



A NEW VISION

Information
Technology Division

FY20 YEAR IN REVIEW



CONTENTS

• Our Mission, Vision, Core Values and Focus	03
• Our Organization	04
• Our Team	05
• Our Projects	06
• COVID-19 Rapid Response Projects	07
• Lean Adaptation	08
• Information Security Awareness	09
• Budgetary Overview	10
• Shaping the Future of IT	11
• Service Delivery Data	13
• Contact Us	14

MISSION

The Information Technology Division provides solutions that upgrade our technical infrastructure, promote progressive implementations, and expand our innovative path to benefit all City of Memphis employees and citizens.

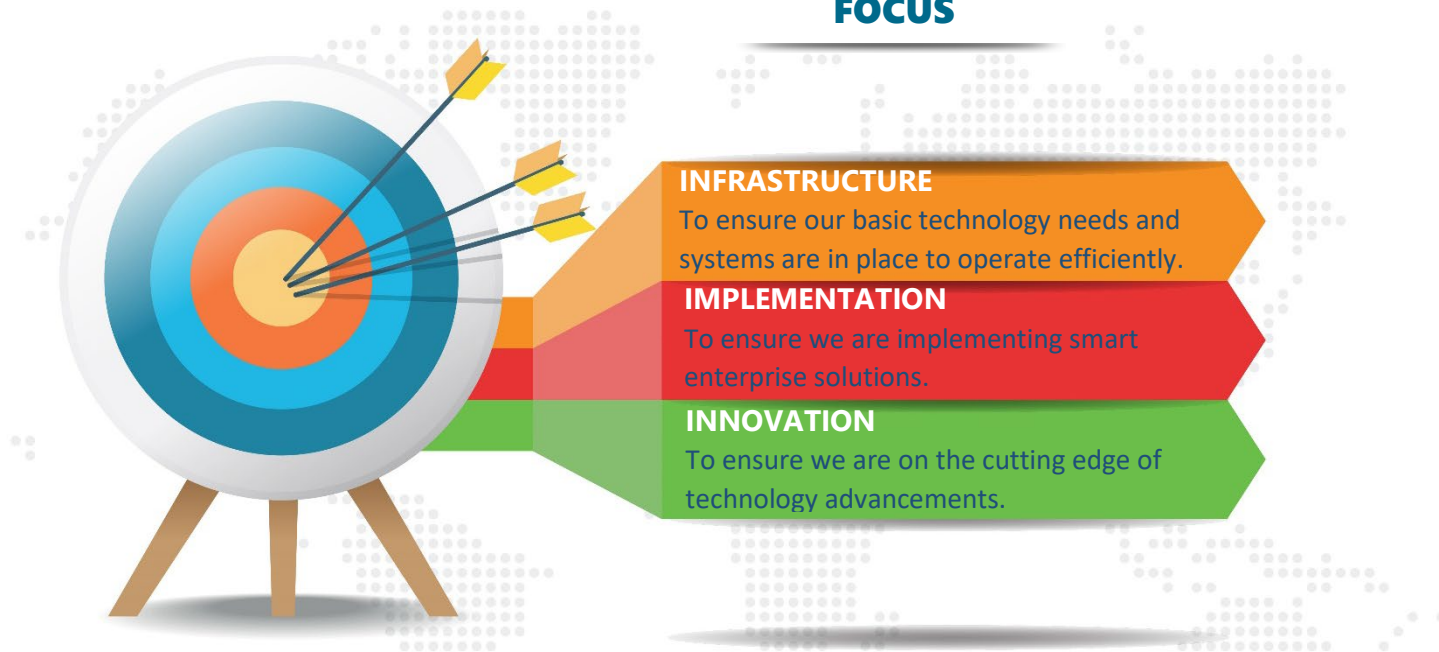
VISION

Information Technology is committed to providing technology-based solutions that enable the City government to connect with and better serve the constituents of the City of Memphis in ways that improve the quality of every experience.

CORE VALUES

1. To operate with integrity
2. To provide quality customer service
3. To be professional, proactive, and competent
4. To build positive relationships
5. To communicate effectively
6. To find areas for professional development

FOCUS



OUR ORGANIZATION

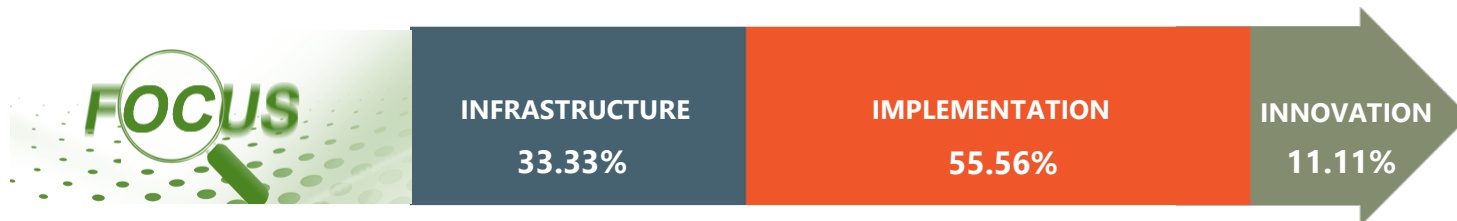
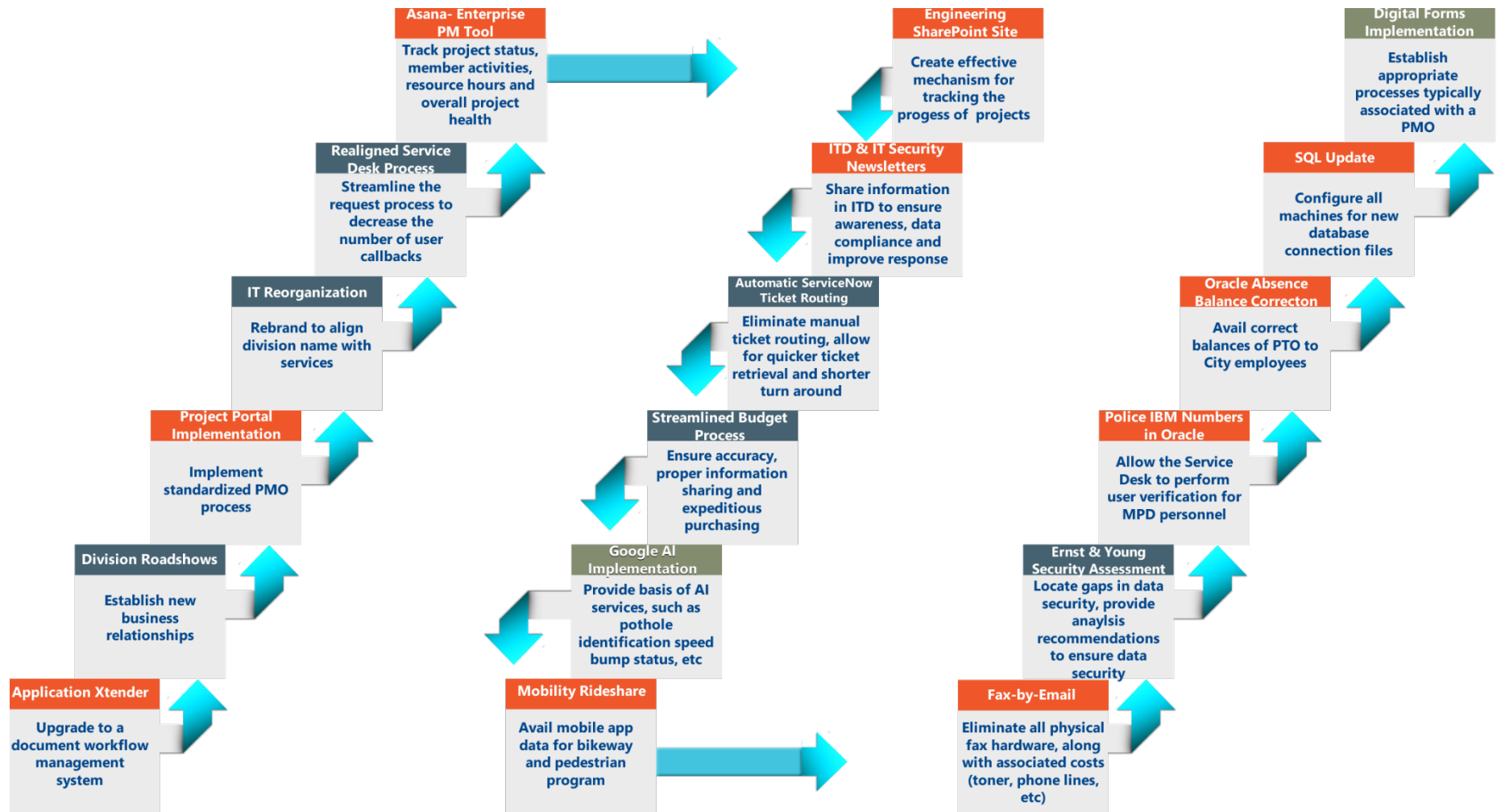
	APPLICATIONS	DATA CENTER	FINANCE PROCUREMENT	NETWORK TELECOM	PROJECT MANAGEMENT COMMUNICATIONS TRAINING	SECURITY	SERVICE DELIVERY
Responsibilities:	<p>Enterprise Applications: Support, implementations and enhancements for Enterprise Applications - Oracle E-business Suite, Oracle Fusion, Treasury Tax System, Hyperion Budgeting, Taleo Recruiting System and GIS Enterprise.</p> <p>Web Sites: Create and support internal and external websites and SharePoint Portals.</p> <p>GIS Services: Location Intelligence, geo-spatial services, GIS capabilities for applications and reporting.</p> <p>Data Services: Build and support reports, extracts, consolidations, data warehouses, ETL, third-party integrations, databases, access control, audits.</p> <p>Business Process: GAP analysis and business process reengineering.</p>	<p>Provides infrastructure support for server hardware and operating systems, enterprise storage needs, e-mail and print servers. Works with other departments and teams to provide and support compute and storage needs and infrastructure related custom process automations. Also provides Desktop Engineering services for bulk application deployment, imaging, and configuration management.</p>	<p>Manages City's contracts with third party organizations and supports City divisions' information technology funding needs by providing capital budget planning and procurement assistance.</p> <p>Administrates the preparation and presentation of the ITD's operating and capital budgets.</p> <p>Provides the most cost-effective method of procuring IT materials, products and services for the City of Memphis divisions.</p>	<p>Responsible for management, architecture, implementation, and monitoring of all networking and telecommunications systems for all City divisions, including network hardware and software (wired and wireless), low voltage and fiber optic cabling, internet circuits, telephone systems, contact centers, and telephone lines.</p>	<p>Develops and implements the framework, strategies, processes, and plans for the City's IT Division. Ensures IT programs meet division goals and requirements. Manages IT related projects. Works with City divisions to support their business processes and assists to improve these processes through technology solutions.</p>	<p>Identify, prioritize and mitigate potential security risks; Implement foundational security controls across key assets; Continuously safeguard against current and potential threats; Protecting the confidentiality of data, implementing and managing endpoint security; Manage Email security; Performing vendor security risk management; Implementing Security Awareness Training across City of Memphis and contributing to the Vision of the CIO and ultimately the Mayor of Memphis.</p>	<p>Troubleshoots computer, printer and communications problems. Assembles, installs, configures, modifies, moves, and/or relocates hardware/software per end user requirements. Manages the Technology Service Desk contract to oversee requests for computer, mobile devices, applications, and other related technology issues from end users. Manages the flow of hardware/software goods from manufacturers and maintains inventory records.</p>
Roles:	<p>Programmers, Web Developers, SharePoint Administrator, Database Administrators, GIS Experts, Enterprise Application SMEs, Report Developers, Data Analysts, Interface Developers.</p>	<p>Office 365 Administrator, Windows Systems Administrator, Linux Systems Administrator and Desktop Engineering.</p>	<p>IT Finance Manager, IT Procurement Lead, IT Procurement Analysts.</p>	<p>Network Engineers, Jr Network Administrator, Sr Telecommunications Analyst, Telecommunications Technicians, Public Safety Network Administrator.</p>	<p>Project Manager, Project Management Lead, Project Coordinator, Business Analyst, Technology Coordinator, Communications and Training Lead, Communications and Training Specialist, Quality Manager.</p>	<p>Security Analysts.</p>	<p>Service Delivery Lead, Field Services Technicians, Field Services Project Coordinator, Inventory Analysts, Mobility Specialist, Engagement Manager.</p>

OUR TEAM



ITD Management Team: (left to right) Augustine Boateng, Steve Crosthwait, Kimberly Bailey, Chrys McDonald, Mickey Alderson, Kelli Werkmeister, Wendy Harris, Binish Gopal, and Von George.

OUR PROJECTS



COVID-19 RAPID RESPONSE PROJECTS

The Information Technology Division gave its immediate support to employees, the community and partner organizations impacted by the rare COVID-19 virus, directly and indirectly. The ITD implemented the following rapid response initiatives:



LEAN ADAPTATION

We are committed to lean thinking by evaluating our processes to ensure they make sense. We take it one step further by implementing improvements, eliminating what does not make sense, and standardizing our processes.



"Lean is not just about growing people so that they feel all happy and involved. It is also about results – measurable, concrete results, that show a continual pattern of improvement."

Our Commitment

As Leaders, We will...

- Teach You to See Waste
- Remain Humble
- Solicit and Welcome Ideas from Everyone
- Recognize Everybody's Contribution as Valuable
- Lead with World Class Principles that are Thoughtfully Applied
- Invest in You and Your Work Environment

As Team Members, You will...

- Keep an Open Mind
- Remain Humble
- Refrain from Overcomplication
- Take Responsibility
- Think Outside the Box
- Collaborate
- Accept Change

INFORMATION SECURITY AWARENESS

Cyber Threat Discovery Conducted by Ernst & Young

The City of Memphis ("CoM") engaged EY to conduct a Cyber Ransomware assessment between November 25, 2019 and February 24, 2020 using host-based and network-based monitoring solutions. EY performed forensics on CoM select devices, a current-state assessment of the environment for suspicious host-based activity, network-based activity, and cybersecurity hygiene issues which potentially place the CoM environment at risk. This report encompasses the findings and recommendations from the host-based and network-based monitoring period.

Objectives

The objectives of the assessment were to assist and perform certain procedures to help determine if there are artifacts and malware from threat actors operating within the CoM network environment. EY conducted the following:

1. Monitoring to detect potentially compromised systems within the CoM's environment
2. System assessment to evaluate the effectiveness of the current cybersecurity controls at a point in time
3. Provide a written report containing the following:
 - a. Number of systems within the scope of the assessment
 - b. Number of systems that displayed suspicious activity, such as presence of malware and/or other threat activity
 - c. A description of the activity, the hosts affected by it, and a set of recommendations for the CoM to consider reducing or eliminating the exposures discovered in the assessment
 - d. Outline of assessment methodology

Findings Summary

Only one higher risk threat was detected in the observed environment, and the Information Security Team at the City of Memphis should be commended for their efforts. Though only limited threats were discovered, this assessment does not imply that no other malicious activities exist in the CoM's environment nor that the CoM's computer network has not been compromised because of the limitations previously mentioned.

Endpoint Detection Monitoring Findings

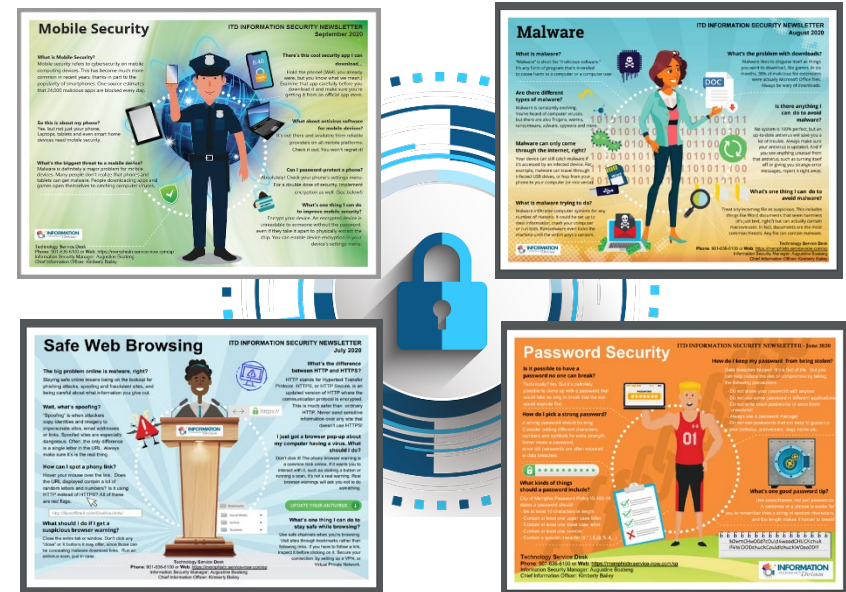
Carbon Black monitored running processes on endpoints where it was installed. EY used public and custom detection logic to generate alerts on threats identified by Carbon Black. EY reviewed alerts to determine reality of the threat. Data from false positives were

used to adjust the watchlists to increase efficacy. Higher risk threats were escalated via tickets to the Information Security Team for remediation. All escalated threats were remediated by the CoM.

Conclusion:

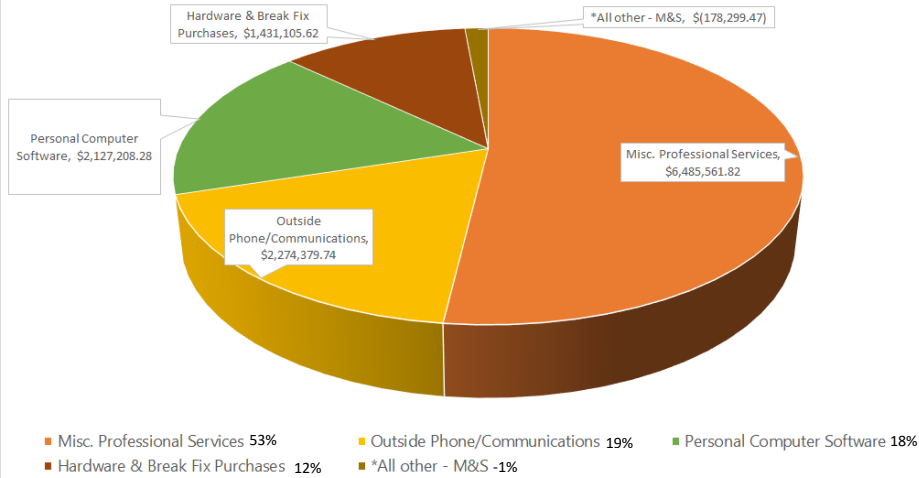
The assessment conducted by EY was helpful in measuring the Risk Appetite for the City of Memphis and provided remediation steps to the CoM contacts. Remediation steps have been completed as recommended.

Monthly security themed newsletters are a part of the City's efforts to keep all employees up to date with current security trends and methods used by malicious attackers to gain access, infect a victims' network or extort victims. We believe knowledge is power!



BUDGETARY OVERVIEW

FY20 Major M&S Expenditures



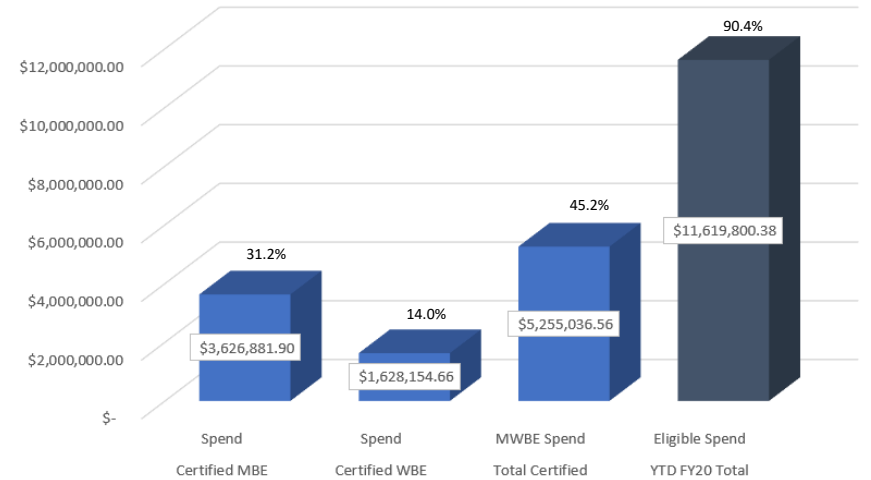
Line Items	Amount	Percentage
Misc. Professional Services	\$ 6,485,561.82	53%
Outside Phone/Communication	\$ 2,274,379.74	19%
Personal Computer Software	\$ 2,127,208.28	18%
Hardware & Break Fix Purchase	\$ 1,431,105.62	12%
*All other - M&S	\$ (178,299.47)	-1%
	\$ 12,139,955.99	100%

*All other includes expense recovery for M&S of (\$764614.23)

MWBE as of March 31, 2020

Certified MBE Spend	Certified WBE Spend	Total Certified MWBE Spend	YTD FY20 Total Eligible Spend
\$ 3,626,881.90	\$ 1,628,154.66	\$ 5,255,036.56	\$ 11,619,800.38
31.2%	14.0%	45.2%	90.4%

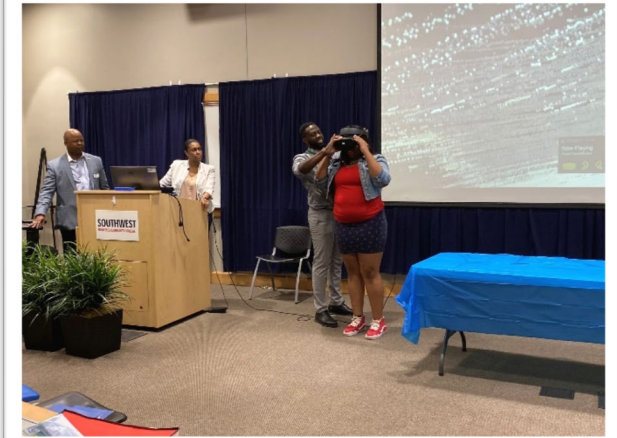
MWBE as of March 31, 2020



SHAPING THE FUTURE OF IT

TECH DAY

The Information Technology Division is committed to its support of career education and regularly participates in community learning events. Tech Day allows member organizations to provide educational tours to Memphis area students. This learning experience provides insight and inspiration on careers available in the Information Technology sector. Photos of Tech Day events sponsored by the Greater Memphis IT Council and Shelby County Schools are pictured below.



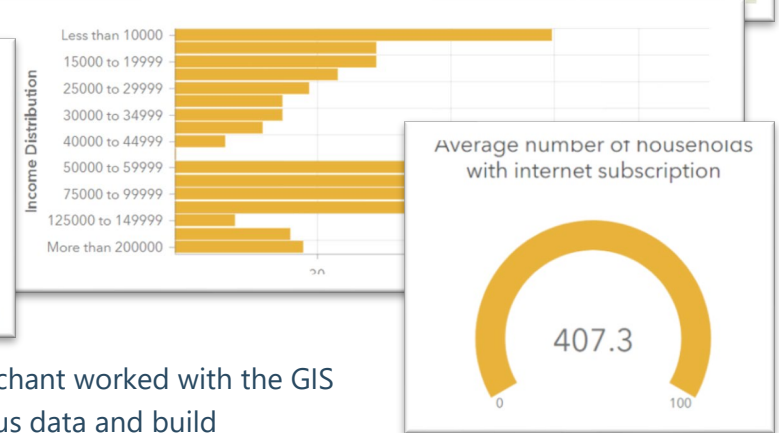
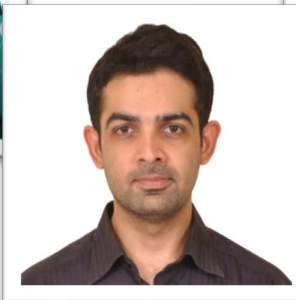
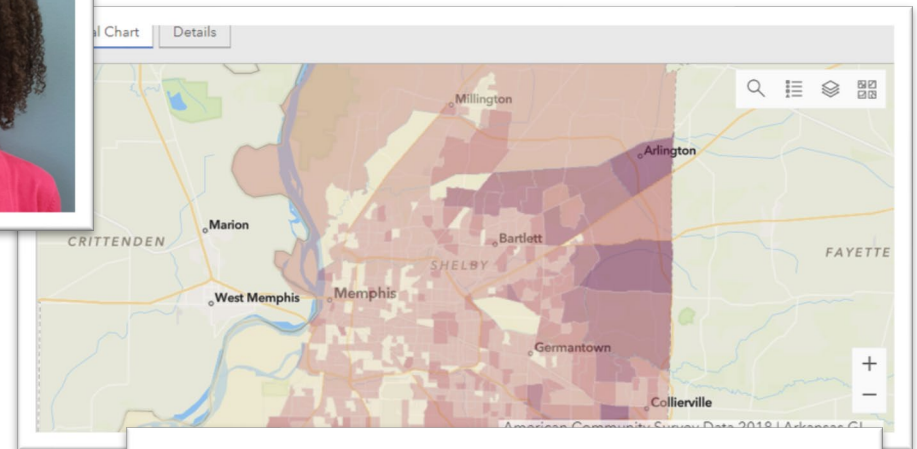
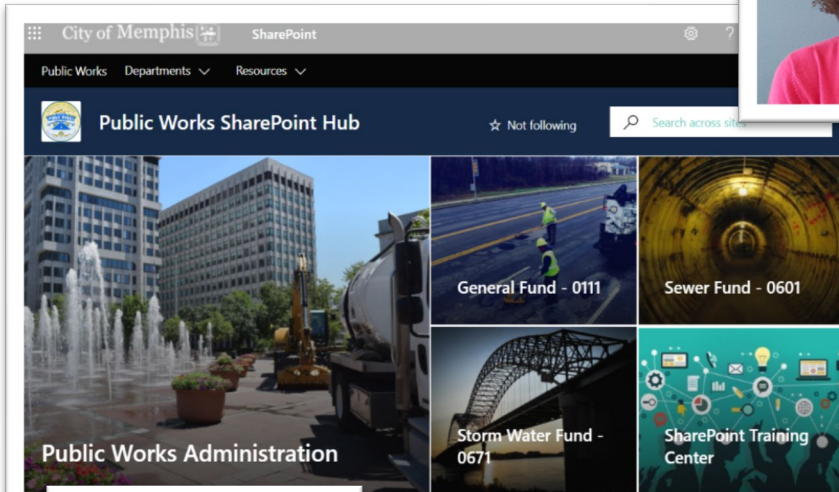
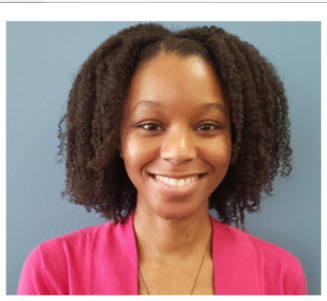
The ITD presented the Map901: Building Rich Interior Hazard Maps for First Responders Technology demo to a group of students at Southwest Tennessee Community College.

SHAPING THE FUTURE OF IT

URBAN FELLOWS

The Memphis Urban Fellows Program (MUFP) is a highly selective, year-round initiative that offers college students the opportunity to intern with various divisions of the City of Memphis Government. Our mission is to develop the change agents of tomorrow, future City of Memphis leaders, and enhance the interaction of area college students with City government, all in support of retaining the best and brightest talent for Memphis.

Eriel Traywick worked with Service Delivery department OER Projects in updating Excel spreadsheets and imaging computer devices



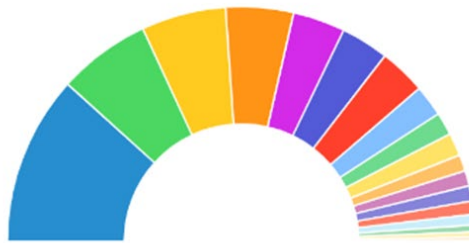
Koungh Nonhprisit worked with General Apps and created a SharePoint site for the Public Works department.

Shahzad Hussain Merchant worked with the GIS Team to analyze census data and build visualizations.

SERVICE DELIVERY DATA

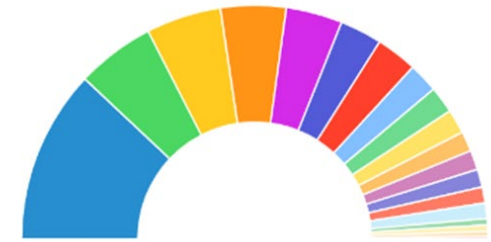
Purchase Requests by Division

Information Technolo... = 178 (23.39%)
Public Works = 97 (12.75%)
Human Resources = 89 (11.7%)
Police Services = 71 (9.33%)
Fire Services = 55 (7.23%)
Finance = 50 (6.57%)
Executive = 49 (6.44%)
Parks & Neighborhood... = 33 (4.34%)
Department of Planni... = 24 (3.15%)
General Services = 24 (3.15%)
Library = 17 (2.23%)
Engineering = 16 (2.1%)
Housing & Community ... = 16 (2.1%)
Solid Waste = 14 (1.84%)
City Court Clerk = 11 (1.45%)
City Council = 7 (0.92%)
Law = 6 (0.79%)
CoM & Shelby County ... = 3 (0.39%)
City Court Judges = 1 (0.13%)

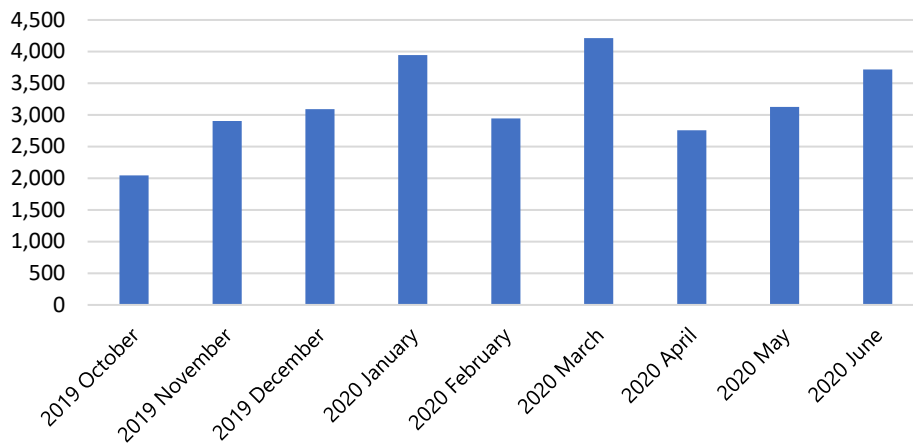


Quote Requests by Division

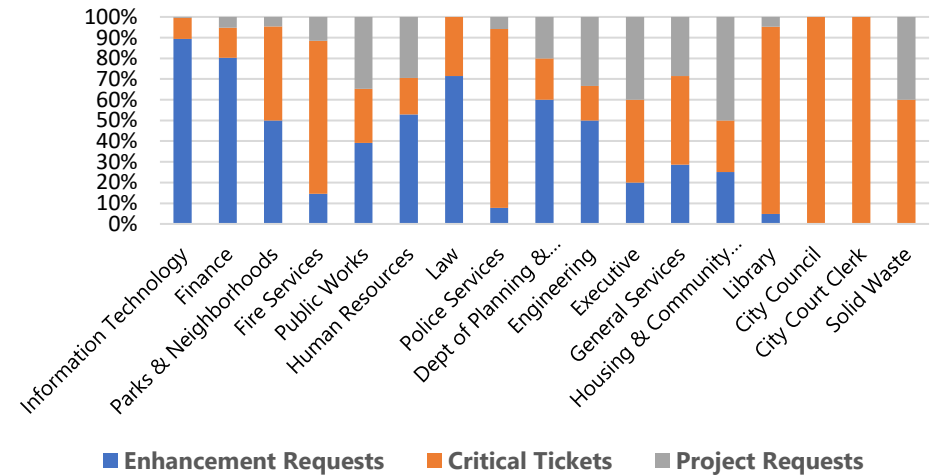
Information Technolo... = 215 (24.05%)
Public Works = 97 (10.85%)
Human Resources = 93 (10.4%)
Police Services = 81 (9.06%)
Fire Services = 70 (7.83%)
Executive = 52 (5.82%)
Finance = 51 (5.7%)
Parks & Neighborhood... = 37 (4.14%)
General Services = 33 (3.69%)
Department of Planni... = 30 (3.36%)
Library = 25 (2.8%)
Solid Waste = 24 (2.68%)
City Court Clerk = 22 (2.46%)
Housing & Community ... = 20 (2.24%)
Engineering = 19 (2.13%)
City Council = 8 (0.89%)
Law = 8 (0.89%)
CoM & Shelby County ... = 6 (0.67%)
City Court Judges = 3 (0.34%)



Technology Service Desk Call Volume



Criticals/Enhancements/Projects



CONTACT US



Call us

901.636.6229



Ask a question

CIO@MemphisTN.gov



Learn about us

[ITD website](#)



Visit us

City of Memphis
Information Technology Division
119 S. Main Street, Suite 200
Memphis, TN 38103

Connect and stay informed



[Twitter](#)



[LinkedIn](#)



[Instagram](#)