide an additional 18 education and skill building sessions on chronic disease, diabetes prevention, and injury prevention to 550 adults from priority populations, including aboriginal and newcomer adults		13.43
Provide service to an additional 35 vulnerable adults and seniors in response to demand for service from community and Councillors through SPIDER program		52.63
C. Savings Applied to Service Enhancements	7.0	\$ 694.35
Net Savings		\$ 23.83

IN YEAR CHANGES TO THE APPROVED CAPITAL BUDGET

In 2015 TPH requested an in-year adjustment to the 2015 approved capital budget to transfer funds between subprojects to capitalize on opportunities to accelerate projects with funds available from projects that had experienced delays.

Table 5: Capital Program In-Year Adjustments for 2015 Budget

	2015 -2024 Approved Budget (\$000s)	2015 Changes	2016 Changes	2015 -2024 Revised Budget	Comment
CDC Wireless Rollout	1,238	(245)	245	1,238	Fewer resources required to complete planned deliverables pertaining to mobile development for Cold Chain information System (CCIS) and TB DOT in 2015
Healthy Environments Inspection (Mobile)	867	245	(245)	867	Additional resources required in 2015 to develop the mobile application and support the rollout of the mobile devices.
Total		0	0		

2015 ESTIMATED CARRY FORWARD IMPACT ON 2016 CAPITAL BUDGET

TPH is forecasting that capital project expenditures for 2015 will be under budget by \$0.475 million.

Table 6: Summary of Major Capital Initiatives (includes Carry Forward Funding)

(\$000s)	2016 Rec. Budget	2015 Carry Forward	2016 Budget Request	2017 Plan	2018 Plan	2016- 2025 Total
2015 Budget and Future Year Commitments						
Ongoing Projects						
Infectious Disease Control Information System	460		460			460
HF/HL Point of Care	564	238	802			802
CDC Wireless Rollout	970	142	1,112			1,112
Healthy Environments Inspection (Mobile)	870	48	918			918
TPH Datamart Data Warehouse-Phase 2	739	47	786	882		1,668
New Projects Beginning 2016						
Library Management System	60		60	1,243		1,303
Electronic Medical Record	60		60	416	1,339	1,815
Staff Scheduling	129		129	305	373	807
Grand Total	3,852	475	4,327	2,846	1,712	8,885

SUMMARY OF POSITIONS FUNDED THROUGH THE CAPITAL BUDGET

TPH requires staff to work temporarily on capital projects. Salary and benefit costs of \$2.272 million gross and \$0.0 net are included in the 2016 Operating Budget to reflect the payroll cost that is funded from the 2016 Capital Budget. The number of capital FTEs in the 2016 Operating Budget is 20.8 as detailed in the table below.

Table 7: Summary of Positions Funded through Capital (excludes Carry Forward Funding)

	2016 Budget Request (\$'000s)	2016 Salaries Exp (\$'000s)	2016 FTE	2017 FTE	2018 FTE	2019 FTE	2020 FTE	2021 FTE	2022 FTE	2023 FTE	2024 FTE	2025 FTE	Total
2016 Budget and Future Year Commitments													
Ongoing Projects													
Infectious Disease Control Information System	460	419	4.5										4.5
HF/HL Point of Care	564	372	3.0										3.0
CDC Wireless Rollout	970	746	6.8										6.8
Healthy Environments Inspection (Mobile)	870	372	3.0										3.0
TPH Datamart Data Warehouse-Phase 2	739	196	2.0	2.0									4.0
New Projects Beginning 2016													
Library Management System	60	56	0.5	5.0									5.5
Electronic Medical Record	60	56	0.5	3.0	5.0								8.5
Staff Scheduling	129	56	0.5	2.0	2.5								5.0
Subtotal	3,852	2,272	20.8	12.0	7.5								40.3
2017-2025 Plan And Forecast (Estimates)													
Future Projects													
Public Health Multilingual Website				2.2	2.1								4.3
Socio-Demographic Data Collection and Reporting				1.6	4.5	5.1	2.5						13.7
Datamart Data Warehouse Phase 3					2.0	1.0							3.0
TPH Common Geographical Interface						1.0							1.0
Public eLearning						2.1	5.5	2.0					9.6
Public Health Service Delivery Tracking						5.5	5.5	6.0					17.0
Inspection Management							6.0	8.0	8.0	5.7			27.7
Mobile Enablement								2.5	3.0	4.0	4.0	4.0	17.5
Reporting Environment Enhancement									4.0				4.0
Document and Records Management System										2.8	4.3	4.5	11.6
Subtotal				3.8	8.6	14.7	19.5	18.5	15.0	12.5	8.3	8.5	109.4
Grand Total				15.8	16.1	14.7	19.5	18.5	15.0	12.5	8.3	8.5	149.7

KEY CHANGES TO THE 2014-2025 CAPITAL BUDGET AND PLAN

Annual updates to the 10-Year Capital Plan provides TPH the opportunity to refine its IT projects based on changing conditions and better information. Significant changes to the 10-Year Capital Plan are detailed in the table below:

Table 8: Key Changes to the 2015-2025 Capital Budget and Plan

	2015-2024 Capital Budget & Plan (2016- 2024) (\$000s)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2016 - 2024	2025	2016- 2025 Capital Budget & Plan
Previously Approved													
Ongoing Projects													
Infectious Disease Control Information System	100	360									360		460
HF/HL Point of Care	75	489									489		564
CDC Wireless Rollout	845	125									125		970
Healthy Environments Inspection (Mobile)	238	632									632		870
TPH Datamart Data Warehouse Phase 2	1,602	(50)	69								19		1,621
TPH Datamart Data Warehouse Phase 3	1,384			(2)	(1)						(3)		1,381
Electronic Medical Records	2,040	(495)	(693)	963							(225)		1,815
Staff Scheduling	697	(246)	(17)	373							110		807
Public eLearning	637				25	379	300				704		1,341
Inspection Management	3,314					1,279	426	367			2,072		5,386
Mobile Enablement	1,513					(384)	36	81	74	562	369	540	2,422
Document and Records Management System	2,427				(687)	(870)	(870)		684	868	(875)	868	2,420
Geographic Information Enablement	600								191	(330)	(139)	292	753
Collaboration	1,372	(515)	(616)	(241)							(1,372)		-
Community Collaboration	1,540			(442)	(483)	(615)					(1,540)		-
Dental & Oral Health Information System	1,848		(528)	(940)	(380)						(1,848)		-
Public Health Systems State of Good Repair	6,184			(535)	(981)	(861)	(692)	(1,066)	(949)	(1,100)	(6,184)		-
Total Previously Approved	26,416	300	(1,785)	(824)	(2,507)	(1,072)	(800)	(618)	-	-	(7,306)	1,700	20,810
New													
Library Management System		60	1,243								1,303		1,303
Public Health Multilingual Website			255	252							507		507
Socio-Demographic Data Collection and Reporting			287	572	634	346					1,839		1,839
TPH Common Geographical Interface					1,073						1,073		1,073
Public Health Service Delivery Tracking					800	726	800				2,326		2,326
Reporting Environment Enhancement								618			618		618
Total New		60	1,785	824	2,507	1,072	800	618			7,666		7,666
Total Changes		360	-								360	1,700	28,476

The requested changes to the 2016 – 2024 approved capital plan include:

A. Change in Scope to Previously Approved Projects:

1. Increase in project cost of \$0.489 million for the HF/HL Point of Care project to address issues which arose as a result of a recent change in the TCHIS (Toronto Community Health Information System) infrastructure; business users were continually "booted out" of the application and losing critical data that were already entered. To address this problem, TPH determined that a new access and identity management solution for TCHIS must be identified, designed and implemented on an urgent basis with revision of the architecture. The new solution requires additional funding and extension of the project from June 30, to December 31, 2016.
2. Increase in project cost of \$0.360 million for Infectious Disease Control Information System for the ICON (Immunization Connection Ontario) pilot. The ICON pilot project will focus on a web interface for the public to submit immunization records which can be imported into Panorama electronically and the development of a validation mechanism for TPH and other health units to review the information before it goes into Panorama (PHIX: Public Health Information Exchange).
3. Increase in project costs of \$0.632 million for the Healthy Environment Inspection (Mobile) to fund additional resources are required to enhance the application to include special events and mobile premises inspection and support the device rollout.

B. Re-prioritization of Capital Projects:

1. TPH reviewed the project scope of IT projects previously included in the 2015-2024 plan and revised project costs based on updated information. These projects were prioritized to ensure that TPH's 2016-2025 Capital Budget and Plan meets the debt target guidelines every year of the 10-Year Plan. These projects are:
 - Electronic Medical Care project moved to 2018 from 2016 with a reduction in cost of \$0.225 million.
 - Staff Scheduling project moved to 2018 from 2016 with an increase in cost of \$0.110 million.
 - Public eLearning project increased by \$0.704 and funding spread over a 3 year period (2019-2021). The scope of the project was expanded to include payment handling and additional resources are required due to the expanded scope.
 - Inspection Management project increase in project cost by \$2.072 million due to revised project assumptions where contracted services, software licenses and project resources were increased.
 - Mobile Enablement project will commence in 2021 instead of 2020 with an increase in cost of \$0.369 million to include mobile access for dental hygienists.
 - Document and Records Management Systems project moved to start in 2023 from 2019. The funding model has not been defined for a corporate solution.

- **Geographic Information Enablement** project accelerated by one year from 2024 to 2023 and an increase in project cost of \$0.139 million. The project has been expanded to include requirements to establish a TPH separate environment.
- The Public Health Systems State of Good Repair project with a total cost of \$6.184 million was deleted and replaced by six separate projects:
 - Library Management System
 - Public Health Service Delivery Tracking
 - Reporting Environment Enhancement
 - Public Health Notification and Advisories (requires additional funding for the project)
 - Toronto Preschool Speech and Language Information System (requires additional funding for the project)
 - Chemical Tracking Information System (requires additional funding for the project)
- The following projects which were previously included in the 2015-2024 Capital Plan have been reclassified as projects requiring additional funding:
 - Collaboration
 - Community Collaboration
 - Dental & Oral health Information Systems
- In addition to the three projects mentioned above, the follow new projects require additional funding
 - Community Collaboration Strategy
 - Public Health Community Information System
 - Public Health Notifications and Advisories
 - Toronto Preschool Speech and Language Information System
 - Chemical Tracking Information System

ADDITIONAL FUNDING REQUIREMENTS

TPH requires additional debt funding of \$12.867 million (for the period 2017-2019) to implement eight projects to improve service delivery and enhance systems while complying with mandatory provincial requirements. Details are summarized in the following table and briefly described below.

Table 9: Additional Funding Requirements

	2016 Rec. Budget	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan	2023 Plan	2025 Plan	2016- 2025 Total
2017-2025 Plan And Forecast (Estimates)											
Community Collaboration Strategy	255										255
Community Collaboration		485	475	607							1,567
Collaboration		548	800								1,348
Dental and Oral Health Information System		972	1,809	666							3,447
Public Health Community Information System		1,036	1,017	1,028							3,081
Public Health Notifications and Advisories		555	472								1,027
Toronto Preschool Speech and Language Information		696	737								1,433
Chemical Tracking Information System			133	576							709
Total	255	4,292	5,443	2,877							12,867

- 1. Community Collaboration Strategy (Tools) - 2015 (\$0.255 million)**
 This project will define a strategy to enable City divisions, in future phases of this project, to improve services by 1) improving knowledge and information sharing between City divisions and the public, partner agencies and businesses, 2) reaching larger audiences and 3) facilitating the promotion of programs and services.
- 2. Community Collaboration (Tools) - 2017 to 2019 (\$1.567 million)**
 This project will deliver web based solutions to facilitate interaction with the public, partner agencies and businesses to improve information sharing including mandatory data collection, data sharing with service delivery partners, and general interaction with the public.
- 3. Collaboration (Tools) - 2017 to 2018 (\$1.348 million)**
 This project will implement corporate Unified Communication and Collaboration solutions within TPH to facilitate knowledge sharing and team based productivity through collaborating around documents and ideas, and enabling real time employee interactions from any City location.
- 4. Dental and Oral Health Information System project - 2017 to 2019 (\$3.447 million)**

The goal of this project is to improve the operational efficiency and effectiveness of providing Dental and Oral Health Services by TPH to eligible clients of the City of Toronto in 23 dental clinics and 1 mobile dental clinic. This initiative will implement an integrated Oral Health Information System to support the service delivery process of public dental clinics. This system will provide access to meaningful, real time dental and oral health practice management information, including: 1) patient scheduling, charting, and digital x-ray management in city dental clinics; 2) dental screening, oral health services and on-site dental treatment for geriatric clients at collective living centres and other community facilities; and 3) electronic integration with provincial systems for school dental screening and private dental operations.

5. **Public Health Community Information System - 2017 to 2019 (\$3.081 million)**
This project will enhance the client information systems and ensure compliance with AODA Accessibility legislation and capture screening and assessment information in the field. Enhancements to content encryption, health record auditing, destruction of expired health records, duplicate record identification, client self-registry for services functionality, eFAX integration with client record, mobile application to improve screening and assessment and scanning.
6. **Public Health Notifications and Advisories - 2017 to 2018 (\$1.027 million)**
Using a current standard technical framework for web based information systems, this project will enhance DineSafe, SwimSafe and BodySafe websites so that they can be accessed via mobile devices and enable the public to automatically receive information alerts e.g. Beaches Water Quality, Heat and Cold Alerts.
7. **Toronto Preschool Speech and Language Information System - 2017 to 2018 (\$1.433 million)**
This project will implement a range of solutions to support/enable recommendations defined in the Toronto Preschool Speech and Language Services (TPSLS) roadmap document prepared in 2014 which includes: 1) upgrading the TPSLS Internet website; 2) implementing eCounselling; 3) implementing an employee work scheduling system; 4) implementing a secure communication tool for interacting with partner agencies; and 5) the replacement of the outdated DANIC system.
8. **Chemical Tracking Information System - 2018 to 2019 (\$0.709 million)**
This project will upgrade technology and technical frameworks to corporate standards utilized by five ChemTRAC integrated applications and implement functionality to provide the ability for the industries to login securely into the system to submit data and reduce processing time. Business partners will also be able to securely login into the system and submit chemical use and release information.

PROJECTS EXPECTED TO BE COMPLETED IN 2015

The following project is expected to be completed in 2015:

Table 10: Capital Projects to be Completed in 2015

	Total Project Budget	Projected Actuals at YE	Balance
(\$000's)			
WEB re:Brand TPH Implementation	51	51	0
Total	51	51	0

Web re:Brand TPH Implementation project: The purpose of the project was to redesign the TPH website and implement the corporate content management software to automate the web posting process in order to improve the accuracy, relevance and timeliness of web content. TPH conducted a content, structural and functional review of the website to identify improvements in functionality and usability. TPH collaborated with the corporate Web Revitalization Project to implement the priority improvements identified during the TPH web content migration. The priority for 2015 concerned ensuring that Web Documents were AODA (Accessibility for Ontarians with Disabilities Act) compliant.

CAPITAL BUDGET CURRENT STATUS

Table 11: 2015 Budget to Actuals Comparison (Capital Variance Report Q3)

	2015 Approved	Actuals as of September 30		Projected Actuals at year End		Balance Unspent
	(\$000s) \$	\$	Spent %	\$	Spent %	\$
WEB re:Brand TPH Implementation	51	48	94.9	51	100.6	0
Infectious Disease Control Information System	578	466	80.6	578	100.0	0
HF/HL Point of Care	2,593	1,699	65.5	2,355	90.8	238
CDC Wireless Rollout	860	509	59.1	718	83.5	142
Healthy Environment Inspection System	804	496	61.7	756	94.0	48
TPH Datamart Data Warehouse Phase 2	478	250	52.2	431	90.2	47
Total Capital	5,364	3,468	64.7	4,889	91.1	475

As at September 30, 2015, TPH utilized \$3.468 million or 64.7% of the 2015 approved Capital Budget of \$5.364 million. The year-end capital expenditure is projected to be \$4.889 million or 91.1% of the approved cash flow. The Web re:Brand TPH Implementation and Infectious Disease Control Information System projects are on schedule.

HF/HL Point of Care

The HF/HL Point of Care year end expenditures are projected to be \$2.355 million representing 90.8% of the 2015 approved cash flow of \$2.593 million.

As a result of unexpected project team vacancies the development and implementation of the third release of the TCHIS mobile application; GIS functionality; and GIS/Datamart integration Phase 2 will be deferred until 2016. This will necessitate the carryover of \$0.238 million to 2016.

CDC Wireless Rollout

This project is forecasted to spend \$0.718 million or 83.5% of its 2015 cash flow of \$0.860 million. As a result of challenges in acquiring qualified contracted resources, PSS application development needs to be deferred until 2016. This necessitates the carryover of \$0.142 million into 2016 to complete planned deliverables.

Healthy Environments Inspections System

The Healthy Environment Inspection System project's year end expenditures are projected to be \$0.756 million representing 94.0% of the 2015 approved cash flow of \$0.804 million. Gaps in service for contracted resources required the deferral of a vulnerability assessment and associated development work into 2016. This required the carryover of \$0.048 million into 2016 to complete the planned deliverables.

TPH Datamart Data Warehouse Phase 2

This project is forecasted to spend \$0.431 million or 90.2% of its 2015 cash flow of \$0.478 million. Delays in hiring a qualified Oracle Data Warehouse & Business Intelligence Administrator necessitates the deferral of \$0.047 million into 2016 to develop dashboards and user presentation layers.