



Department of Innovation & Performance 2020 Operating Budget Request

Santiago Garces - Director of Innovation & Performance
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6) How we propose investing our resources



Devices– Tech Refresh



IT Service management



Infrastructure – Network and Hosting



Software Roadmap



Cyber security



Investing in our team

WHERE WE ARE



In the past three years we have seen 3X the number of devices in our network



Computers in the City are on **average 6 years old**. Some are 12 years old.
Industry best practice is to limit devices to 4 years.



THE CITY SPENDS APPRX. \$4,269 IN TECHNOLOGY PER EMPLOYEE. OTHER LOCAL GOVERNMENTS OUR SIZE SPEND APPRX. \$8,242 (GARTNER)

WHAT WE NEED TO IMPROVE

Innovation & Performance is building the foundations of a strong, reliable, and fiscally responsible environment to benefit residents and employees



A reliable and secure network to support over **100** locations



2000 PCs and other devices that empower (instead of frustrate) our employees



Over **20** major Software Applications that maximize value to the City

HOW WE WILL ACCOMPLISH THIS

I&P SUPPORTS: PITTSBURGH CITY CHANNEL, THE CABLE FRANCHISE AGREEMENT, THE PRINTSHOP, THE WEBSITE, ALL TELEPHONY, 311, ALL TECHNOLOGY SERVICES INCLUDING SOFTWARE, NETWORK, SERVERS, COMPUTERS, SMART PHONES AND TABLETS, PERFORMANCE MANAGEMENT, INNOVATION PROGRAMS SUCH AS PGHLAB AND INCLUSIVE INNOVATION.

I&P HAS SIX PRIORITY FOCUS AREAS IN 2020 TO ACCOMPLISH THIS MISSION:



Devices–Tech
Refresh



IT Service
management



Infrastructure –
Network and
Hosting



Software
Roadmap



Cyber security



Investing in our
team

OTHER OBJECTIVES FOR 2020



CYBERSECURITY

REDUCE EXPOSURE TO FINANCIAL RISK

REDUCE EXPOSURE TO OPERATIONAL RISK



DATA SERVICES

GIS

INFRASTRUCTURE

TEAM GOVERNANCE

PRIVACY & ANALYTICS



FRANCHISE AGREEMENT

SECURE THE FUTURE OF PEG TELEVISION FOR OUR DIVERSE COMMUNITY



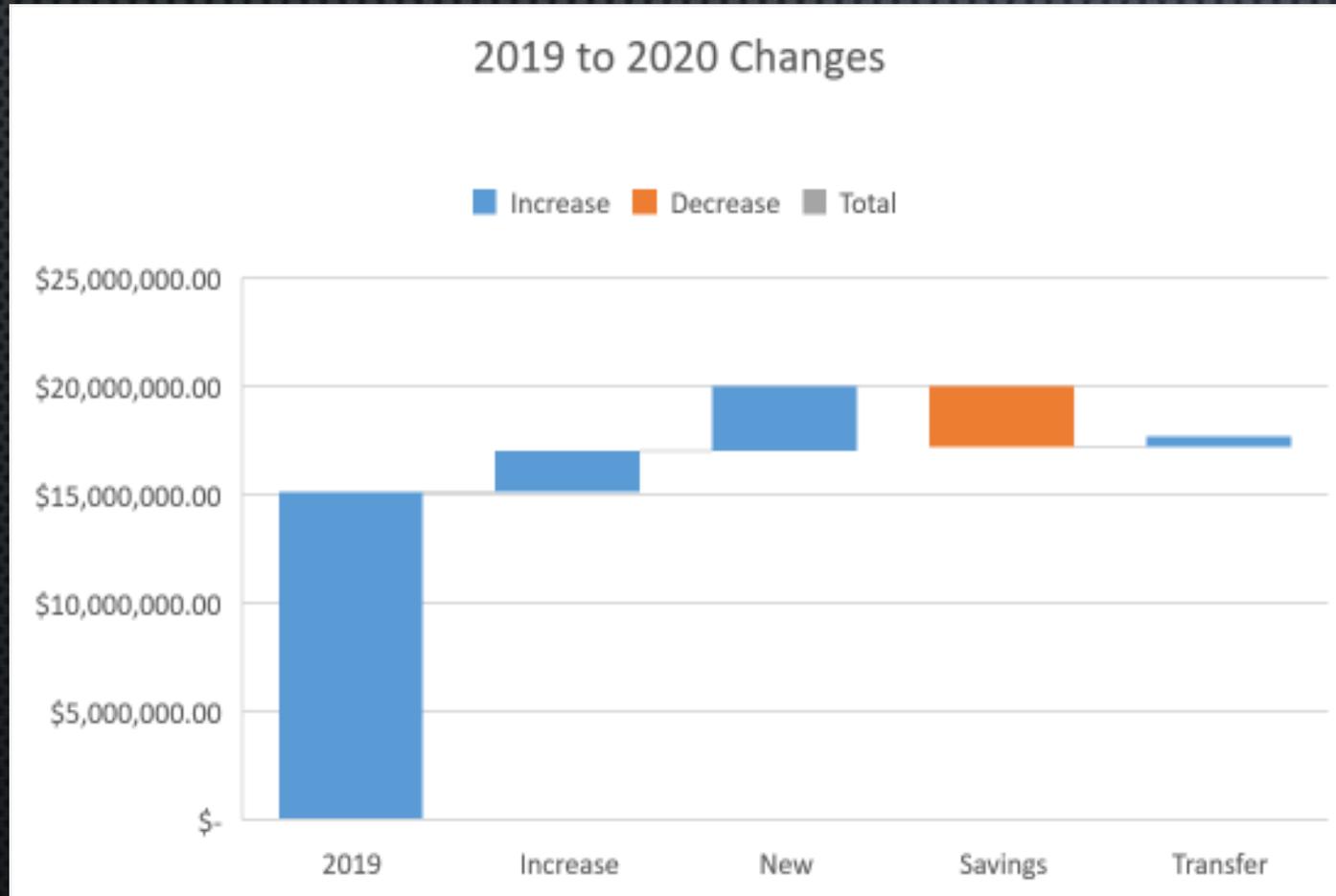
PERFORMANCE MANAGEMENT

IMPROVE FOCUS AND EXECUTION ON PROJECTS

DRIVE TRANSPARENCY INTO OPERATIONS

USE HUMAN CENTERED DESIGN AND BEHAVIORAL NUDGES

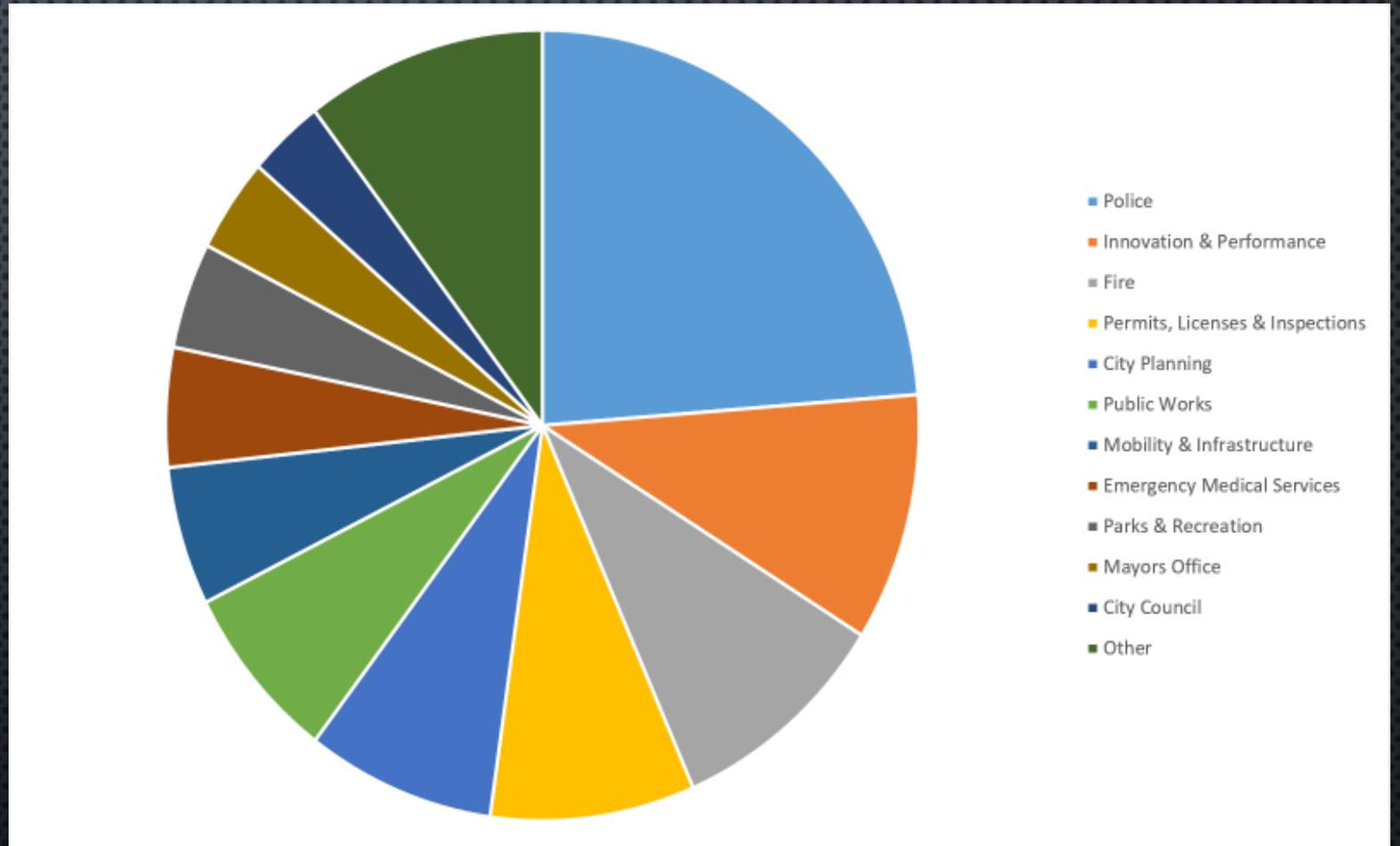
WHAT IS CHANGING IN OUR BUDGET



Programs	19 vs 20
311	\$ 1,600
AV	\$ 8,000
Communication	\$ (120,900)
Data	\$ 300,000
Devices	\$(1,499,700)
Equity	\$ 6,000
GIS	\$ 19,289
Infrastructure	\$ 434,050
Innovation	\$ 20,000
ITSM	\$ 203,000
Network	\$ 1,285,000
Overhead	\$ (29,850)
People	\$ 1,037,288
Printers	\$ 225,000
Printshop	\$ (500)
Public Safety	\$ (9,000)
Security	\$ 235,000
Services	\$ (47,000)
Software	\$ 525,474

Department	2020 Cost	2020 Percent
Office of Equity	\$ 3,952.21	0.05%
Pension Plans	\$ 7,476.33	0.09%
Office of Municipal Investigations	\$ 14,162.59	0.17%
Animal Care & Control	\$ 14,683.94	0.17%
Public Safety Admin	\$ 52,612.31	0.61%
Commission on Human Relations	\$ 55,820.12	0.65%
Office of Management & Budget	\$ 68,165.24	0.80%
City Controller	\$ 114,513.92	1.34%
Law	\$ 141,130.50	1.65%
Human Resources & Civil Service	\$ 190,487.83	2.22%
Finance	\$ 223,033.43	2.60%
City Council	\$ 280,500.10	3.27%
Mayor's Office	\$ 330,655.53	3.86%
Parks & Recreation	\$ 372,031.76	4.34%
Emergency Medical Services	\$ 418,334.59	4.88%
Mobility & Infrastructure	\$ 487,236.05	5.69%
Public Works	\$ 624,734.31	7.29%
City Planning	\$ 693,261.07	8.09%
Permits, Licenses & Inspections	\$ 751,774.77	8.78%
Fire	\$ 817,382.89	9.54%
Innovation & Performance	\$ 870,127.58	10.16%
Police	\$ 2,035,001.94	23.75%
Total:	\$ 8,567,079.00	100.00%

Consumption of I&P Resources By Department

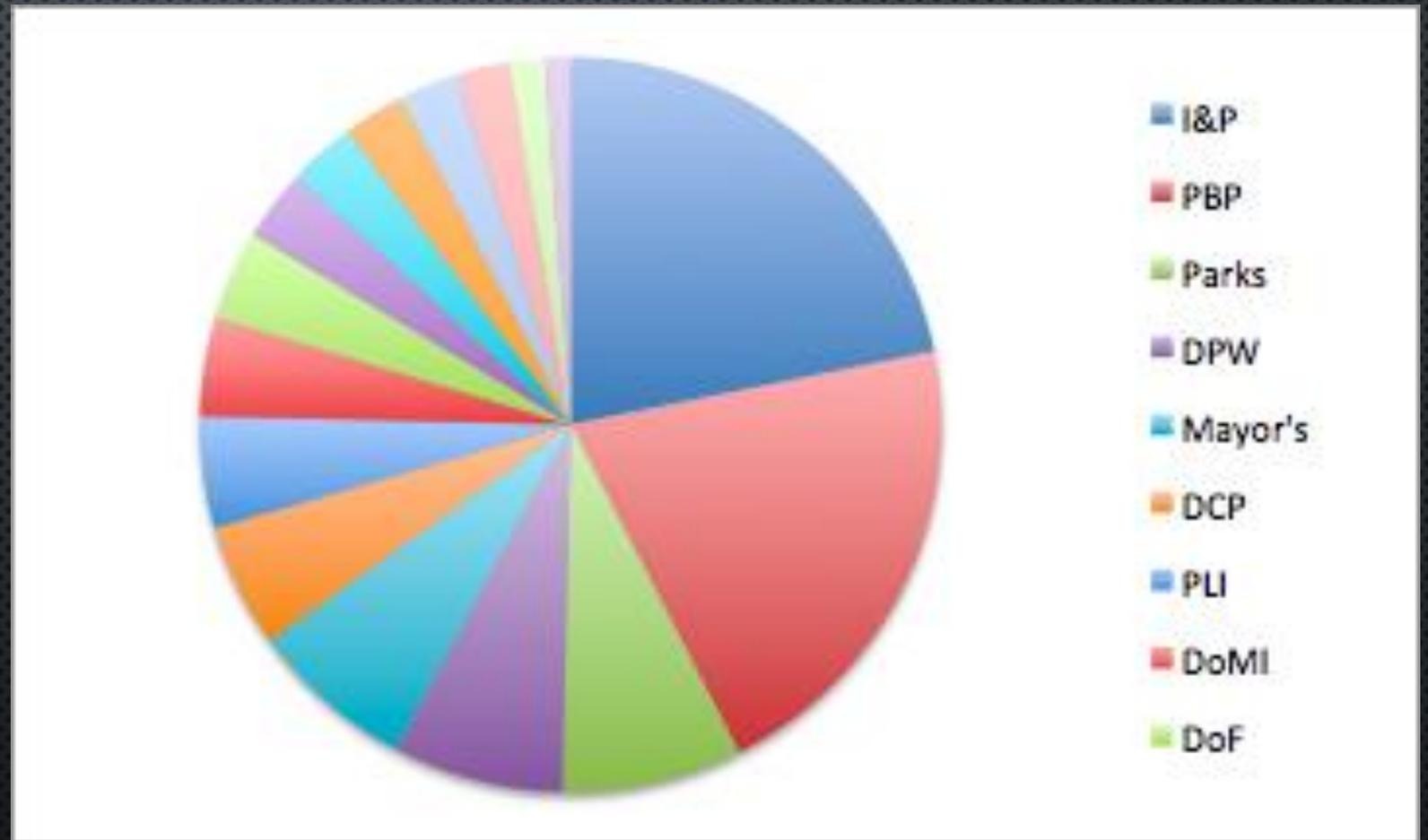


Innovation & Performance includes all overhead that cannot be allocated to other departments, plus software and hardware

I&P HELP TICKETS BY DEPARTMENT

15,200 TICKETS CLOSED IN THE PAST YEAR

I&P	3,230
PBP	3,067
Parks	1,162
DPW	1,107
Mayor's	1,067
DCP	804
PLI	726
DoMI	645
DoF	584
HRCS	459
Law	436
PBF	404
Council	382
Outside	340
EMS	234
Controller's	165



HOW WE
PROPOSE
INVESTING OUR
RESOURCES
KEY INITIATIVES

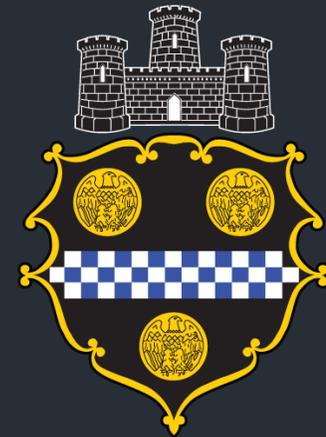


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Devices– Tech Refresh



IT Service management



Infrastructure – Network and Hosting



Software Roadmap



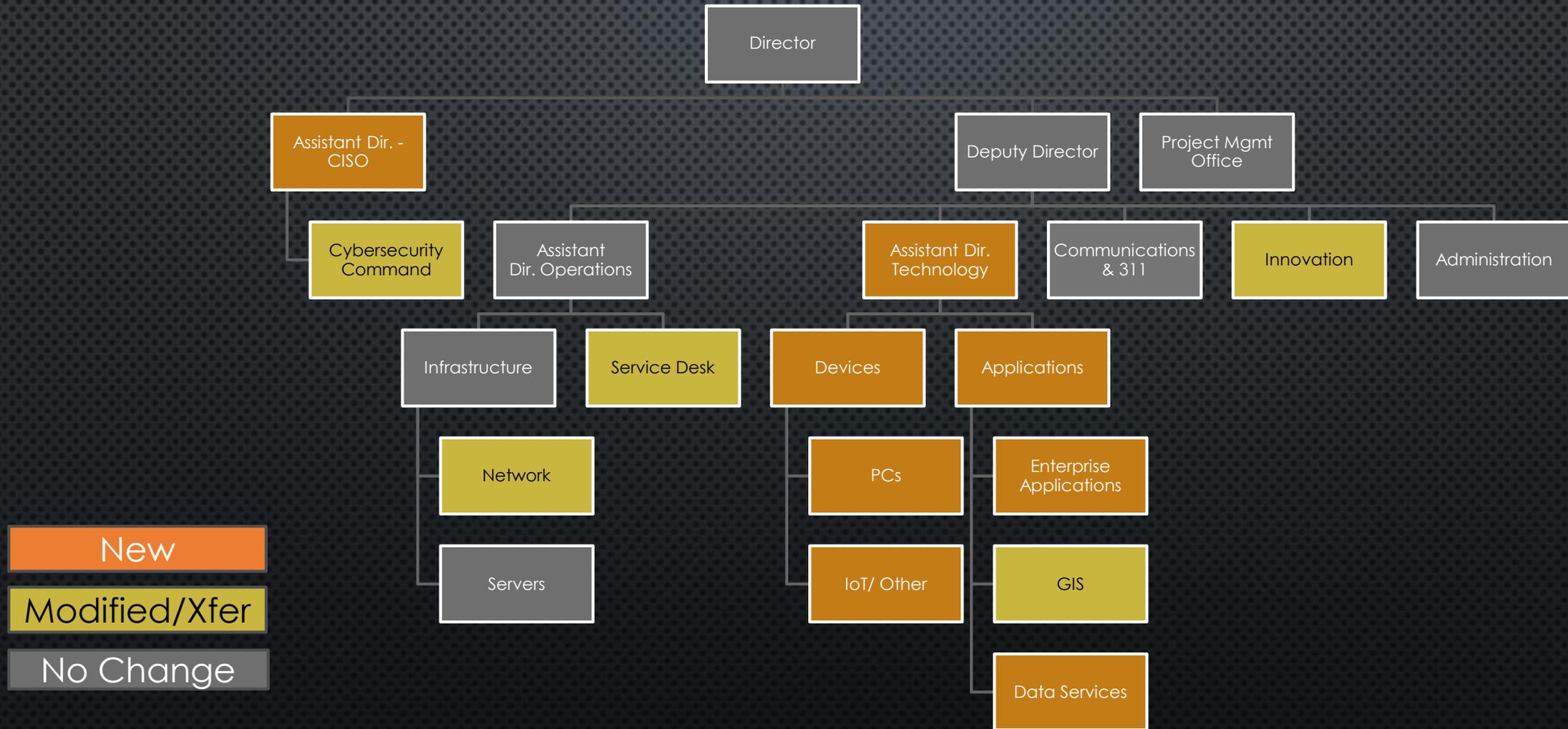
Cyber security



Investing in our team

INVESTING IN OUR TEAM

In 2019 the Department reorganized to better align with IT best practices, incorporating a service management methodology – a key suggestion of the Deloitte report. The reorganization was budget neutral.



INVESTING IN OUR TEAM

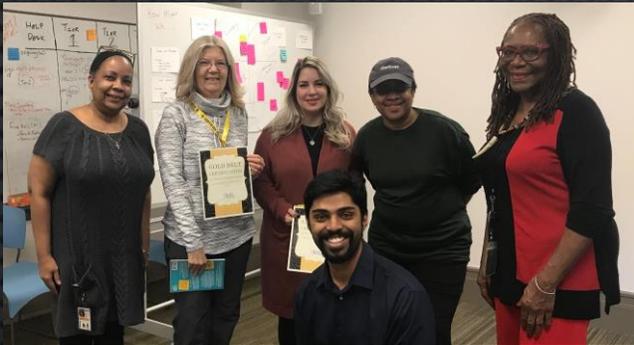


NEW ROLES REQUESTED FOR 2020 TO COMPLETE THE REORGANIZATION:

- **CISO & ASSISTANT DIRECTOR, SECURITY**
 - LEADS THE CYBERSECURITY COMMAND TEAM TO MANAGE AND REDUCE IT SECURITY RISKS FOR THE CITY'S NETWORK, DEVICES, APPLICATIONS AND FACILITIES.
- **SENIOR MANAGER, APPLICATIONS**
 - LEADS ENTERPRISE APPLICATIONS ADMINISTRATION, GEOGRAPHIC INFORMATION SYSTEMS, AND DATA SERVICES ENGINEERING TO MANAGE, SECURE AND SUPPORT INTEGRATED SOFTWARE APPLICATIONS.
- **SENIOR ENTERPRISE APPLICATIONS ADMINISTRATOR**
 - MANAGES AND SUPPORTS PUBLIC SAFETY APPLICATIONS, INCLUDING NEW RMS AND OTHERS RECOMMENDED BY DELTAWRX REPORT.
- **SENIOR CIVIC INNOVATION SPECIALIST**
 - DEVELOPS PARTNERSHIPS BETWEEN CITY DEPARTMENTS AND EXTERNAL ORGANIZATIONS, SUCH AS START-UPS, UNIVERSITIES, COMMUNITY MEMBERS, CORPORATIONS AND INNOVATION-FOCUSED NON-PROFITS.
- **CIVIC INNOVATION SPECIALIST**
 - SUPPORTS PROGRAMS AND EVENTS SUCH AS INCLUSIVE INNOVATION MEETUPS AND PGHLAB COHORTS.

INVESTING IN OUR TEAM

I&P will continue to focus on developing our staff in their technical fields, ensure they hold current certifications as appropriate, and train them to apply generally accepted best practices consistently.



Process Improvement



The Gold Belt Workshop in process improvement has yielded \$200,000 in savings since inception in July 2018.

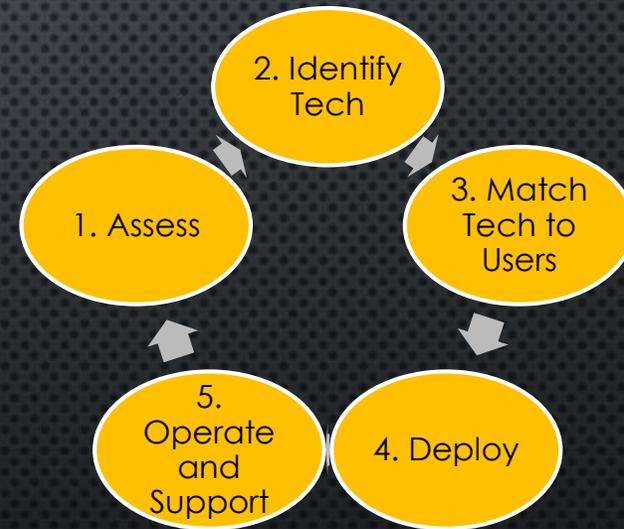
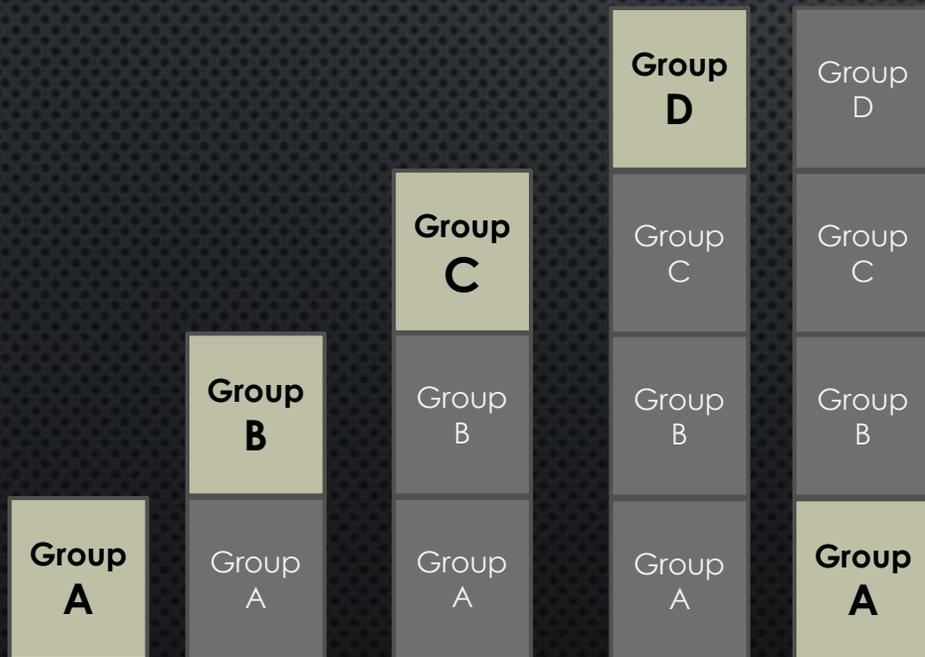
TECH REFRESH



Device standards – 4 year refresh:

- Desktop
- Laptop
- Power Desktop
- Power Laptop
- Tablet/
Laptop
- Chromebook

I&P's goal is to provide up-to-date, reliable computers and other IT devices to support the City's workforce in providing services efficiently and effectively every day. I&P will work to set device refresh standards and a schedule for City staff to receive updated devices.



Device lifecycle

TECHNOLOGY REFRESH



Reliable computers and mobile devices that are replaced according to the new City standard (4 years for PCs and MDTs and 3 years for tablets and smart phones) costs 0.27% of the annual City budget (PC refresh) and 0.04% of the annual City budget (tablets)

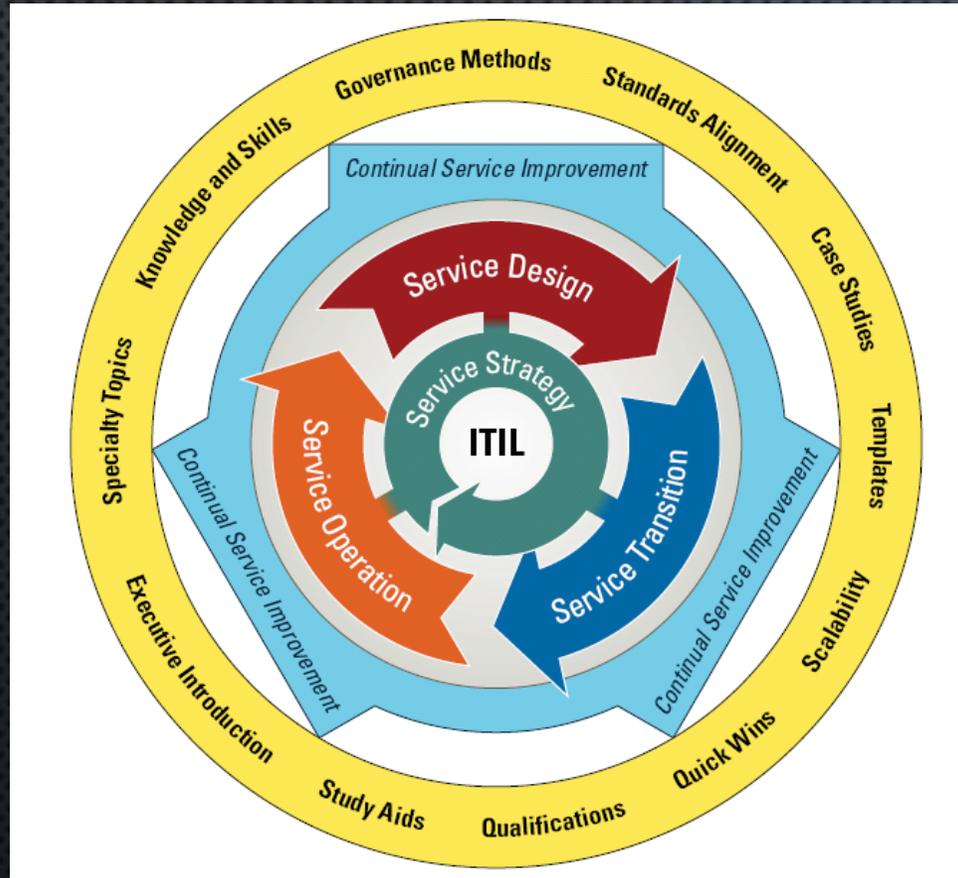
Expenditure	2020 Request	Recurring?
PC and MDT Refresh	\$350,000	Yes
Printers/Copiers	\$576,000	Yes
Automated Card Systems	\$16,000	Yes
Mobile Tech Refresh	\$250,000	Yes

INFRASTRUCTURE



Category	Expenditure	2020 Request	Defunding Impact	Recurring?
Network	Municipal Network (Contingency)	\$1,500,000	Risk of losing network to all facilities	Yes
Wireless Network	Data and Cellphone Service	\$2,627,680	Connectivity of field employees and vehicles	Yes
Hosting	VMWare	\$426,260	License to run servers, virtual machines, and device mgmt.	Yes
Hosting	Cloud and Collocated Infrastructure	\$350,000	Provide scalable service while reducing the need for data center staff and overhead	Yes
Monitoring	Network Monitoring	\$110,000	Proactive monitoring to determine up time and security	\$25,000

IT SERVICE MANAGEMENT



Key recommendation from Deloitte report

- 2019: Trained 100% of I&P Tech Staff [\$45,000]
- 2019-2020: propose investing in ITSM software tool - [\$500,000-\$250,000]
 - Asset management
 - Incident management
 - Employee portal
 - Knowledge base
- Enabled by reorganization

SOFTWARE ROADMAP



ACTIVE IMPLEMENTATIONS

COMPUTRONIX/ONESTOPPGH – PERMITTING, LICENSING, CODE ENFORCEMENT (PLI, PLANNING, DOMI, FINANCE, FIRE) - [\$655,000 TO FINISH PROJECT/\$235,000] - SUMMER 2020

CERIDIAN – PAYROLL, TIMEKEEPING, HR INFORMATION SYSTEM, BENEFITS (HR AND ALL DEPARTMENTS) - [\$167,600/\$305,000] - ONGOING, ADDING BENEFITS MODULE IN 2020

POLICE RECORDS MANAGEMENT SYSTEM – ALL CRIMINAL RECORDS AND INVESTIGATORY SYSTEM, MIGRATION TO INFORM SYSTEM WITH COUNTY (PBP) - [COSTS BUDGETED IN PD] - 2021

SNOWPLOW ROUTE OPTIMIZATION – ALL ROUTES DIGITIZED AND OPTIMIZED (DPW) -[COSTS BUDGETED OUT OF DPW] - LIVE THIS WINTER WITH IMPROVEMENTS PLANNED FOR NEXT WINTER.

REVENUE MANAGEMENT SYSTEM – MANAGES ALL TAX INCOME TO THE CITY (FINANCE) - [COSTS BUDGETED BY FINANCE] - 2021

SOFTWARE ROADMAP



PLANNED PROJECTS

GIS – GIS HAS ALL RECORDS OF PLACES, STREETS, AND ASSETS IN THE CITY (ALL DEPARTMENTS)
- [\$200,000 ENTERPRISE LICENSE AND \$300,000 TO IMPROVE DATA QUALITY]

DOCUMENT MANAGEMENT SYSTEM – IMPROVE FOUNDATIONS OF DOCUMENT
MANAGEMENT (ALL DEPARTMENTS) - [\$150,000]

CMS – IMPROVEMENTS TO THE WEBSITE INFRASTRUCTURE (ALL DEPARTMENTS) - [\$75,000]

FIREHOUSE – UPGRADES TO FIRE MANAGEMENT SYSTEM (FIRE)

CYBERSECURITY



I&P is implementing the NIST Cybersecurity Framework to determine risk profile and to prioritize investments.

- Establishing dedicated Cybersecurity team
- Partnering with DHS and MS-ISAC for assessments and vulnerability detection
- Cybersecurity Monitoring [\$110,000]
- End Point Monitoring [\$80,000]
- Remediation [\$100,000]

THANK YOU
QUESTIONS AND COMMENTS