THE COUNCIL OF THE CITY OF NEW YORK

Hon. Corey Johnson
Speaker of the Council

Hon. Peter Koo
Chair, Committee on Technology

Report of the Finance Division on the
Fiscal 2020 Preliminary Budget and the
Fiscal 2019 Preliminary Mayor's Management Report for the

Department of Information Technology and Telecommunications

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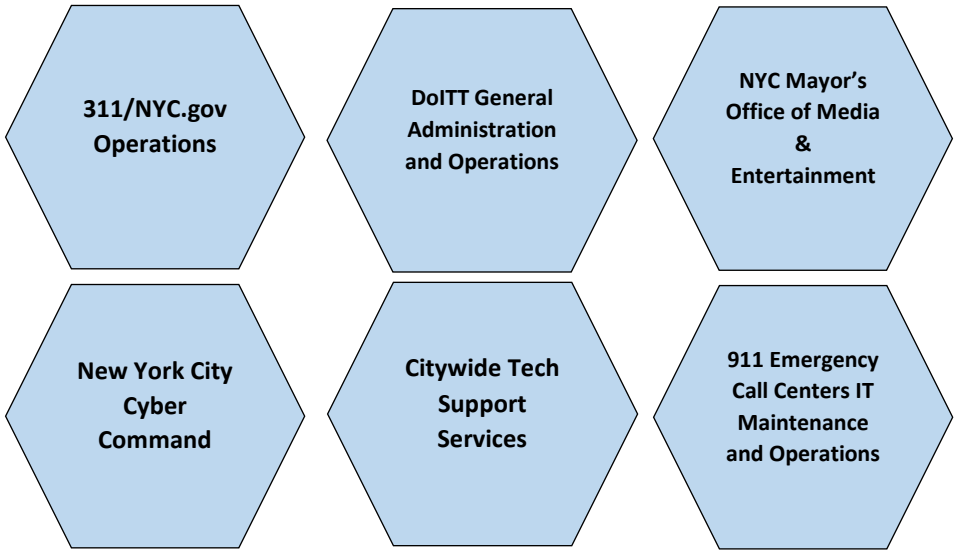
Department of Information Technology and Telecommunications Overview

The Department of Information Technology and Telecommunications (DOITT) provides coordination across City agencies and technical expertise in the development and use of data, voice and video technologies in city services and operations.

Program Areas



DoITT's actions include:

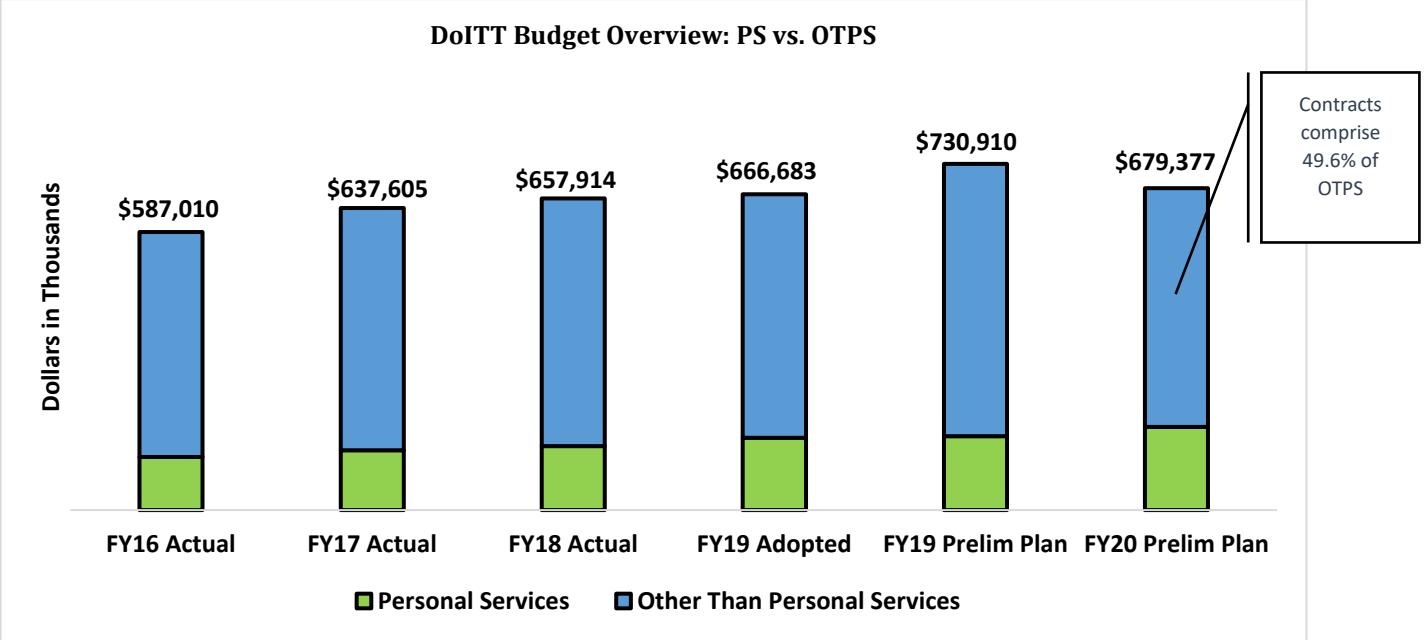
- Providing infrastructure support for data processing and communications services to city agencies;
- Researching and managing IT projects and administers the City's cable television, public pay telephones, and mobile and high capacity telecommunications franchises;
- Administering the 311 Customer Service Center and the City's broadcast/cable television and radio stations;
- Managing New York City Cyber Command, a recently created Command Unit directing citywide cyber defense practices and protecting the City from cyber threats;
- Administering the Open Data Portal, making over 1,700 datasets publicly available for download; and
- Administering the budget of the Mayor's Office of Media and Entertainment (MOME), which promotes NYC as a thriving center of creativity, issuing permits for productions filming on public property and facilitating production throughout the five boroughs.

Fiscal 2020 Preliminary Budget Highlights

The Department of Information Technology and Telecommunications' Fiscal 2020 Preliminary Budget totals $679.4 million, including $175.8 million for Personal Services (PS) to support 1,887 full-time employees and $503.6 million in Other Than Personal Services (OTPS) funding. Figure 1 illustrates the

Department's actual spending in Fiscal 2016 - 2018, the Fiscal 2019 Adopted Budget, and the Fiscal 2019 and Preliminary Fiscal 2020 Budgets, as of the Preliminary Financial Plan for Fiscal 2019 – 2023.

Figure 1



DoITT's Fiscal 2020 Preliminary Budget schedules a $22.9 million increase in PS and a $10.2 million decrease in OTPS spending since the Fiscal 2019 Adopted Budget. Several highlights of the Department's budget are listed in the following section below.

Highlights

- **New Needs.** Since Adoption of Fiscal 2019, DoITT has identified $2.9 million in new needs for Fiscal 2019, $1.7 million in Fiscal 2020, and baselined new needs of $1.5 million beginning in Fiscal 2021. This includes $2.2 million in Fiscal 2019 for capitally ineligible costs to support the ongoing 311 Re-Architecture project, and $890,000 in Fiscal 2020 for additional staffing for the Software Asset Management Program, among other new needs.
- **Citywide Savings Program.** DoITT will generate budgetary savings of $1.8 million in Fiscal 2019 and baselined savings of $344,000 beginning in Fiscal 2020 as part of the Citywide Savings Program introduced since Adoption. The largest savings comes from a one-time savings of $1.5 million in Fiscal 2019 through PS accruals generated by vacant positions across the agency.
- **Contract Budget.** DoITT's Fiscal 2020 contract budget totals $249.6 million, which represents approximately 36.7 percent of the Department's entire Fiscal 2020 Preliminary Budget. DoITT's Contract Budget provides funding for the maintenance and security of many citywide technology systems, among other important issues.
- **DoITT Capital Program.** DoITT's Fiscal 2019 – 2023 Preliminary Capital Commitment Plan totals $603.8 million for technology equipment and infrastructure, including $157.4 million for continued upgrades and additional equipment for the Public Safety Answering Center (PSAC) I and PSAC II.

- **Miscellaneous Revenue.** The Financial Plan projects that DoITT will generate Miscellaneous Revenue of $180.9 million in Fiscal 2019, including $138.5 million from Cable Television Franchises and $32.3 million from advertising revenue through LinkNYC.
- **Performance Highlights.** Notable performance metrics reported in the Preliminary Mayor's Management Report (PMMR) related to DoITT include the following.
  - ✓ Contains the average uptime of key systems, that measures DoITT's maintenance of the City's website (NYC.gov), CityNet, and other systems. In Fiscal 2018, the average uptime of key systems was 99.89 percent, a small increase since Fiscal 2017.
  - ✓ DoITT published 2,206 datasets on the Open Data Portal as of October 2018 an increase of 24 percent when compared to the same period in Fiscal 2017.
  - ✓ Contains the average time to resolve telecommunications incidents that analyses DoITT's effectiveness at addressing all service incidents that are reported to the Department. In Fiscal 2018, the average time to resolve all service incidents was 1.4 days, a slight decrease since Fiscal 2017.

Financial Plan Summary

Table 1

Department of Information Technology and Telecommunications Financial Summary *Dollars in Thousands*						
	2017	**2018**	**2019**	**Preliminary Plan**		****Difference**
	Actual	**Actual**	**Adopted**	**2019**	**2020**	**2019-2020**
Personal Services						
Full-Time Salaried	$120,550	$129,161	$150,644	$153,417	$173,504	$22,860
Additional Gross Pay	3,411	4,065	949	949	949	0
Other Salaried & Unsalaried	358	340	1,001	1,041	1,015	14
Overtime - Civilian	1,845	1,776	315	315	315	0
Subtotal	**$126,164**	**$135,340**	**$152,909**	**$155,722**	**$175,783**	**$22,874**
Other Than Personal Services						
Contractual Services	$281,155	$298,093	$269,124	$353,079	$249,643	($19,481)
Fixed & Misc. Charges	296	31	60	53	60	0
Other Services & Charges	207,096	214,020	241,545	204,289	250,678	9,133
Property & Equipment	8,636	6,876	825	3,343	925	100
Supplies & Materials	14,257	3,553	2,221	14,424	2,288	67
Subtotal	**$511,441**	**$522,574**	**$513,774**	**$575,188**	**$503,594**	**($10,181)**
TOTAL	**$637,604**	**$657,914**	**$666,684**	**$730,910**	**$679,377**	**$12,693**
Funding						
City Funds			$491,275	$488,584	$518,344	$27,069
Other Categorical			2,680	13,234	2,639	(41)
Capital- IFA			1,895	1,961	0	(1,895)
State			25,668	67,230	14,841	(10,827)
Federal - Community Development			6,014	9,585	1,677	(4,337)
Federal - Other			300	3,605	0	(300)
Intra City			138,852	146,711	141,876	3,024
TOTAL	**$637,604**	**$657,914**	**$666,684**	**$730,910**	**$679,377**	**$12,693**
Budgeted Headcount						
Full-Time Positions	1,484	1,493	1,816	1,837	1,887	71
TOTAL	**1,484**	**1,493**	**1,816**	**1,837**	**1,887**	**71**

***The difference of Fiscal 2019 Adopted Budget compared to Fiscal 2020 Preliminary Budget.*

DoITT's Fiscal 2020 Preliminary Budget is $12.7 million more than the Fiscal 2019 Adopted Budget of $666.7 million, an increase of 1.9 percent. Included in the total is $141.9 million in Intra-City payments from other agencies for telecommunications, data and consultant services and support for which DoITT coordinates payments, and constitutes 20.9 percent of the Department's total funding for Fiscal 2020. The Fiscal 2020 Budget will most likely increase as year-to-year needs are adjusted and unused funding from ongoing projects is rolled forward.

Since Fiscal 2017, the Department's PS budget has increased by approximately $49.6 million. This is largely attributable to increased funding and headcount for 24/7 information technology (IT) security and increased staffing for the newly created New York City Cyber Command (NYC3) Unit - created via Mayoral Executive Order in 2017 - and will direct all citywide cyber defense practices across multiple agencies.

DoITT's Fiscal 2019 Budget as of the Preliminary Plan has increased by approximately $64.2 million, or 9.6 percent, since the Adoption of the Fiscal 2019 Budget. The change is caused by the recognition of State, Other Categorical, and federal funding over the course of Fiscal 2019. The most notable increase in funding has been allocated to the ongoing Mayor's Office of Criminal Justice (MOCJ) *"Ecology of Justice"* program, which has recognized over $38.9 million in State funding in Fiscal 2019 since Adoption, which has yet to be recognized for Fiscal 2020. Furthermore, there is an additional

$8.5 million allocated to the budget of the Mayor's Office of Media and Entertainment (MOME), housed in DoITT's budget, related to the *"Government Education Access Grant"* in the current year budget that has not yet been recognized in the Fiscal 2020 budget.

The Fiscal 2019 Preliminary Plan also recognizes an increase of approximately $7.9 million from Intra-City payments bringing the total Intra-City payments to $146.7 million. The change is driven by an increase of $3 million for the Special Education Student Information System (SESIS), which covers the maintenance and support cost under DoITT's contract with Powerschool for the SESIS system. It should be noted that DoITT is not incurring these expenses, as the Department is coordinating payments from other agencies. Relative to the Adopted Budget, the Fiscal 2020 Preliminary Plan increases City funding by $27 million. This increase reflects changes in the funding levels of NYC Cyber Command, as its funding is expected to grow to $134 million by Fiscal 2022. Appendix A refers to all the budget actions in DoITT's budget since the Fiscal 2019 Adopted Budget.

Figure 2

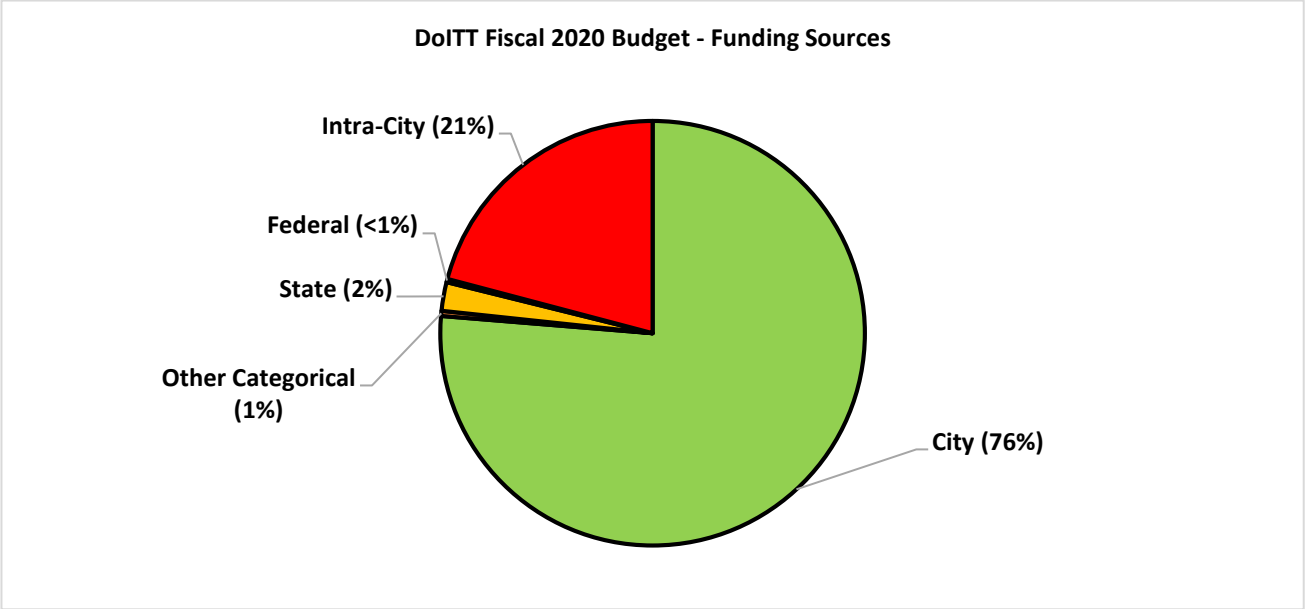
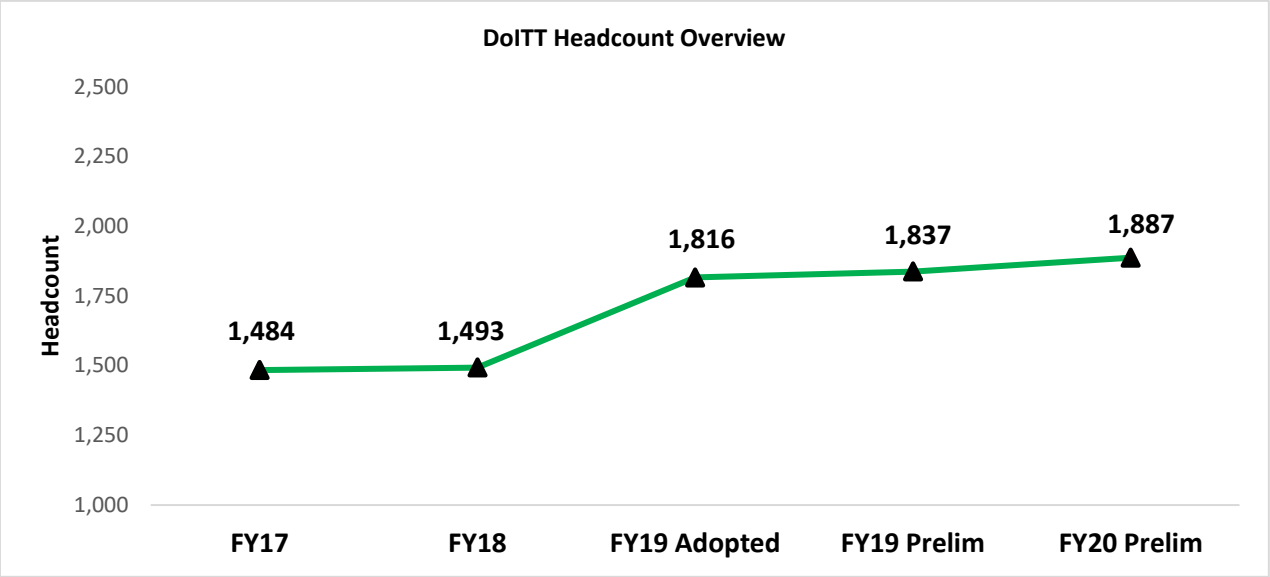


Figure 2 shows that the majority of DoITT's funding for the Fiscal 2020 Preliminary Budget consists of City funds, accounting for 76 percent of the Department's funding. The second largest funding source, at 21 percent, is intra-city payments from other city agencies for telecommunications, data, and consulting services and support for which DoITT coordinates payments. The remaining smaller shares of DoITT's budget represent State, Federal and Other Categorical funding.

Headcount

Figure 3



The Department's Fiscal 2020 PS Budget of $175.8 million provides for 1,887 full-time budgeted positions across its different program areas. As of January 2019, the Department was operating with 203 vacant positions[1], or a 16 percent staff vacancy rate, and in the 2018 November Financial Plan, the Department registered a one-time saving of $1.5 million in Fiscal 2019 due to vacant positions across the agency. The Citywide Tech Support Services program area is the largest, boasting 526 full-time budgeted positions, making up 27.9 percent of the Department's entire staff for Fiscal 2020. The increase in the Department's Fiscal 2020 headcount is mainly attributed to increased staffing needs for New York City Cyber Command, which has 186 budgeted positions in Fiscal 2020, and expected to grow to 267 budgeted positions in Fiscal 2022. It is also important to note that the Fiscal 2020 budget sees a reduction of $2 million in IFA funding, and thus a reduction of 17 IFA budgeted positions. Because IFA positions are evaluated on a year-to-year basis, it is anticipated that headcount associated with IFA's will be adjusted in the upcoming financial plans.

Changes introduced since the November 2018 and Preliminary Plans have adjusted the Department's headcount and funding. Changes include an increase of two baselined IT support positions beginning in Fiscal 2019 for the Citywide Event Coordination and Management Unit (CECMU), with $104,167 for Fiscal 2019 and $250,000 baselined in Fiscal 2020. The Department has also increased staffing for the Mayor's Office of Data Analytics (MODA), by baselining three positions in Fiscal 2019, with $146,500 allocated in Fiscal 2019 and $293,000 baselined in Fiscal 2020. The Department also increased staffing to expand the Software Asset Management Program, by adding five positions in Fiscal 2019, eight positions in Fiscal 2020, and baselining nine positions in the outyears, with $235,000 allocated in Fiscal 2019, $890,000 in Fiscal 2020, and $975,000 in the outyears. Cyber Command has increased its headcount by 67 positions, to 187 positions, in the Fiscal 2020 budget relative to its current-year budget, as its headcount is expected to grow to 267 positions by Fiscal 2022.

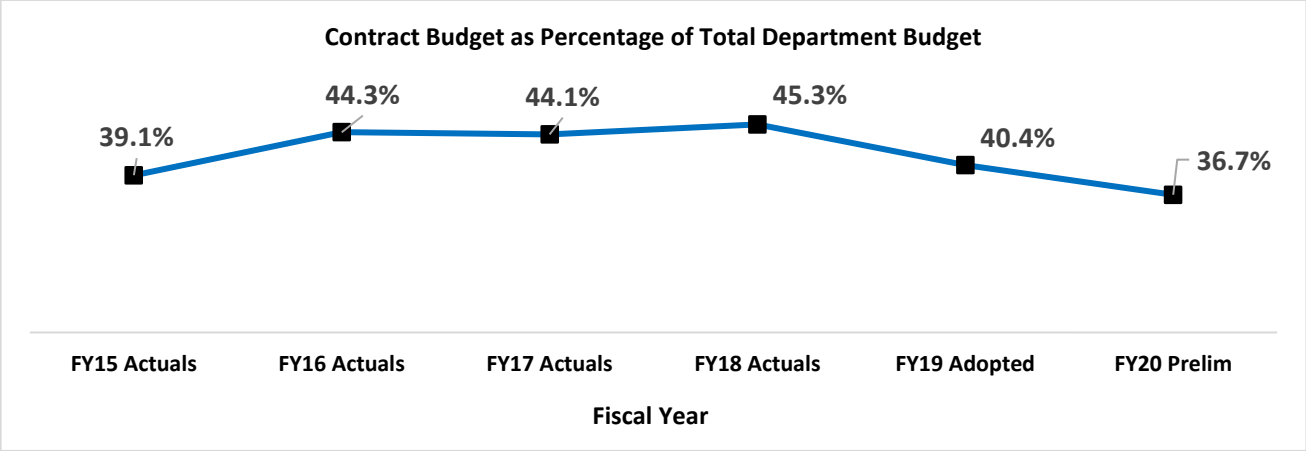
[1] These vacant positions include all vacant positions from all funding sources, including City, IFA, CDBG funded and Federal/State funded headcount.

In the 2018 November Financial Plan, the Department also increased headcount by 10 positions in Fiscal 2019 alone, through a technical adjustment using existing Federal CDBG funds. Budgeted headcount is impacted by multiple financial plan actions, including new needs, inter-fund agreements, functional transfers, and technical adjustments that eliminate vacant budgeted positions while maintaining funding levels.

Contract Budget

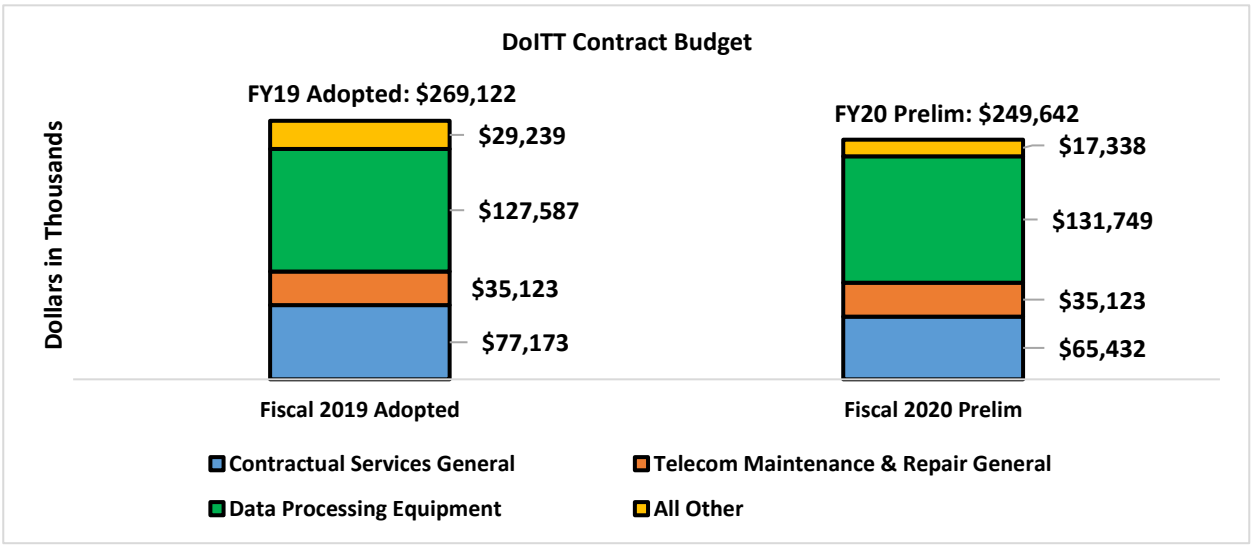
The New York City Charter mandates the preparation of a Contract Budget to identify expenditures for contractual services, which are defined as any technical, consultant or personnel services provided to the City by means of a contract. The Contract budget is actually a subset of the OTPS portion of the City's Expense Budget. The Administration prepares a Contract Budget twice each fiscal year. In January, it is prepared with Departmental Estimates, and in late April it is submitted to the Council with the Executive Budget. The Fiscal 2020 Preliminary Contract Budget, totals $15.9 billion for procurement across all agencies, with 17,655 contracts.

Figure 4



Since Fiscal 2015, the Department's contract budget has increased by $57.2 million, or 29.8 percent. However, it is important to note that the Department's Contract Budget as of Adoption and the Fiscal 2020 Budget projections are less than the Fiscal 2018 Actuals, at $269.1 million and $249.6 million respectively. Nonetheless, since Fiscal 2015, major increases in the Department's contract budget can be attributed to contracts related to data processing equipment and general contractual services. Figure 5 provides a different view of DoITT's Fiscal 2019 Adopted and Fiscal 2020 Preliminary contract budgets.

Figure 5

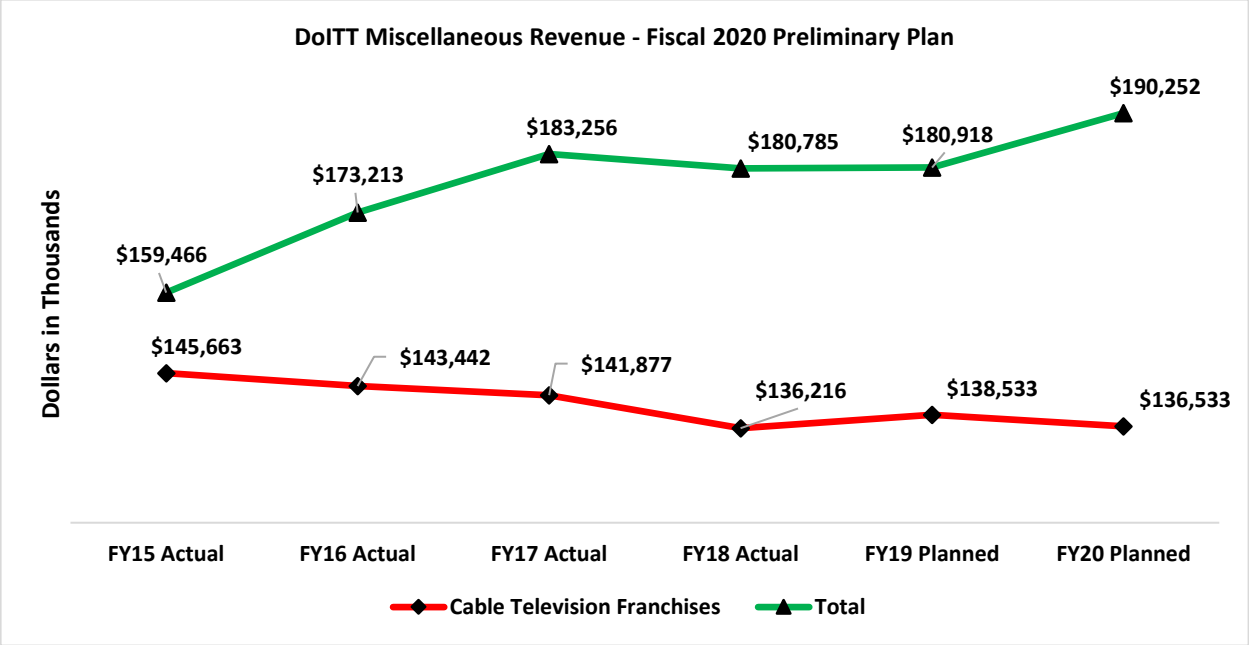


The Department's Fiscal 2020 contract budget totals $249.6 million for 123 contracts, accounting for 49.6 percent of the Department's Fiscal 2020 OTPS budget. Contracts related to Data Processing Equipment and General Contractual Services comprise a substantial portion, accounting for 52.8 percent and 26.2 percent, respectively, of the Department's total Fiscal 2020 Contract Budget. This is because DoITT provides computing services to City agencies in meeting their information processing needs and implements a single data communications network among City agencies through the City Net system, which is later charged back to those agencies through an inter-city billing process. DoITT's Fiscal 2019 Adopted Contract Budget is slightly higher than Fiscal 2020, due to additional contractual amounts associated to ECTP contracts in Fiscal 2019, which has not yet been recognized in Fiscal 2020. As part of DoITT's due diligence, the agency will perform a detailed market analysis of current high-spend contracts so as to ensure their competitiveness, and re-negotiate to improve terms when opportunities are identified, and it will continue to engage more often with Minority and Women Owned Business Enterprises (M/WBEs) as part of its agency-wide equity agenda.

Furthermore, due to the newly created Units of Appropriation (U/A) for MOME and New York City Cyber Command, the Department has been able to display the contracts associated to each of the new U/As, with MOME having 10 contracts totaling $6 million and NYC3 having one contract totaling $2.7 million. For additional information related to DoITT's Fiscal 2020 Contract Budget, please refer to Appendices B - D.

Miscellaneous Revenue

Figure 6



DoITT generated miscellaneous revenue from a wide variety of sources that include cable television franchises, and advertising revenue from LinkNYC, amongst others. Figure 6 shows the Department's major miscellaneous revenue sources. Miscellaneous revenue generated by the Department contributes to the City's General Fund, and therefore is not a dedicated funding source for the Department. Since Fiscal 2015, DoITT's miscellaneous revenue has increased in large part due to additional revenue being recognized from LinkNYC.

The Preliminary Budget projects that the Department will generate miscellaneous revenue totaling $190.3 million in Fiscal 2020. It is important to note that due to the nature of the revenue for the Department, it may vary from year to year. For example, in Fiscal 2016, the Department generated $5.7 million in miscellaneous revenue from Mobile Telecommunication Franchises, whereas in Fiscal 2017, the Department generated $9.5 million from the same funding source. Additionally, in Fiscal 2016, the Department generated $18.4 million in miscellaneous revenue from advertising on LinkNYC's around the City. In Fiscal 2017, it generated $26 million from the same funding source, and is expected to generate $43.7 million in Fiscal 2020. For additional information regarding DoITT's miscellaneous revenue, please refer to Appendix E.

As of October 31, 2018, there were 1,759 active LinkNYC kiosks across the City, with an average of 15 kiosks added per month, from July – October 2018, according to the Preliminary Mayor's Management Report (PMMR). The City's revenue share is not dependent on the number of kiosks installed, as the agreement with the partner vendors guarantees the City will receive either 50 percent of gross revenues, or the minimum annual guarantee of revenues, set at approximately $540 million over the initial term of the agreement through 2026. In the reporting period of the PMMR, LinkNYC kiosks have generated $12.4 million in revenue for the City, and approximately $90 million in revenue for the City since its implementation began in 2015.

Citywide Savings Program

Since Adoption, the Department will generate budgetary savings of $1.8 million in Fiscal 2019 and baselined savings of $344,000 beginning in Fiscal 2020. Although these savings were included in the 2018 November Financial Plan, DoITT has not included a savings program as of the release of the Preliminary Plan, as it aims to generate citywide savings through the Software Asset Management (SAM) initiative, outlined later on in the report. Significant savings initiatives include the following.

- **MOME – Incentive Fund Savings**. DoITT will generate savings of $345,000 in Fiscal 2019 and another $344,000 beginning in Fiscal 2020 through savings from reducing costs associated to the Mayor's Office of Media and Entertainment (MOME) Film Incentive Fund program.
- **Personal Services Surplus**. DoITT will generate a one-time savings of $1.5 million in Fiscal 2019 through PS accruals generated by vacant positions across the agency.
- **Vacancy Reductions**. DoITT plans to reduce 28 vacant positions beginning in Fiscal 2020 as part of the citywide initiative to generate savings by reducing vacant positions across multiple agencies. It is important to note that these vacant positions are non-critical managerial and/or administrative positions, and therefore poses no immediate threat to the vital operations of the Department.

The Administration has announced that it will introduce Programs to Eliminate the Gap (PEGs) for the first time in its tenure, across most City agencies. The Administration is requiring every agency, except for the public housing authority, to identify budgetary savings that will collectively add up to $750 million. A detailed plan for these savings will be included in the City's upcoming Executive Budget in April, and it is likely that DoITT will contribute to this savings target.

Budgetary Issues

- **Federal Communications Commission Second Further Notice of Proposed Rulemaking (FNPRM) 18-131**. On September 25, 2018, the FCC released the second FNPRM 18-131 which introduced new proposed rules on how local franchising authorities (LFAs) may regulate cable operators. FNPRM 18-131 proposes that cable related 'in-kind' contributions, which include services rendered free of cost or certain costs related to public, education and governmental access television, be treated as 'franchise fees', subject to the statutory five percent cap on franchise fees set forth by Section 622 of the Communications Act of 1934. Hence, LFAs would be required to choose between reduced annual franchise fee revenues and/or fewer public, educational and government access television channels and 'in-kind' service benefits. As per Resolution 620, *"…this could burden existing companies financially and dissuade competition within the market, and also prohibit LFAs from using their video franchising authority to regulate the provision of most 'non-cable services', such as broadband Internet access services offered over a cable system by an incumbent cable operator"*.[2] Should the LFA's choose not to lose public, educational, and government access television, the City could potentially recognize a reduction in the miscellaneous revenue it collects from cable television franchises.
- **Net Neutrality Bills – (New York State Finance Law 169 and the New Public Authorities Law 2878-C).** The New York State Fiscal 2020 Executive Budget proposes requiring State agencies

[2] Resolution number 620, by Council Members Moya and Koo (at the request of the Manhattan Borough President), release on December 5, 2018, for the Committee on Technology.

and other State authorities to procure services from only those internet service providers (ISPs) that adhere to the net neutrality principles. This includes the ISPs specifically committing to not blocking any lawful content and services that compete with their services. The proposed bill would enact into law the provisions set forth in the Executive Order Governor Cuomo signed in January 2018 to the same effect.

However, in late 2017, the Federal Communications Commission (FCC) Board voted, and later ratified by Congress, to get rid of net neutrality regulations, with the idea to increase competition between ISPs and create more consumer choice. Numerous states, including California, Washington, and now New York, have enacted laws to only conduct business with ISPs that respect net neutrality principles. The US Attorney General's Office has declared it unlawful for individual states to have their own net neutrality regulations and/or force ISPs to adhere to net neutrality principles. Depending on the legal outcome of this issue with the federal government, City agencies and NYC customers may have to pay higher rates to maintain their fast internet services.

- **New York State Public Service Commission vs. Charter Communications.** In July 2018, the New York State Public Service Commission claimed that Charter Communications (parent company of Spectrum) failed to adequately roll out its internet service to rural areas of the State, which it had promised to do when it merged with Time Warner Cable.[3] Thus, the Commission voted to ban Charter Communications from doing business in the State. As of the latest public update, *"…Charter was supposed to submit a plan to the Commission on November 8th, with a May 2019 date for leaving New York…"*[4], but negotiations are still ongoing as Charter is still appealing the decision. Should Charter Communications leave the State, New York City could see a decline in its Miscellaneous Revenue streams from cable television franchises. It would put into question the entity that would be responsible for taking over the internet and cable operations of Charter Communications in New York City.

[3] Carman, Ashley. "Spectrum internet is getting kicked out of New York". https://www.theverge.com/2018/7/27/17622846/spectrum-charter-cable-internet-new-york-kicked-out

[4] Gartenberg, Chaim. "Charter-Spectrum reaches $174.2 million settlement in New York AG's speed fraud lawsuit". https://www.theverge.com/2018/12/18/18146210/charter-spectrum-174-million-settlement-new-york-state-attorney-general-internet-speeds

Program Areas

Figure 7

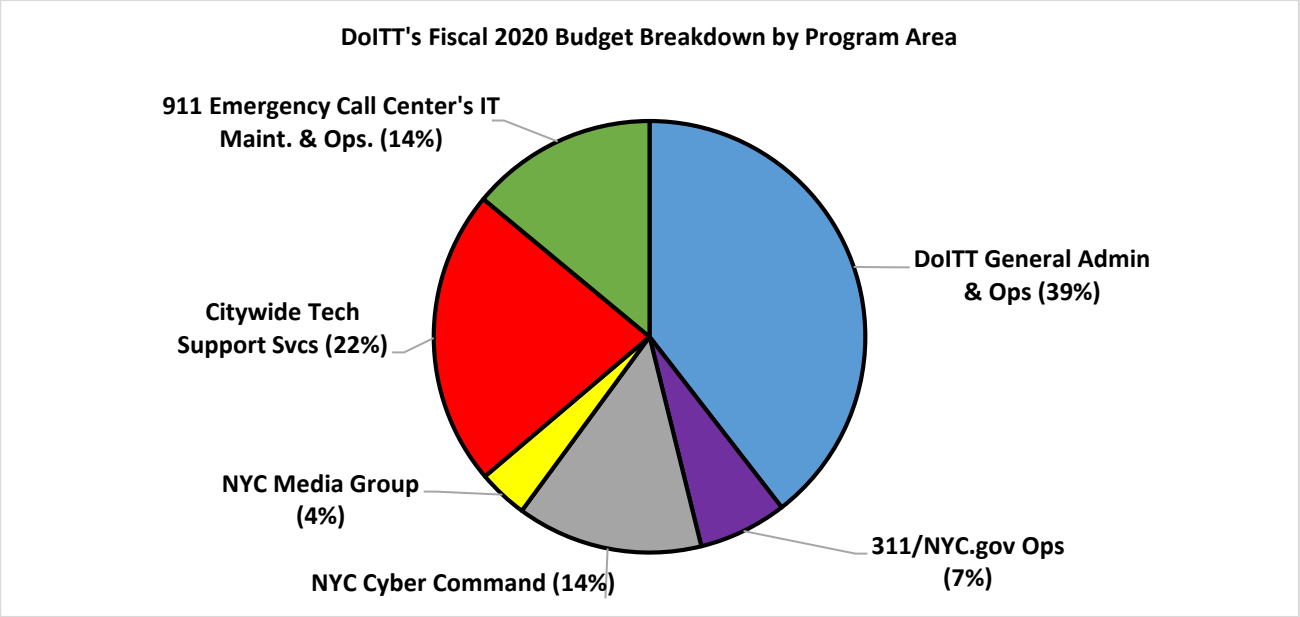
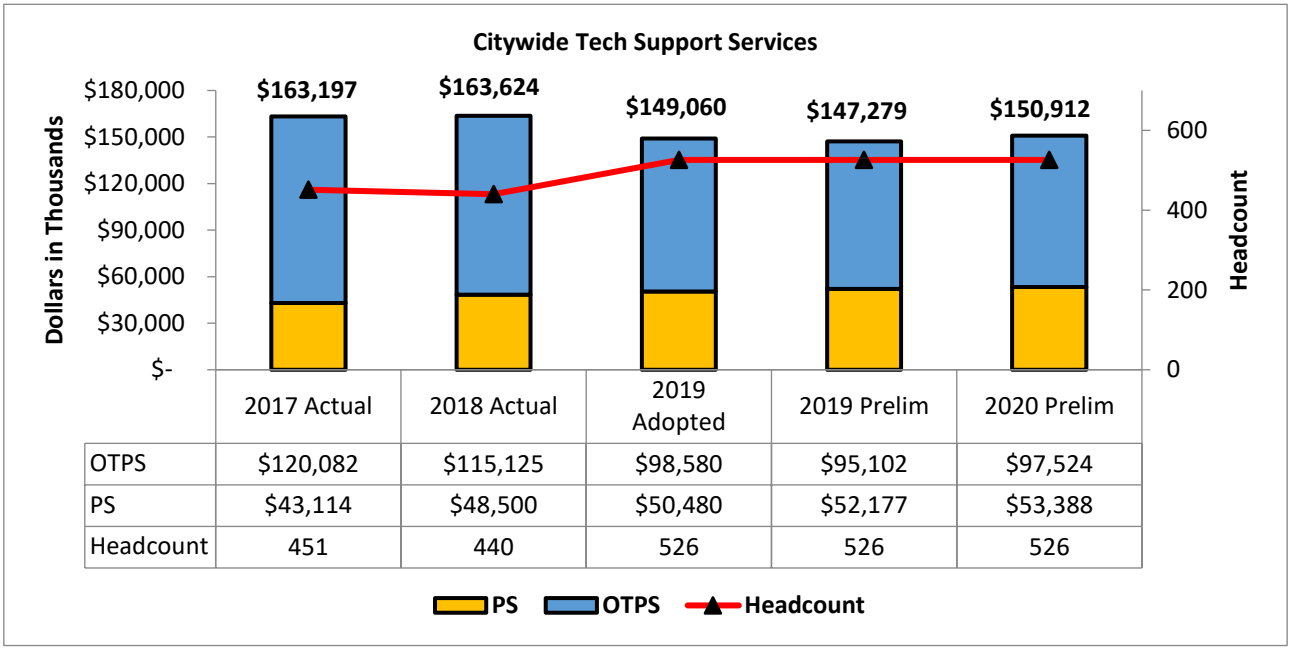


Figure 7 shows how DoITT's budget is distributed across functional areas. Since Adoption, the Department has added four new U/As, including PS and OTPS funding, for both MOME and the New York City Cyber Command – a welcome event given DoITT's previous two U/A budget. However, other areas of DoITT's budget, prepared by the Office of Management and Budget (OMB) are not organized programmatically, and part of the presentation here suggests an alternative structure based on DoITT's program areas. DoITT's General Administration and Operations, which encompasses all other aspects of its budget, is the largest program area in the budget, accounting for roughly $268.4 million, or 39.5 percent of its total budget for Fiscal 2020. This program area is responsible for operating and maintaining all other services that DoITT provides, including but not limited to, the maintenance of CityNet, the Citywide Service Desk and telecommunications systems, amongst others. Currently, DoITT's budget contains six U/As, three of which are for PS related costs, and three are for OTPS costs. DoITT's Fiscal 2020 Preliminary Budget totals $679.4 million, with $175.8 million in PS to support 1,887 positions.

Citywide Tech Support Services

The Citywide Tech Support Services program area is responsible for operating and maintaining the City's wireless network, also known as NYCWiN, created to support public safety and other essential City operations. It is a highly-secure and redundant wireless network that provides agencies with real-time access to high-speed voice, video, and data communications throughout the five boroughs. Additionally, this program area is responsible for general IT security of maintaining the City's databases.

Figure 8



The proposed Fiscal 2020 budget for the Citywide Tech Support Services program area totals $150.9 million, and includes $53.3 million in PS funding to support 526 full-time budgeted positions. DoITT's current year budget allocates upwards of $40 million for NYCWiN, while the Fiscal 2020 Budget allocates a slightly higher amount, at roughly $44 million. During the Fiscal 2019 Preliminary and Executive budget hearings, DoITT testified that it is in the process of planning the decommissioning of NYCWiN as a matter of financial prudence. NYCWiN has become more expensive to operate, requiring millions in upgrades in the near future to maintain. DoITT will transfer the agencies to commercial carriers. Last year, DoITT allocated $4.8 million for Fiscal 2018 to cover the costs associated with developing the scope of work for the decommission process. Although DoITT has yet to identify savings originating from the decommissioning, it is estimated that the City will save at least tens of millions of dollars annually. DoITT is currently working with other City agencies in developing cost estimates to migrate these agencies to commercial carriers.

Preliminary Mayor's Management Report (PMMR) Performance Measures

Table 2

DoITT Critical Performance Indicators	Actuals			Target		4-Month Actual	
	FY16	FY17	FY18	FY19	FY20	FY18	FY19
Ave. uptime of key systems (%)	99.59%	99.66%	99.89%	99.99%	99.99%	99.92	99.78%
Ave. time to resolve all service incidents (days)	1.6	1.5	1.4	3.0	3.0	1.8	1.4
Service Incidents	230,978	260,045	260,060	*	*	88,155	99,118
Ave. time to resolve service incidents - Critical (days)	0.4	0.4	0.3	0.1	0.1	0.1	0.2
Ave. time to resolve telecomm incidents (days)	8.0	6.4	5.0	*	*	5.5	2.8
↑↓ Directional Target * None							

During the first four months of Fiscal 2019, DoITT maintained an average uptime of its key systems of 99.78 percent, which is a slight decrease over the same period in the previous fiscal year. DoITT continues to make upgrades to systems and network infrastructure, such as upgrading the CityNet

network from its legacy vendor-proprietary protocol with limited scalability, to the highly scalable and reliable industry standard to increase the safety and reliability of the City's infrastructure. DoITT continues to work with other city agencies to ensure their applications are resilient and redundant for business continuity.

DoITT also saw a decrease in the average time to resolve all incidents, from 1.8 days to 1.4 days, despite a 12 percent increase in the number of incidents compared to the period in in Fiscal 2018. This is due in part to the refinement of the incident management process, 24/7 infrastructure coverage in key areas and the continual fine-tuning and leveraging of monitoring appliances. Enhanced metrics, tools and continued capacity building across service teams will support further improvements in incident resolution. DoITT also improved the average time to resolve telecommunications incidents by 2.7 days, when compared to last year, which is due to new training programs and administrative support for technical staff. Furthermore, according to the Department, the telecommunications team is now directly responsible for both monitoring and resolving voice circuit issues resulting in quicker resolution.

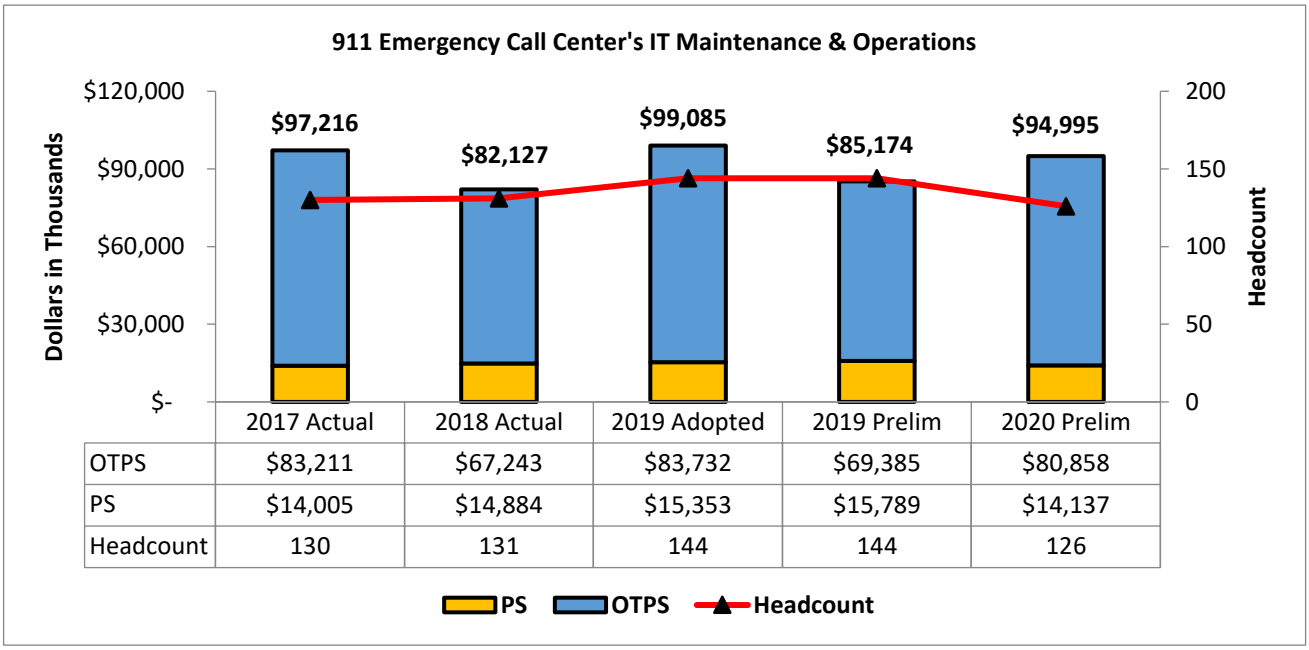
911 Emergency Call Center's IT Maintenance & Operations

The City continues work on Stage 2 of planned upgrades and enhancements to its 911 Emergency System. The objective of the program is to modernize and consolidate the City's 911 emergency communications systems. Funding for this program area aims to maintain and support the two Public Safety Answering Centers (PSAC I & II) and infrastructure operations, including hardware maintenance, software maintenance, lease costs, and other general operations. From 2004 – 2018, the City has committed (contracted out) approximately $2 billion in capital funds to the Emergency Communications Transformation Program (ECTP), now known as the 911 Emergency Call Centers.

New York City is also planning an infrastructure upgrade of its 911 telecommunications network, and the various subsystems that route 911 calls so that it can reliably support any device or service, and quickly connect callers to police, fire or emergency medical personnel. NYC's Next Generation 911 (NG911) will allow the City's public safety agencies to continue to provide high quality and responsive emergency services. Examples of the work that will be done include: the replacement of end of life components of the current 911 system; connecting with 911 systems in neighboring jurisdictions; implementing text-to-911 and providing the ability to submit videos and photos in emergencies. For additional information, please refer to DoITT's report titled *"NYC Next Generation 911"*, released in December 2018[5].

[5] *"2018 Annual Report on Implementation of Next Generation 9-1-1 in NYC – Pursuant to Local Law 78 of 2016"*. https://www1.nyc.gov/assets/doitt/downloads/pdf/2018_doitt_ng911_ll78_annual_report.pdf

Figure 9



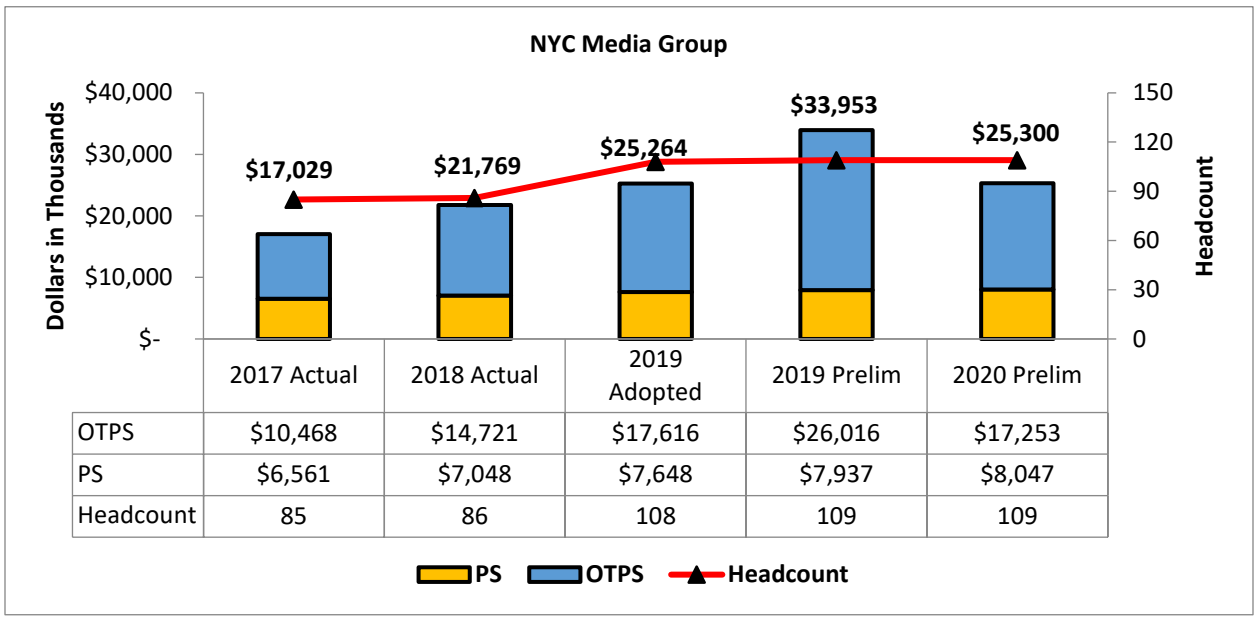
	2017 Actual	2018 Actual	2019 Adopted	2019 Prelim	2020 Prelim
OTPS	$83,211	$67,243	$83,732	$69,385	$80,858
PS	$14,005	$14,884	$15,353	$15,789	$14,137
Headcount	130	131	144	144	126

The program area's proposed budget for Fiscal 2020 totals approximately $95 million, and includes $14.1 million in PS funding to support 126 full-time budgeted positions. These positions include full-time IT support for the PSAC's, and positions that are required for the final stage of the buildout program. The decrease in headcount in the Fiscal 2020 Preliminary Budget, when compared to the Fiscal 2019 Adopted Budget, can be attributed to a decrease in IFA funding. Because IFA positions are evaluated on a year-to-year basis, it is anticipated that headcount associated with IFA's will be adjusted in the upcoming financial plan. According to the Department, part of the reason why OTPS funding increased in the Fiscal 2020 Budget is due to the timing of receiving intra-city funding transfers from other agencies to pay their portions of the Enterprise License Agreement (ELA) costs. DoITT has temporarily reallocated funding from the Fiscal 2019 Preliminary Budget to pay ELA related invoices. Additional funding for ECTP-related costs, including 911 call takers, is included in the budgets of the NYPD and FDNY.

NYC Media Group

The NYC Media Group program area includes the budget of the Mayor's Office of Media and Entertainment (MOME), and the Mayor's Office of Film, Theater and Broadcasting, which encompasses film, television, radio, theater, music, advertising, and others as it relates to creative industries, and NYCTV, the official broadcast network and media production group of the City of New York. The program area also includes the Film Incentive Program, which incentivizes film and television production companies to film in the five boroughs. Production companies are offered incentives and discounts, along with expanded customer services for production, which includes: NYC's marketing credit; cultural benefit; vendor discounts; logo; concierge services; expanded facilities and labor enhancements.

Figure 10



	2017 Actual	2018 Actual	2019 Adopted	2019 Prelim	2020 Prelim
OTPS	$10,468	$14,721	$17,616	$26,016	$17,253
PS	$6,561	$7,048	$7,648	$7,937	$8,047
Headcount	85	86	108	109	109

The NYC Media Group's program area proposed budget for Fiscal 2020 totals $25.3 million, and includes roughly $8 million in PS funding to support 109 full-time positions. The budget for the Film Incentive Program for Fiscal 2020 totals approximately $14.9 million, which has replaced the City's film tax credit program that expired, and was funded at $30 million. The reason why the budget for Fiscal 2019 has increased when compared to the Fiscal 2019 Adopted Budget is mainly attributable to an increase of $8.5 million in Government Education Access Grants that has not yet been recognized in the Fiscal 2020 Budget.

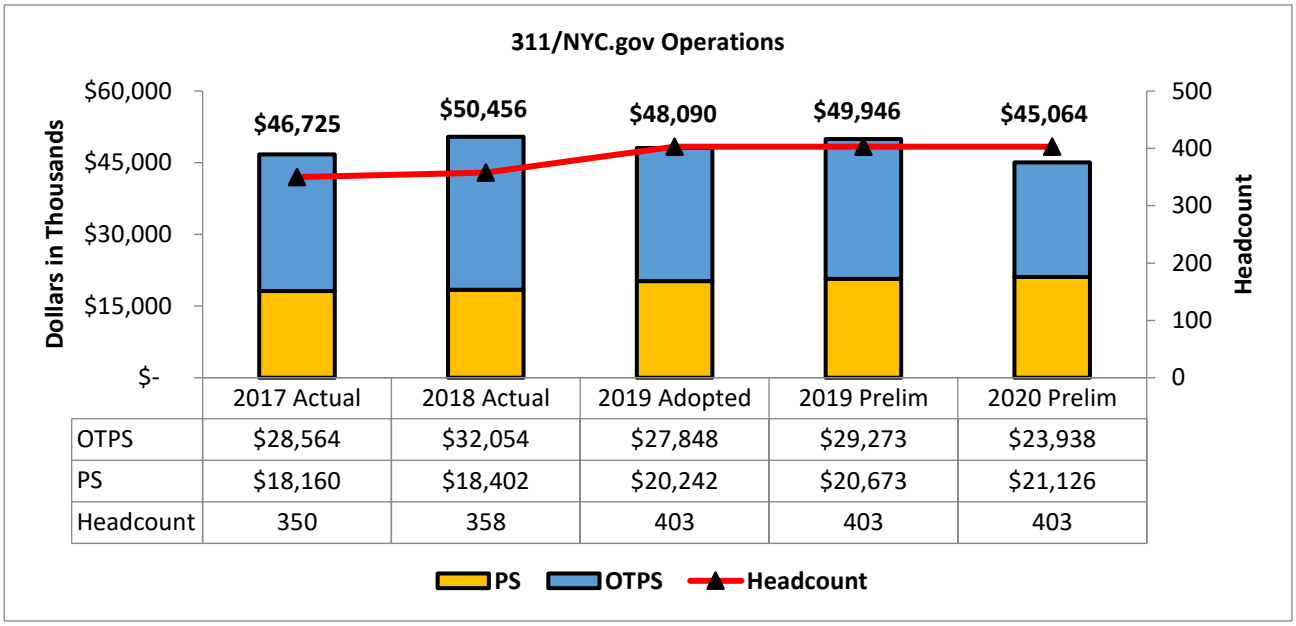
Financial Plan Actions

- **MOME – Film Incentive Program Fund Savings**. In the November 2018 Financial Plan, DoITT will generate savings of $345,000 in Fiscal 2019 and another $344,000 beginning in Fiscal 2020 through savings by reducing costs associated to the MOME Film Incentive Fund program. It should be noted that in the previous fiscal year (Fiscal 2018), DoITT generated $1.1 million in savings by reducing costs associated with the program across multiple financial plans.
- **MOME – DOT Personnel Transfer.** According to the Department, this is a technical budgetary adjustment in the Fiscal 2020 Preliminary Plan, to transfer a position and related funding, for a staff member who works at the Film Office as a field representative, but has been on the payroll of the Department of Transportation (DOT), which will now be housed in MOME's budget.

311/NYC.gov Operations

The 311/NYC.gov program area is responsible for operating and maintaining the 311 Customer Service Center and NYC.gov, the City's official website. 311's mission is to provide the public with quick, easy access to all New York City government services and information while maintaining the highest possible level of customer service.

Figure 11



	2017 Actual	2018 Actual	2019 Adopted	2019 Prelim	2020 Prelim
OTPS	$28,564	$32,054	$27,848	$29,273	$23,938
PS	$18,160	$18,402	$20,242	$20,673	$21,126
Headcount	350	358	403	403	403

The 311/NYC.gov operations proposed budget for Fiscal 2020 totals $45.1 million, and includes $21.1 million in PS funding to support 403 full-time budgeted positions. Part of the increase in funding in its Fiscal 2019 Budget is due to the 311 re-Architecture program, totaling roughly $5.7 million in OTPS funds for Fiscal 2019. The Capital Budget also includes approximately $5.4 million for the 311 re-Architecture Project. The funding will allow the 311 Customer Call Center to deliver a more customer-centric, cost effective system and help modernize the Customer Relationship Management (CRM) software and revitalize the 311 Mobile App. According to DoITT, the new CRM software system is expected to launch in mid-2019. At a hearing held in early January 2019, DoITT Commissioner Samir Saini testified that the Department will be taking over production support with DoITT resources, for the 311 platform after the contract with IBM finishes at the end of the year.

Financial Plan Actions

- **311 Re-Architecture Project**. In the Fiscal 2020 Preliminary Plan, there is a one-time new need totaling $2.2 million in Fiscal 2019. This funding will be used to cover the cost of additional software upgrades, information technology and computing services (ITCS), and cover other capitally-ineligible costs to support the 311 Re-Architecture project.

311 PMMR Performance Measures

Table 3

311 Critical Performance Indicators	Actuals			Target		4-Month Actual	
	FY16	FY17	FY18	FY19	FY20	FY18	FY19
311 Calls (000)	18,799	20,540	20,618	*	*	5,964	5,968
311 Online Site Visits (000)	13,018	17,246	19,345	↑	↑	5,919	6,517
Average wait time (tier 1 calls) (minutes:seconds)	0:16	0:18	0:28	0:30	0:30	0:14	0:23
Calls Answered in 30 seconds (%)	89%	85%	81%	80%	80%	88%	82%
NYC.gov unique visitors (average monthly) (000)	4,001	4,599	4,358	↑	↑	4,195	4,258
↑↓ Directional Target * None							

During the first four months of Fiscal 2019, 311 received more than 13.2 million inquires via phone, 311 Online, the 311 Mobile App and text, which presents an increase of a six percent increase when compared to the first four months of Fiscal 2018, according to the PMMR. Additionally, during the same reporting period, the average wait time to speak to a representative increased by nine seconds to 23 seconds, and 82 percent of the calls were answered within 30 seconds, which still exceeds the target laid out in the PMMR. The new CRM system will allow 311 to handle a larger call volume, make more complaints online, and allow the customer to have a record of all their complaints and the status of those complaints. This would increase the number of 311 online site visits.

Performance Metrics above target

Table 4

Performance Indicator	Actuals			Target		4-Month Actual	
	FY16	FY17	FY18	FY19	FY20	FY18	FY19
Average time to resolve service incidents - Critical (days)	1.6	1.5	1.4	3.0	3.0	1.8	1.4
Average time to resolve service incidents - Medium (days)	1.2	1.2	1.2	3.0	3.0	1.8	0.8
Average time to resolve service incidents - Low (days)	2.2	2.0	2.1	6.0	6.0	2.3	2.7
Projects on Schedule (%)	88%	88%	91%	80%	80%	91%	88%

These performance metrics, found in the PMMR, show that DoITT has set some of its performance targets low, while it has consistently performed above its target since Fiscal 2016. Nevertheless, the Department has published its *"10 Points of Change"*[6], which aims to conduct strategic alterations across the agency. DoITT has stated that performance indicators shall be examined on an ongoing basis as the strategy is executed.

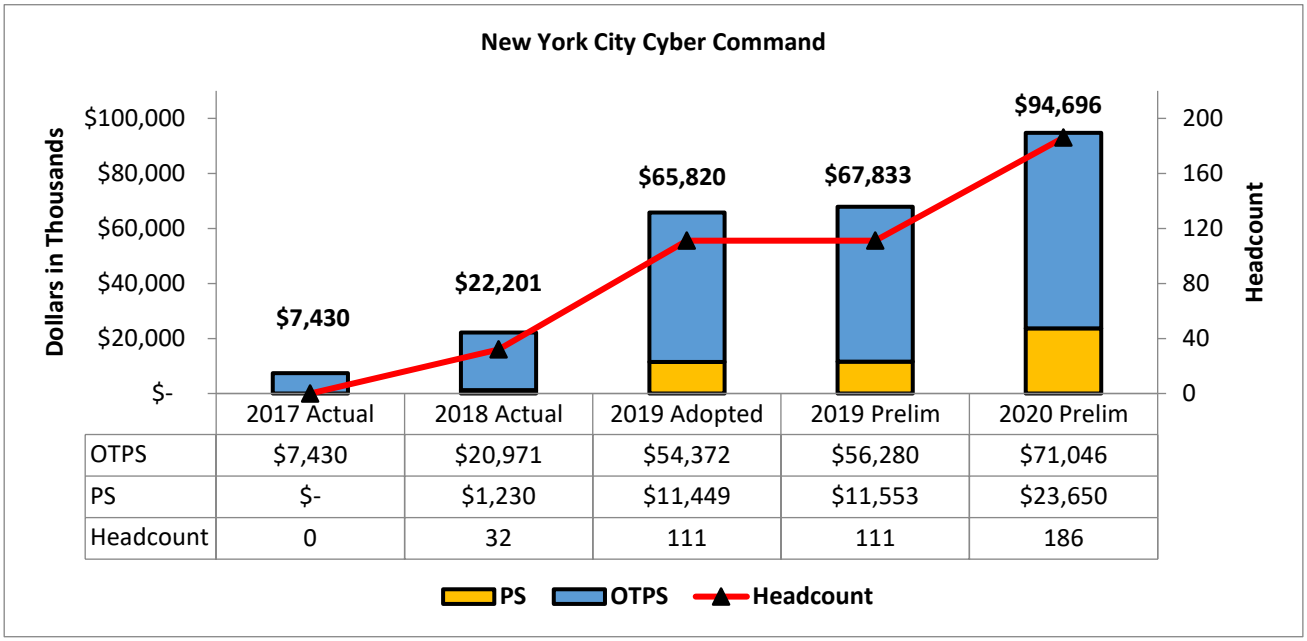
New York City Cyber Command

Since its creation in July 2017 by Mayoral Executive Order 28, the New York City Cyber Command (NYC3) has led the City's cyber defense efforts by directing citywide cyber defense and incident response, mitigating cyber threats, and providing guidance to the Mayor and other City agencies. Using the latest technologies and leveraging public-private partnerships, NYC3 will work to protect, detect, respond, and recover from threats while setting citywide information security policies and standards. NYC Cyber Command has also assisted in protecting the digital lives of all New Yorkers. In

[6] "DoITT's 10 Points of Change". https://www1.nyc.gov/assets/doitt/html/10pointplan/10-points-of-change.html#tpp-01

March, 2018, the Administration announced a pioneering cybersecurity initiative called *"NYC Secure"*, a free mobile application aimed at protecting New Yorkers online, that has seen over 56,000 downloads.

Figure 12



	2017 Actual	2018 Actual	2019 Adopted	2019 Prelim	2020 Prelim
OTPS	$7,430	$20,971	$54,372	$56,280	$71,046
PS	$-	$1,230	$11,449	$11,553	$23,650
Headcount	0	32	111	111	186

New York City Cyber Command's proposed budget for Fiscal 2020 totals $94.7 million, with $23.7 million in PS funding to support 186 full-time positions. One of the reasons why the Fiscal 2020 Budget is larger than the Fiscal 2019 Budget, is a $12 million increase in PS funding, as Cyber Command is expected to reach 267 full-time positions by Fiscal 2022. Additionally, when compared to its current year budget, there is an increase of $14.8 million in OTPS funding in its Fiscal 2020 budget, primarily driven by the purchase of cyber defense tools, the majority of which come in the form of software licenses to perform its operations.

Cyber Command operates through an *'umbrella perspective'*, as numerous City agencies are integrated via Cyber Command's threat management function in their standing incident response policy. This policy encompasses a tiered approach to different agencies based on their daily operations and composite of their own cyber security mission. Most notably, Cyber Command works in conjunction with other cyber security divisions in other agencies to resolve cyber security breaches, and/or works in a consultative capacity to provide aid to other divisions, which encompasses a technical review of their cyber security defenses, among other cyber security assessments.

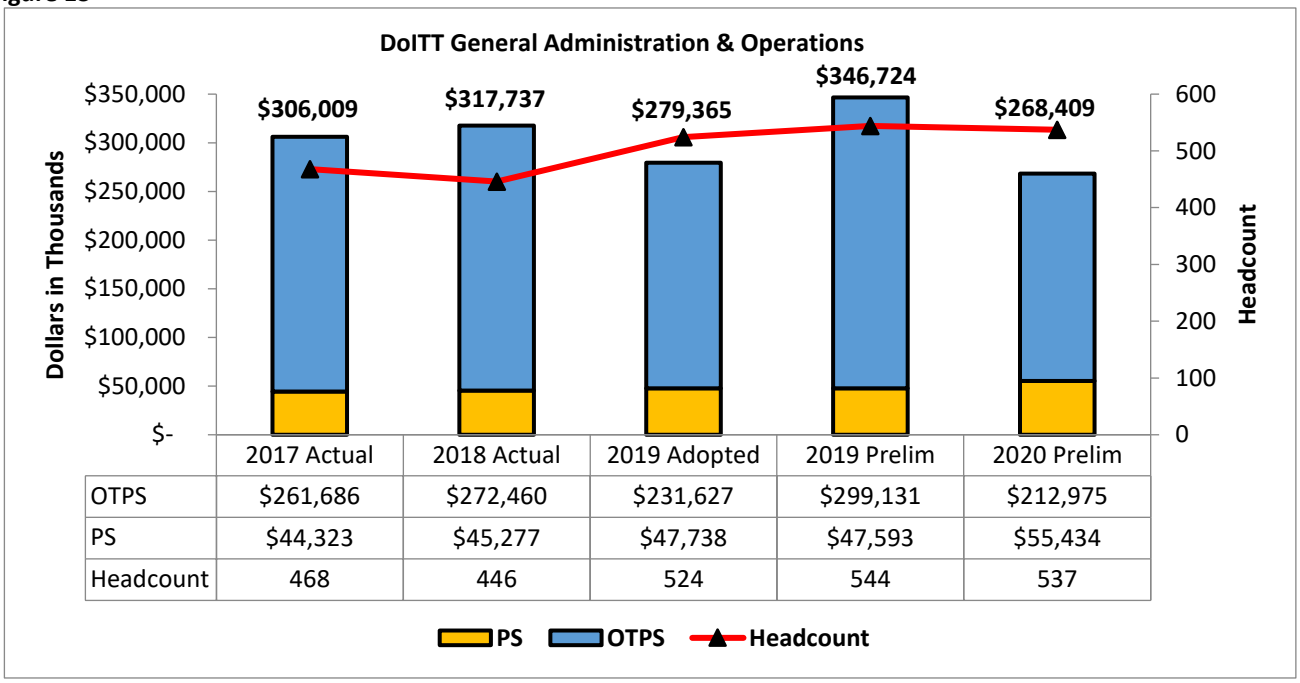
DoITT General Administration and Operations

This program area is responsible for operating and maintaining all other services that DoITT provides, including but not limited to, the maintenance of CityNet[7], the Citywide Service Desk and telecommunications systems; administering telecommunications franchise contracts providing fiber; cable television; and pay the cost for telephones and mobile telecommunication equipment installed on city property and streets. The agency also manages other large inter-agency technology projects.

[7] CityNet is the City's institutional fiber network, which provides the data communications backbone for City agencies, entities and more than 300,000 employees. It interconnects city agencies through fiber network, hosts citywide applications, and provides internet-based services citywide.

Its computer service center is designed to enhance the productivity and cost-effectiveness of over 25 city agencies to meet their information processing needs through 24-hour continuous online operations. DoITT is also supporting the efforts of the Mayor's Office of the Chief Technology Officer (MOCTO) to bring free broadband to over 16,000 New Yorkers living in public housing through the *"NYC Connected Communities"* initiative, which aims to increase access to broadband, computer literacy and job readiness in low-income communities.

Figure 13



	2017 Actual	2018 Actual	2019 Adopted	2019 Prelim	2020 Prelim
OTPS	$261,686	$272,460	$231,627	$299,131	$212,975
PS	$44,323	$45,277	$47,738	$47,593	$55,434
Headcount	468	446	524	544	537

The proposed budget for this program area, for Fiscal 2020 totals $268.4 million, and includes $55.4 million in PS funding to support 537 full-time budgeted positions. This program area also includes $138.4 million in intra-city funding in the Fiscal 2020 Preliminary Plan, accounting for approximately 20.4 percent of the budget for Fiscal 2020. These include $87.4 million for telecommunication service payments and $25.1 million for the Microsoft Enterprise Licensing Agreement (ELA) payments. The most notable increase in funding has been allocated to the ongoing Mayor's Office of Criminal Justice (MOCJ) *"Ecology of Justice"* program, which has recognized over $38.9 million in State funding into the Fiscal 2019 Preliminary Budget since the Adopted Budget, the majority of which has been rolled from the previous fiscal year. This program aims to design a Case Tracker and use DataShare and DataBridge to design, construct and implement an integrated data platform that will enable MOCJ and its partners to enhance public safety, leave mentally ill individuals out of the criminal justice system, and promote a more effective use of incarceration and its alternatives. DoITT has received funding to support this program through to Fiscal 2022. Since Fiscal 2016, DoITT has committed $15 million for this project. A major reason why its current year budget is higher than the one for Fiscal 2020 is because funding allocated to the MOCJ *"Ecology of Justice"* program has not yet been recognized in Fiscal 2020.

With regard to the Department's operations, DoITT has announced several changes as a result of their *"10 Points of Change"* initiative. Most notably, DoITT has established the first ever Chief Operating Officer (COO), which will be responsible for the four largest divisions in the agency, including infrastructure, security, architecture, and development, and will assess, re-align, and augment these

divisions to better conform to IT service management best practices and meet growing demand. The COO will also establish new divisions to better deliver high-value services and products to customers. DoITT will introduce a *'new digital one-stop shop'* that will provide additional levels of transparency, as the portal will enable customers to access information, collaborate with the Department and other agencies, request services, and view real-time operational dashboards for status updates on projects and performance metrics through a single access point.

Financial Plan Actions

- **CECM Staffing**. In the Fiscal 2020 Preliminary Plan, the Department added $104,167 in Fiscal 2020 and baselined $250,000 beginning in Fiscal 2020 in new needs to insource staff who provide maintenance and ongoing support for the Citywide Event Coordination and Management (CECM) system – specifically handling all IT aspects of system maintenance, including documenting business processes, coding, and providing the necessary system updates. CECM provides oversight on all City event-permitting activities, advises and assists the Mayor in the coordination of policies, procedures and operations in relation to permitting; and review the coordination of street activities and pedestrian plaza events.
- **Citywide Telecommunications Consultant**. In the Fiscal 2020 Preliminary Plan, DoITT has added $220,000 in new needs between Fiscal 2019 and Fiscal 2020, which will provide the adequate resources necessary to identify potential telecommunications cost savings at City agencies. DoITT is currently in negotiations with 12 Telecommunication Service providers to secure voice, data and wireless/mobile services on a citywide basis, via the establishment of Master Service Agreements (MSAs). The Department has provided preliminary estimates of annual citywide MSA savings ranging between $3 million and $4 million. This funding will allow consulting resources to assist DoITT and its client agencies to identify opportunities to migrate services to those providers who can generate savings over current spending levels. However, savings have not yet been projected on an individual agency basis. This is expected to occur in the upcoming financial plan.
- **MODA Staffing**. In the Fiscal 2020 Preliminary Plan, DoITT has added $146,500 and baselined $293,000 beginning in Fiscal 2020 in new needs to provide for three additional positions for the Mayor's Office of Data Analytics (MODA), which include a new Open Data Manager, a Project Manager, and a Junior Data Visualization Specialist. MODA requires additional capacity to manage the relationships with DoITT and other City agencies to ensure the public is receiving a high-quality customer services.
- **Software Asset Management**. In the Fiscal 2020 Preliminary Plan, the Department has identified new needs of $235,000 in Fiscal 2019, $890,000 in Fiscal 2020, and $975,000 between Fiscal 2021 – 2023 for additional staffing to expand cost avoidance opportunities in the Software Asset Management (SAM) program. The Department has added five positions for Fiscal 2019, eight positions in Fiscal 2020, and baselined nine positions beginning in Fiscal 2021 for this purpose. According to the Department, over the past few years, DoITT has identified the need to assist agencies in deploying software licenses in the most effective and optimal way. This effort is designed to right-size software license allocations across the City, avoiding inefficient software deployments, and resulting in cost avoidance to the City in the future.

- **MOCS PASSPort Contract Transfer.** The 2018 November Financial Plan and Preliminary Budget includes the transfer of funds and contract assignments related to the Procurement and Sourcing Solutions Portal (PASSPort) Project to the Mayor's Office of Contract Services (MOCS), totaling $7.3 million in Fiscal 2019 and $9.5 million in Fiscal 2020. DoITT is currently in the process of assigning several contracts to MOCS, and has been working with the agency to transfer funds to their budget. The project includes the replacement of the VENDEX questionnaire system, an Automated Procurement Tracking (APT) System, and other account management systems. It includes improvements to allow vendors to complete City contracts faster. DoITT does not expect there to be additional transfer of funds to MOCS for this project, as a result of this budgetary action.
- **Personal Services Savings and Vacancy Reductions.** As part of DoITT's Citywide Savings Plan in the 2018 November Financial Plan, the Department announced that it will generate one-time savings of $1.5 million in Fiscal 2019 through PS accruals generated by vacant positions. Additionally, the Department permanently eliminated 28 vacant positions beginning in Fiscal 2020 as part of the citywide initiative to generate savings by reducing vacant positions across multiple agencies. It is important to note that these vacant positions are non-critical managerial and administrative positions, and therefore pose no significant disruption to the vital operations of the Department.
- **Collective Bargaining.** DoITT has allocated a total of $4.4 million in Fiscal 2019, $7.5 million in Fiscal 2020, and $8.7 million in Fiscal 2021 – 2022 for collective bargaining purposes at the Department.
- **HRO Funding Roll.** DoITT has rolled $2.9 million in Federal funding from Fiscal 2018 into Fiscal 2019 due to continued work related to the Housing Recover Office (HRO).

All Other DoITT PMMR Performance Measures

Table 5

DoITT Critical Performance Indicators	Actuals			Target		4-Month Actual	
	FY16	FY17	FY18	FY19	FY20	FY18	FY19
Projects completed on time (%)	71%	70%	86%	75%	75%	92%	63%
Uptime of telecommunications network (Voice over Internet Protocol) (%)	100.00%	99.93%	100.00%	99.99%	99.99%	99.99%	100.00%
Data sets available for download on NYC.gov/OpenData	1,552	1,700	2,103	↑	↑	1,775	2,206
↑↓ Directional Target * None							

The percentage of DoITT-led citywide projects completed on time decreased when compared to the same four-month period in Fiscal 2018. In the reporting period, the number of projects completed decreased from 16 to eight. DoITT is evaluating project management and implementing best practices in an effort to return to earlier performance levels. Additionally, DoITT published 2,206 datasets on the Open Data Portal as of October 31, 2018, representing an increase of 24 percent when compared to the same date last year. DoITT continues to work closely with City agencies to ensure that data is continually updated to increase the frequency of available data in consistent and user-friendly format on the Open Data website.

Capital Plan Overview

On February 7, 2019, the Administration released the Preliminary Ten-Year Capital Strategy for Fiscal Years 2020 – 2029 (the Ten-Year Strategy), the Capital Commitment Plan for Fiscal 2019 – 2023 (the Commitment Plan), and the Fiscal 2020 Preliminary Capital Budget (the Capital Budget).

This section will provide an overview of the Preliminary Ten-Year Strategy, Commitment Plan, and Capital Budget for DoITT. Each one of these documents should support and be well integrated with one another to properly execute the City's capital projects as well as meet its infrastructure goals. We will examine to what extent this is occurring, where improvements need to be made, and the overall feasibility of DoITT's capital program.

Preliminary Ten-Year Capital Strategy for Fiscal 2020 – 2029

The Ten-Year Strategy is the City's long-term capital planning document, which proves a framework for capital spending by agency. The Strategy is released every two years as mandated by the City Charter.

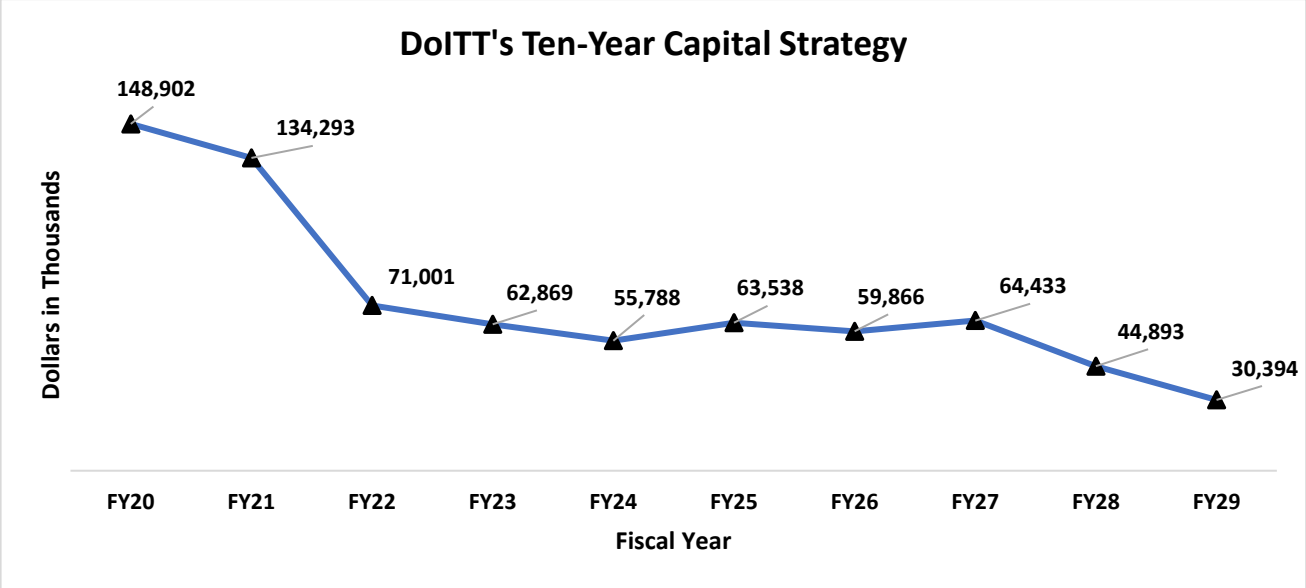
Strategy Guiding Principles

By its own description, the Ten-Year Strategy document *"…provides a venue for the City to demonstrate the comprehensive infrastructure planning that the City undertakes as part of its responsibility to all New Yorkers, across all neighborhoods, and explain the connections between capital investment and strategic opportunities"*. It strives to do this through four guiding principles:

1) Maintain New York City's financial responsibility;
2) Promote forward-looking, holistic capital planning that anticipated neighborhood needs of tomorrow;
3) Advance a more equitable New York City through capital investment; and
4) Consider community perspectives in capital planning and decision-making.

Using these principles, we shall assess DoITT's Strategy, and how well it is integrated with DoITT's Capital Commitment Plan and Capital Budget.

Figure 14



The City's Ten-Year Strategy totals $104.1 billion (all funds), which is $14.5 billion larger than the $89.6 billion Fiscal 2018 – 2028 Ten-Year Strategy. DoITT's Ten-Year Capital Strategy totals approximately $736 million, accounting for less than one percent of the City's total strategy. It should be noted that, DoITT's Ten-Year Strategy of $736 million does not include capital funding for the current fiscal year, which totals $186.7 million. In the Department's Ten-Year Strategy, a large portion of its capital funding ($283.2 million) is frontloaded in Fiscal 2020 and Fiscal 2021, and then drops to $71 million in Fiscal 2022. As such, its Ten-Year Strategy is realistic only in the first few years it shares with the Capital Commitment Plan, with placeholders in the outyears. Given DoITT's historical average capital commitment rate of 37 percent since Fiscal 2014, it is estimated that the majority of the capital funding in the first two years of the Ten-Year Strategy will be rolled into consecutive fiscal years.

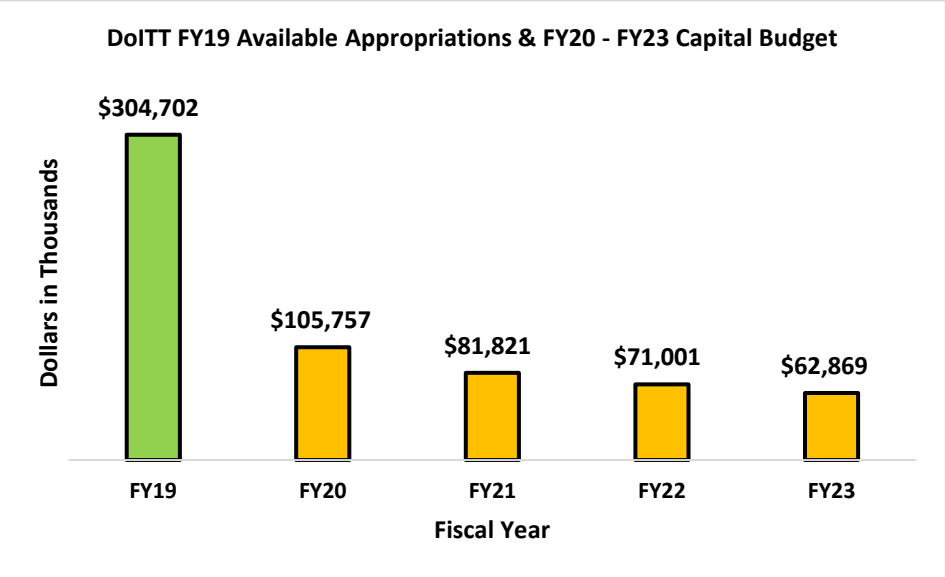
DoITT's Ten-Year Strategy is housed as a subcategory to the *"Energy Efficiency and Citywide Equipment"* capital program area, which includes capital funding for the Financial Information Services Agency (FISA) and other citywide data processing equipment, and totals $7.2 billion. Of this total, DoITT's Ten-Year Strategy accounts for approximately 10.3 percent. One of DoITT's major roles as an agency is to consolidate the citywide management of information technology (IT) and communications to achieve long-term productivity improvements. DoITT has planned capital spending in the ten-year capital strategy to procure data processing equipment services. This will enable City agencies to achieve greater efficiency with limited resources. The Capital Strategy includes approximately $52.5 million for continued infrastructure and telecommunication upgrades to PSAC I and PSAC II in Fiscal 2020. It also contains $96.4 million in capital funding for Fiscal 2020 to support other citywide IT systems, including CityNet, and the 311 Customer Service Center.

Fiscal 2019 Preliminary Capital Budget for Fiscal 2020 - 2023

The Capital Budget provides the required appropriations for Fiscal 2020 and planned appropriations for the subsequent three-year program. Appropriations represent the legal authority to spend capital dollars and are what the Council votes on at the budget adoption. The Commitment Plan, which is a five-year spending plan, is the plan to spend those appropriations. The Capital Budget is significantly less than the Capital Commitment Plan because it does not include the current appropriations for Fiscal 2019 or the amount of funding that may be re-appropriated or rolled into Fiscal 2020 in the

Executive and Adopted Budgets. The following provides an overview of the Capital Budget and Commitment Plan for DoITT.

Figure 15

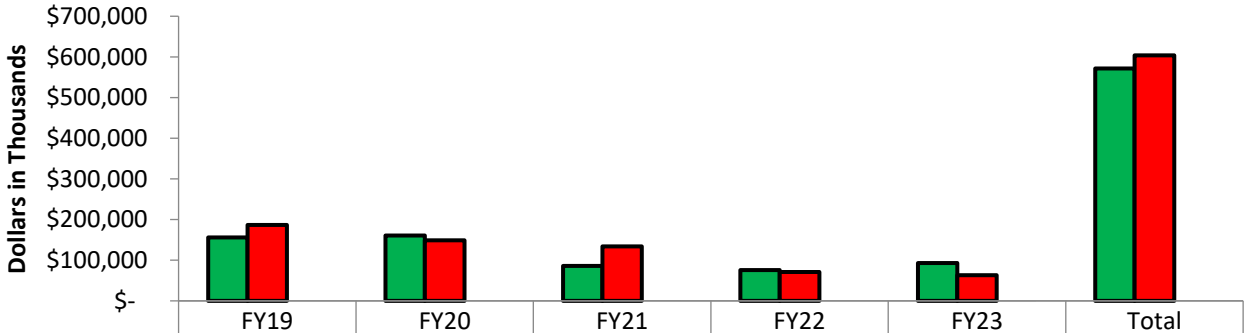


As shown in the chart (left), DoITT's Fiscal 2020 Preliminary Capital Budget includes $321.4 million in Fiscal 2020 - 2023, all of which are City funds. This represents approximately less than one percent of the City's total $52.8 billion Capital Budget for 2020 – 2023. Available appropriations for Fiscal 2019 total $304.7 million. Due to the fact that there was no new funding added in authorized Fiscal 2019 appropriations, the available appropriations for Fiscal 2019 is recognized as reauthorized prior year appropriations.

Fiscal 2019 Preliminary Capital Commitment Plan for Fiscal 2019 – 2023

The City's Capital Commitment Plan details the Administration's plan to spend appropriations voted on by the City Council at Adoption. The Commitment Plan provides project-level funding detail as well as an estimate of expenditure dates. It is through this document that we gain insight into a project's estimated start date and time to completion. The Department's Preliminary Capital Plan totals $603.8 million in Fiscal 2019 – 2023. This represents less than one percent of the City's total $83.8 billion Preliminary Commitment Plan for Fiscal 2019 – 2023.

Figure 16



	FY19	FY20	FY21	FY22	FY23	Total
Adopted	$155,831	$160,446	$86,321	$76,001	$92,931	$571,530
Prelim	$186,692	$148,902	$134,293	$71,001	$62,869	$603,757
% Change	19.8%	-7.2%	55.6%	-6.6%	-32.3%	5.6%

In Fiscal 2018, the Department rolled $117.6 million in unspent capital funds into the outyears, thus increasing funds between Fiscal 2019 – 2023 to reflect more accurate timelines. The majority of the capital projects span multiple fiscal years, and it is therefore common practice for an agency to roll unspent capital funds into future years. As of November 2018, the Department has actually committed $36.2 million, or 19.4 percent, of the total $186.7 million annual commitment plan for Fiscal 2019. It is important to note that the Department increased its capital plan by $32 million between Fiscal 2019 – 2022, in order to finance newly created capital projects, which shall be discussed later on in this section.

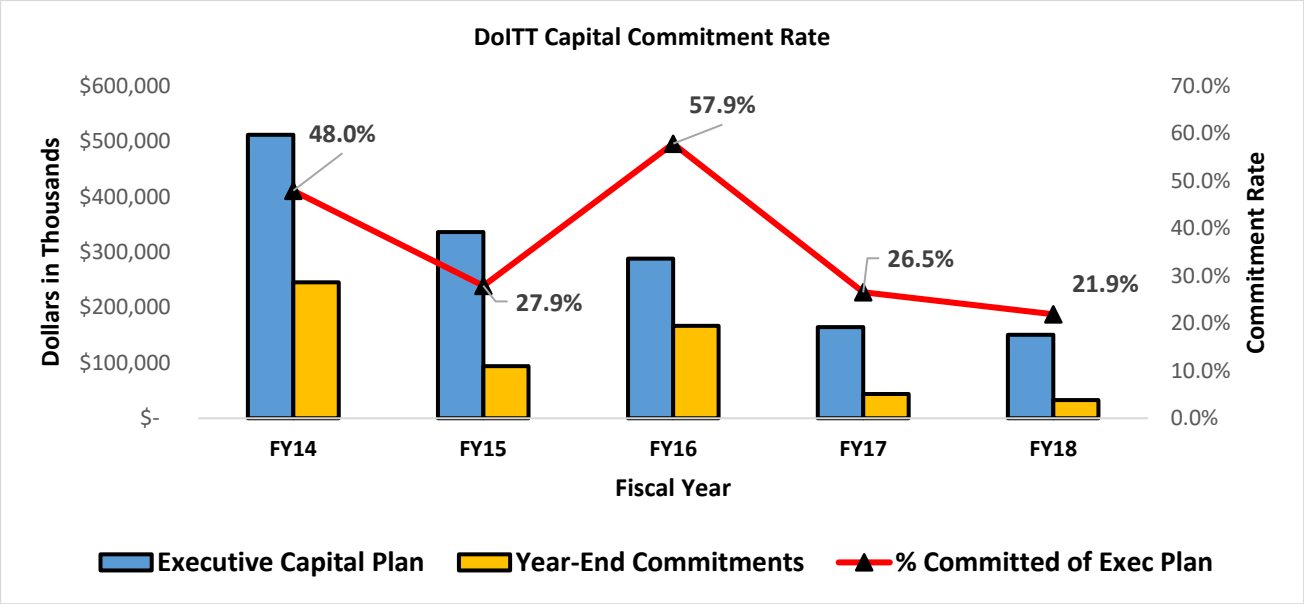
The Department's current appropriations (authorized spending) totals $268.5 million in Fiscal 2019. These appropriations are to be used to finance the agency's $186.7 million planned capital commitment program[8]. The agency has $81.8 million, or 30.5 percent more funding than it needs to meet its entire capital commitment program for the current fiscal year. This excess balance gives the Administration and agency considerable flexibility within the capital plan. However, as the commitment of appropriations are legally bound to their budget line descriptions, this flexibility is more limited than it appears from this variance alone. In the City Council's *"Response to the Fiscal 2019 Preliminary Budget and Fiscal Year 2018 Preliminary Management Report"*, released on April 10, 2018, the Council expressed concern over excess capital appropriations in the capital commitment plan, and called upon the Administration to reduce appropriations in the capital plan. Historically, the Commitment Plan has been frontloaded with a majority of planned commitments in the first year or two of the plan. At the Council's request, this practice has begun to come to an end. Agencies' Commitment Plans have been more accurate, including being more evenly distributed planned spending across all years of the plan, beginning with the last Executive Commitment Plan.

The chart below displays the Department's capital commitment plan as of the Fiscal 2014 – 2018 Executive Budget and the actual commitments in the corresponding fiscal year. The graph shows the capital commitment rate, which is the percentage of the capital plan committed per fiscal year.[9]

[8] Appropriations for Fiscal 2019 are calculated by summing the available appropriations listed in the commitment plan with actual commitments to-date. Because commitments to-date excludes inter-fund agreements (IFA), this figure may be slightly lower than the total appropriations for Fiscal 2019. In addition, a very small portion of the difference between appropriations and planned commitments are necessary to fund IFA, which are excluded from this planned commitments figure.

[9] Note: Planned commitments are higher than the agency's "total commitments". Target commitments are the management tool used by the Office of Management and Budget (OMB); they are "the actual aggregate levels that managing agencies are expected to commit and against which their performance will be measured at the end of the fiscal year", and are not broken out between City and non-City funds.

Figure 17



The reason why DoITT's Capital Commitment rate is volatile is because total commitments often increase significantly as projects near completion. In this instance, it was driven by changes in commitments for ECTP and PSAC related capital projects. For example, in Fiscal 2016, capital commitments increase to 57.9 percent, as PSAC2 became operational in June 2016.

Capital Budget Structure

DoITT's capital plan contains two budget lines, one for all general IT services and cybersecurity related projects, and the second contains projects related to the maintenance of the 911 Emergency Call Centers, also known as the ECTP, as mentioned previously. Under the general IT services budget line, there are 37 projects, ranging from $18,000 for remaining capital work upgrading 311's tech infrastructure to $17.3 million for work related to NYCICN upgrades. Additionally, this budget line contains a lump-sum project line titled *"DoITT's EDP Projects – Current Year and Out-Year Planning"*, with $353.1 million in capital funding between Fiscal 2019 – 2023, where funding is allocated to ongoing electronic data processing (EDP) projects, and shifted to other projects as needs are identified. Lump-sum budget lines are not a transparent planning tool and is something that the Council has been addressing with the Administration.

Under the ECTP budget line, there are 29 capital projects, ranging from $3,000 for remaining work on FDNY's Computer Aided Dispatch workstations, to $15 million for work related to PSAC1 reconstruction. This budget line also contains a lump-sum project line titled *"Emergency Communications Systems & Facilities"*, with $121.6 million in capital funds between Fiscal 2019 – 2023, where funding is allocated to ongoing ECTP-related projects, and moved to other projects as needs are identified. In total, DoITT's Fiscal 2020 Capital Commitment Plan contains 66 projects.

The following table provides a breakdown of planned commitments from Fiscal 2019 – 2023 for both budget lines under DoITT's Capital Commitment Plan, which are DP-0001 (general IT services) and DP-0002 (ECTP-related projects).

DoITT 2019-2023 Capital Commitment Plan (Budget Line DP-0001)
Dollars in Thousands

	2019	2020	2021	2022	2023	Total
Preliminary Plan	$134,220	$96,430	$81,821	$71,001	$62,869	**$446,341**
Adopted Plan	$77,123	$81,738	$86,321	$76,001	$92,931	**$414,114**
Change	$57,097	$14,692	($4,500)	($5,000)	($30,062)	**$32,227**

Source: OMB Fiscal 2020 Preliminary Capital Commitment Plan

For this budget line (all general IT services), in Fiscal 2018, the Department committed $26.9 million, or 45 percent of its annual commitment plan for that year.[10] As such, this resulted in a funding roll of $32.5 million into Fiscal 2019 – 2023. It should be noted that the Department has relocated capital funding from Fiscal 2021 – 2023 to finance new capital projects in the current Fiscal 2019 Capital Commitment Plan, which will be outlined in the following section of this report.

DoITT 2019-2023 Capital Commitment Plan (Budget Line DP-0002)
Dollars in Thousands

	2019	2020	2021	2022	2023	Total
Preliminary Plan	$52,472	$52,472	$52,472	$0	$0	**$157,416**
Adopted Plan	$78,708	$78,708	$0	$0	$0	**$157,416**
Change	($26,236)	($26,236)	$52,472	$0	$0	**$0**

Source: OMB Fiscal 2020 Preliminary Capital Commitment Plan

The Capital Commitment Plan suggests that DoITT will use all capital funds related to ECTP-related projects by Fiscal 2021, effectively ending capital funding for the program in Fiscal 2021. The Department reallocated $25 million from its project related to Stage two of the ECTP Systems Integrator in Fiscal 2019 to ECTP's lump-sum budget line for Fiscal 2021.

2019 Preliminary Capital Commitment Plan Highlights

DoITT has reallocated approximately $27 million of funding within its Capital Commitment Plan and added approximately $32 million in new capital funding, to fund the following new major capital projects.

- **Worker Connect and Health & Human Services (HHS)-Connect Component Upgrades**. The Fiscal 2020 Capital Commitment Plan adds $1.4 million to upgrade and modernize Worker Connect and HHS-Connect System Components, as part of the Mayor's Office of Economic Opportunity's (NYC Opportunity) growing portfolio of integrated data services. Worker Connect is a web-based application that provides workers a consolidated view of client data integrated from multiple case management systems. NYC Opportunity is seeking to build out an integrated data platform for mayoral initiatives that involve data sharing among multiple agencies.
- **IT Backup Infrastructure Upgrades**. The Fiscal 2020 Capital Commitment Plan includes $2.9 million for upgrades and the expansion of the City's IT Backup Infrastructure. Currently, DoITT provides backup and recovery of all data that are mandated for protection. This equipment is currently at its end-of-life, and DoITT has allocated this funding to upgrade its components.
- **Server Farm Upgrade**. The Fiscal 2020 Capital Commitment Plan includes $11.1 million to replace the end-of-life hardware as well as transform the datacenter networking architecture of Software Defined Networking (SDN). DoITT operates and manages two consolidated

[10] Actual Commitment Plan in Fiscal 2018 was $59.8 million.

datacenters, which host critical City applications and databases. DoITT is faced with demands to provide faster services, maintain those services, and support applications on a yearly basis. DoITT is transforming the networking architecture of server farms in the datacenters to SDN.

- **Information Security Infrastructure Upgrade**. The Fiscal 2020 Capital Commitment Plan adds $5.4 million to implement Phase 1 of replacing the end-of-life components of information systems. This new feature will provide threat and advanced malware protection, greater automation, tighter security monitoring of malicious content from the internet, and provide capabilities that enhance every aspect of network agility, visibility, and security.
- **Citywide CMWare ELA**. The Fiscal 2020 Capital Commitment Plan includes $17.8 million to provide the necessary VMware licensing needs for a new 5-year ELA renewal for all City agencies, as the current ELA has expired in December 2018.
- **PSAC I and PSAC II FDNY Joint Operations Center (JOC) Construction**. The Fiscal 2020 Capital Commitment Plan includes $1.7 million to provide closer integrations between the Fire Department (FDNY) dispatch operations and Emergency Medical Services (EMS) dispatch operations. According to the Department, FDNY is creating a Joint Operations Center at each PSAC, creating a setting where Fire Alarm Dispatchers and Emergency Medical Dispatchers can manage multiple incidents citywide from a single location together. This will establish a direct line of communication between FDNY and EMS.
- **PSAC II Critical Systems Enhancements**. The Fiscal 2020 Capital Commitment Plan adds $1.6 million to improve the resiliency of the PSAC II facility's mechanical, electrical and plumbing (MEP) infrastructure. With this funding, PSAC II will be able to meet the requirements for fault tolerance and will be able to operate effectively in the event of a major malfunction of equipment.
- **FDNY FireCAD (Computer Aided Dispatch) Security Enhancements**. The Fiscal 2020 Capital Commitment Plan includes $1.4 million to create additional security zones for the FireCAD system. In addition, the FDNY Bureau of Communications (BOC) Fire Dispatch operations will have further protection in order to secure operations without concerns about external, or possible internal threats to the system's security or operation.
- **PSAC II Room 305 Buildout**. The Fiscal 2020 Capital Commitment Plan includes $2.3 million to expand the room of call taking operations at PSAC II in the Bronx, in order to have sufficient office space for these critical operations.

Other DoITT Managed Capital Projects

Additionally, a portion of the capital funding for DoITT projects is housed in other areas of the Fiscal 2020 Capital Commitment Plan. These include approximately $184,000 in the Citywide Equipment Budget (PU) for phase 3 implementation of Citywide VoIP (Voice over Internet Protocol), and $39.7 million for the Public Buildings Budget (PW), which includes a large project of $13.2 million in Fiscal 2022 for an alternate data center for the Financial Information Services Agency (FISA). A large portion of the funds ($26.2 million) is held in one lump-sum project line, titled *"Infrastructure Equipment Upgrades"*, which is for the improvement of long-term leased facilities for all boroughs.

Conclusion

To a certain extent, DoITT's Capital Commitment Plan and Ten-Year Strategy accurately reflect the new capital projects the Department has added in its Capital Budget. Given the nature of the ever-changing and fast-paced world of technology, it is difficult to accurately budget tech-related projects

in the outyears, as other tech-related needs may be identified as fiscal years progress. However, the Department should take into account its history in actual capital commitments as a benchmark for future capital expenditures, in order to accurately budget for its projects in the outyears. The Department should also curtail its use of lump-sum budgeting and move to a more transparent budgeting practice.

Appendices

Appendix A: Budget Actions in the November and Preliminary Plans

Dollars in Thousands	Fiscal 2019			Fiscal 2020		
	City	Non-City	Total	City	Non-City	Total
DoITT Budget as of the Adopted 2019 Budget	**$491,275**	**$175,409**	**$666,684**	**$519,316**	**$152,829**	**$672,145**
New Needs						
311 Re-Architecture Project	$2,176	-	$2,176	-	-	-
CECM Staffing	104	-	104	250	-	$250
Citywide Telecommunications Consultant	220	-	220	220	-	220
MODA Staffing	140	-	140	293	-	293
Software Asset Management	235	-	235	890	-	890
Subtotal, New Needs	**$2,875**	**-**	**$2,875**	**$1,653**	**-**	**$1,653**
Other Adjustments						
MOME - Incentive Fund Savings	($345)	-	($345)	($345)	-	($345)
Personal Services Savings	(1,500)	-	(1,500)	-	-	-
Other City Adjustments	(3,730)	-	(3,730)	(2,280)	-	(2,280)
State Adjustments	-	41,563	41,563	-	6,173	6,173
CDBG Adjustments	-	3,569	3,569	-	87	87
Other Federal Adjustments	-	3,305	3,305	-	-	-
Other Categorical Adjustments	-	10,553	10,553	-	(41)	(41)
Intra-City Adjustments	-	7,856	7,856	-	1,985	1,985
Subtotal, Other Adjustments	**($5,575)**	**$66,846**	**$61,271**	**($2,625)**	**$8,204**	**$5,579**
TOTAL All Changes	**($2,700)**	**$66,846**	**$64,146**	**($972)**	**$8,204**	**$7,232**
DoITT Budget as of the Preliminary 2020 Budget	**$488,584**	**$242,326**	**$730,910**	**$518,344**	**$161,033**	**$679,377**

Appendix B: DoITT's Total Fiscal 2020 Contract Budget

DoITT Fiscal 2020 Preliminary Financial Plan Contract Budget - Total Departmental Contracts *Dollars in Thousands*				
Category	**Fiscal 2019 Adopted**	**# of Contracts**	**Fiscal 2020 Prelim**	**# of Contracts**
Contractual Services General	$ 77,173	22	$ 65,432	22
Telecommunications Maintenance	14,827	7	14,827	7
Maint. & Rep. General	20,296	7	20,296	7
Office Equipment Maintenance	434	2	434	2
Data Processing Equipment	127,587	69	131,749	69
Printing Contracts	107	2	107	2
Security Contracts	176	1	176	1
Temporary Services	1,129	2	1,139	2
Cleaning Services	17	2	17	2
Training Program for City Employees	1,930	3	730	3
Professional Svcs: Legal Services	96	1	102	1
Professional Svcs: Computer Services	10,912	2	1,064	1
Professional Svcs: Other	14,438	4	13,569	4
Subtotal	**$269,122**	**124**	**$249,642**	**123**

Appendix C: MOME Fiscal 2020 Contract Budget

Fiscal 2020 Preliminary Financial Plan Contract Budget - Mayor's Office of Media and Entertainment (MOME) *Dollars in Thousands*		
Category	**Fiscal 2020 Prelim**	**# of Contracts**
Contractual Services General	$ 5,124	1
Telecommunications Maintenance	3	1
Maintenance & Repair General	1	1
Office Equipment Maintenance	5	1
Data Processing Equipment	242	1
Printing Contracts	4	1
Temporary Services	592	1
Cleaning Services	5	1
Training Program for City Employees	1	1
Professional Services: Other	9	1
TOTAL	**$ 5,986**	**10**

Appendix D: Cyber Command Fiscal 2020 Contract Budget

Fiscal 2020 Preliminary Financial Plan Contract Budget - New York City Cyber Command (NYC3) *Dollars in Thousands*		
Category	**Fiscal 2020 Prelim**	**# of Contracts**
Data Processing Equipment	$ 2,652	1
TOTAL	**$ 2,652**	**1**

Appendix E: DoITT Miscellaneous Revenue (Fiscal 2015 – Fiscal 2020 Preliminary)

DoITT Revenue Sources	**Actuals**				**Planned**	
(Dollars in Thousands)	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Film Application Process Fees	$1,020	$1,111	$1,047	$1,042	$1,020	$1,020
Premier Fees	274	343	633	278	274	274
Cable Television Franchises	145,663	143,442	$ 141,877	136,216	138,533	136,533
Mobile Telecom Franchises	4,222	5,728	9,496	12,566	3,840	3,840
WiFi Revenue	3,141	18,395	26,018	27,372	32,333	43,667
Film Permits for City Property	300	294	394	336	300	300
.NYC Revenue	1,238	854	600	758	788	788
Lease-Time TV	1,874	1,869	1,854	1,706	1,700	1,700
Procurement Spend Card Rebates	1,734	1,177	1,337	511	2,130	2,130
TOTAL	**$159,466**	**$173,213**	**$183,256**	**$180,785**	**$180,918**	**$190,252**