Chapter 8

Technology Support and Infrastructure

PAGE

Office of Chief Technology Officer 8-3

Department of Technology Integration and Learning Management Systems 8-8

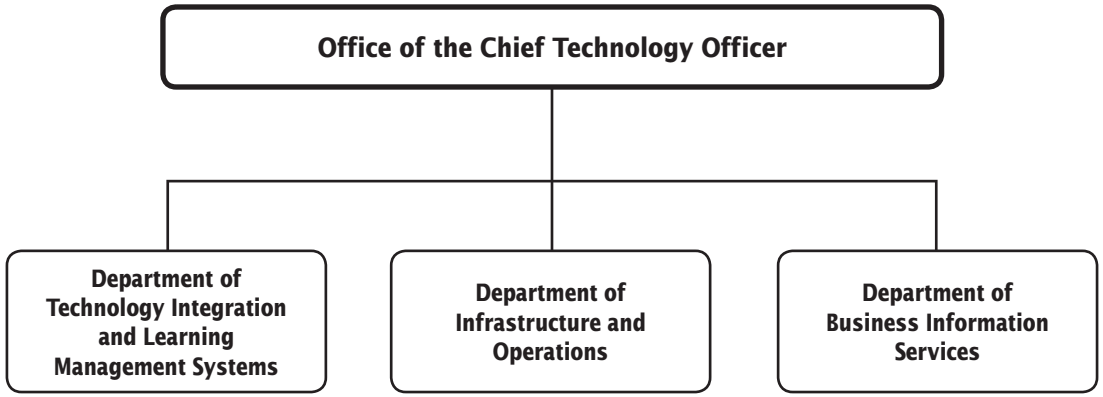
Department of Infrastructure and Operations 8-14

Department of Business Information Services 8-21

Technology Support and Infrastructure
Summary of Resources
By Object of Expenditure

OBJECT OF EXPENDITURE	FY 2019 ACTUAL	FY 2020 BUDGET	FY 2020 CURRENT	FY 2021 BUDGET	FY 2021 CHANGE
POSITIONS					
Administrative	10.000	12.000	12.000	12.000	
Business/Operations Admin.	9.000	9.000	9.000	9.000	
Professional	8.000	8.000	8.000	10.000	2.000
Supporting Services	103.500	104.000	104.000	103.500	(.500)
TOTAL POSITIONS	**130.500**	**133.000**	**133.000**	**134.500**	**1.500**
01 SALARIES & WAGES					
Administrative	$1,507,767	$1,770,675	$1,770,675	$1,770,675	
Business/Operations Admin.	1,071,060	1,074,343	1,074,343	1,074,343	
Professional	985,495	1,009,700	1,009,700	1,256,388	246,688
Supporting Services	9,374,434	9,895,348	9,895,348	9,947,487	52,139
TOTAL POSITION DOLLARS	**12,938,756**	**13,750,066**	**13,750,066**	**14,048,893**	**298,827**
OTHER SALARIES					
Administrative					
Professional	90,646	115,226	115,226	515,226	400,000
Supporting Services	57,367	277,995	277,995	721,736	443,741
TOTAL OTHER SALARIES	**148,013**	**393,221**	**393,221**	**1,236,962**	**843,741**
TOTAL SALARIES AND WAGES	**13,086,769**	**14,143,287**	**14,143,287**	**15,285,855**	**1,142,568**
02 CONTRACTUAL SERVICES	**13,061,642**	**14,880,394**	**14,880,394**	**16,920,271**	**2,039,877**
03 SUPPLIES & MATERIALS	**561,675**	**601,181**	**601,181**	**616,950**	**15,769**
04 OTHER					
Local/Other Travel	17,213	123,286	123,286	54,286	(69,000)
Insur & Employee Benefits					
Utilities	2,952,676	3,286,423	3,286,423	3,286,423	
Miscellaneous	608,047	598,347	598,347	597,347	(1,000)
TOTAL OTHER	**3,577,936**	**4,008,056**	**4,008,056**	**3,938,056**	**(70,000)**
05 EQUIPMENT	**714,667**	**490,241**	**490,241**	**323,176**	**(167,065)**
GRAND TOTAL AMOUNTS	**$31,002,689**	**$34,123,159**	**$34,123,159**	**$37,084,308**	**$2,961,149**

Technology Support and Infrastructure—Overview



F.T.E. Positions 134.5

In addition, there are 18.5 positions funded by the Capital Improvements Program Budget, and a 0.5 position funded by the Employee Benefits Trust Fund.

Office of the Chief Technology Officer

411

MISSION The Office of the Chief Technology Officer (OCTO) provides high-quality instructional and information systems and services essential to teaching and learning and critical to effective business operations. OCTO is committed to excellence in providing technology solutions that support teachers, engage students, and sustain operational resources throughout Montgomery County Public Schools (MCPS). These solutions are implemented following best practices for project management and with continuous collaboration with MCPS staff and the community.

MAJOR FUNCTIONS

Business Information Services *(Operational Excellence)*

The Department of Business Information Services leads the development, implementation, and support for high-quality business solutions contributing to the effective management of human, fiscal, and operational resources across all aspects of the school system.

Infrastructure and Operations *(Operational Excellence)*

The Department of Infrastructure and Operations manages the enterprise-wide technical systems, including the data center, network connections, e-mail, and telephones; and facilitates the implementation of effective, secure, and reliable hardware and software solutions.

Technology Integration and Learning Management Systems *(Operational Excellence)*

The Department of Technology Integration and Learning Management Systems leads the selection, integration, training, and support of innovative technologies for our schools and offices to ensure operational excellence and staff productivity. The work of the department encompasses the full technology life cycle from research, design, and procurement to implementation and training supports. Staff work closely with schools and offices to support technology implementation strategies and training. The department provides instructional and information systems that enhance the education of students through the innovative application of technology; facilitates the design of connected systems, processes, and information; increases the efficiency of the educator; and transforms access to information in support of teaching and learning for staff, students, parents/guardians, and the community.

OVERVIEW OF BUDGET CHANGES

FY 2021 RECOMMENDED BUDGET

The FY 2021 recommended budget for this office is $5,577,574, and is unchanged from the current FY 2020 budget. An explanation of this change follows.

Same Service Level Changes—$0

Realignments to Meet Expenditure Requirements and Program Priorities—$0

Realignments are budgeted to address priority spending needs in this office. There is a budget neutral realignment of $1,000 from training support to local travel mileage reimbursement.

Office of the Chief Technology Officer

Chief Technology Officer	1.0
Assistant to the Associate Superintendent (N)	1.0
Fiscal Specialist II (25)	1.0
Administrative Services Manager 1 (17)	1.0
Fiscal Assistant III (16)	1.0

F.T.E. Positions 5.0

Office of the Chief Technology Officer - 411

Description	FY 2019 Actual	FY 2020 Budget	FY 2020 Current	**FY 2021 Request**	FY 2021 Change
01 Salaries & Wages					
Total Positions (FTE)	5.000	5.000	5.000	**5.000**	
Position Salaries	$550,363	$574,324	$574,324	**$574,324**	
Other Salaries					
Summer Employment					
Professional Substitutes					
Stipends					
Professional Part Time					
Supporting Services Part Time					
Other					
Subtotal Other Salaries					
Total Salaries & Wages	550,363	574,324	574,324	**574,324**	
02 Contractual Services					
Consultants					
Other Contractual		1,071,655	1,071,655	**1,071,655**	
Total Contractual Services	379,660	1,071,655	1,071,655	**1,071,655**	
03 Supplies & Materials					
Textbooks					
Media					
Instructional Supplies & Materials					
Office		10,799	10,799	**10,799**	
Other Supplies & Materials		30,000	30,000	**30,000**	
Total Supplies & Materials	77,159	40,799	40,799	**40,799**	
04 Other					
Local/Other Travel		6,026	6,026	**7,026**	1,000
Insur & Employee Benefits					
Utilities		3,286,423	3,286,423	**3,286,423**	
Miscellaneous		598,347	598,347	**597,347**	(1,000)
Total Other	3,566,687	3,890,796	3,890,796	**3,890,796**	
05 Equipment					
Leased Equipment					
Other Equipment					
Total Equipment					
Grand Total	$4,573,869	$5,577,574	$5,577,574	**$5,577,574**	

Office of the Chief Technology Officer - 411

CAT		DESCRIPTION	10 Mon	FY 2019 ACTUAL	FY 2020 BUDGET	FY 2020 CURRENT	**FY 2021 REQUEST**	FY 2021 CHANGE
1		Chief Technology Officer		1.000	1.000	1.000	**1.000**	
1	N	Asst. to Assoc Supt		1.000	1.000	1.000	**1.000**	
1	25	Fiscal Specialist II		1.000	1.000	1.000	**1.000**	
1	17	Admin Services Manager I		1.000	1.000	1.000	**1.000**	
1	16	Fiscal Assistant III		1.000	1.000	1.000	**1.000**	
	Total Positions			**5.000**	**5.000**	**5.000**	**5.000**	

Department of Technology Integration and Learning Management Systems

435/428/442/445

MISSION The Department of Technology Integration and Learning Management Systems (DTILMS) leads the selection, integration, training, and support of innovative technologies for our schools and offices; and manages learning management systems, including the student information system, gradebooks, and adult and student learning platforms, to ensure operational excellence and staff productivity. It provides instructional and information systems that enhance the education of students through the innovative application of technology; facilitates the design of connected systems, processes, and information; increases the efficiency of the educator; and transforms access to information in support of teaching and learning for staff, students, parents/guardians, and the community.

MAJOR FUNCTIONS

DTILMS leads the selection, integration, training, and support of innovative technologies for our schools and offices; and manages learning management systems, including the student information system, gradebooks, and adult and student learning platforms, to ensure operational excellence and staff productivity. The work of the department encompasses the full technology life cycle from research, design, and procurement to implementation and training supports. Staff work closely with schools and offices to support technology implementation strategies and provide training.

Systems Engineering and Integration *(Operational Excellence)*

The department is charged with designing, developing, integrating, and maintaining the systems ecosystem and architecture for MCPS applications and systems. Staff responsibilities include providing technical assessments of new digital platforms, integrating new systems into the MCPS environment, and connecting systems together to create a coherent experience for staff, teachers, and parents. This team leads the research and development of new learning technologies and platform configurations to optimize student learning.

Technology Innovation, Modernization, and Management *(Operational Excellence)*

The department oversees the research, purchasing, configuration, deployment, and implementation of mobile computers (Chromebooks, tablets, and laptops), desktop computers, and interactive whiteboard technologies as well as a wide range of other hardware and software technologies to redefine 21st Century learning spaces that support new uses of technology in teaching and learning. The deployment of new learning technologies provides equity of access to digital content and resources that enable anywhere, anytime access to learning for students and staff. These technologies increase opportunities for learning and directly support the superintendent's strategic priority for high academic achievement for all students.

Technology Implementation *(Operational Excellence)*

The department works closely with offices and individual school leadership teams in order to design, develop, and deliver high-quality professional development on the integration of technology into teaching, learning, and business operations. There is an increased focus on designing professional learning opportunities that can be accessed anytime, anywhere. These resources enable staff to learn independently through a self-paced format to address the varied and growing demands of staff as well as ensure opportunities to reach a broader audience.

Learning Management Systems and Development *(Operational Excellence)*

The department collaborates with offices, schools, and local government agencies to develop, implement, and continuously improve MCPS' student applications and services. Based on goals and priorities, the department implements and supports instructional technology solutions for students, parents/guardians, schools, and offices. These solutions support data-driven decision-making and planning; dissemination of accurate and timely information; and operational effectiveness that streamline and enhance the management of teaching and learning, as well as compliance with state and federal regulations. The department focuses on providing and managing student systems to support greater accountability and sharing of knowledge among staff, students, and parents/guardians. Systems include the student information system, gradebooks, learning management systems, professional development platforms, and the parent portal.

Systems Management and Operations *(Operational Excellence)*

The department supports offices and schools by overseeing the daily operations of student applications and technology systems for the purposes of managing all student administrative information including enrollment, attendance, report cards and transcripts, scheduling, course management, and assessment information within the OASIS platform. The department manages the myMCPS Staff Portal.

Information and Architecture and Data Systems *(Operational Excellence)*

The department provides data management services and system integrations in support of MCPS applications and operational reporting systems. Staff responsibilities include monitoring and supporting the infrastructure needed to integrate external systems such as Performance Matters, Naviance, Northwest Evaluation Association, and others. These applications and reporting solutions provide current and historical reports to support both detail and summary-level data analysis for strategic decision making.

OVERVIEW OF BUDGET CHANGES

FY 2021 RECOMMENDED BUDGET

The FY 2021 recommended budget for this department is $11,355,776, an increase of $1,644,916 from the current FY 2020 budget. An explanation of this change follows.

Same Service Level Changes—($1,030)

Realignments to Meet Expenditure Requirements and Program Priorities—($23,328)

Realignments are budgeted to address the priority spending needs in this department. There is a budget neutral realignment of $110,691 for a 1.0 technical analyst position from Systems Management and Operations to Learning Management Systems and Development.

There also is an increase of $227,416 for 2.0 application developer III positions in Learning Management Systems and Development. These positions are supported by a realignment of $103,668 for a 1.0 application developer II position from Learning Management Systems and Development, and $103,668 for a 1.0 application developer II position and $43,408 for a 1.0 data control technician position from Systems Management and Operations. Lastly, there is a realignment of $23,328 to chapter 10, Department of Employee and Retirement Services, for employee benefits.

Other—$22,298

In this department, there are several adjustments resulting from rate changes. The adjustments are as follows:

- An increase of $200 for technology equipment maintenance.
- An increase of $122,727 for contractual services, including Socrata, a portal for easy exchange of information between MCPS and Montgomery County Government, Northwest Evaluation Association (NWEA) for expansion of services and licenses, and Naviance, a K–12 web-based planning and advising system for schools.
- An increase of $8,705 for multiple software subscriptions.
- A decrease of $109,334 for equipment maintenance for the Blackboard calling system.

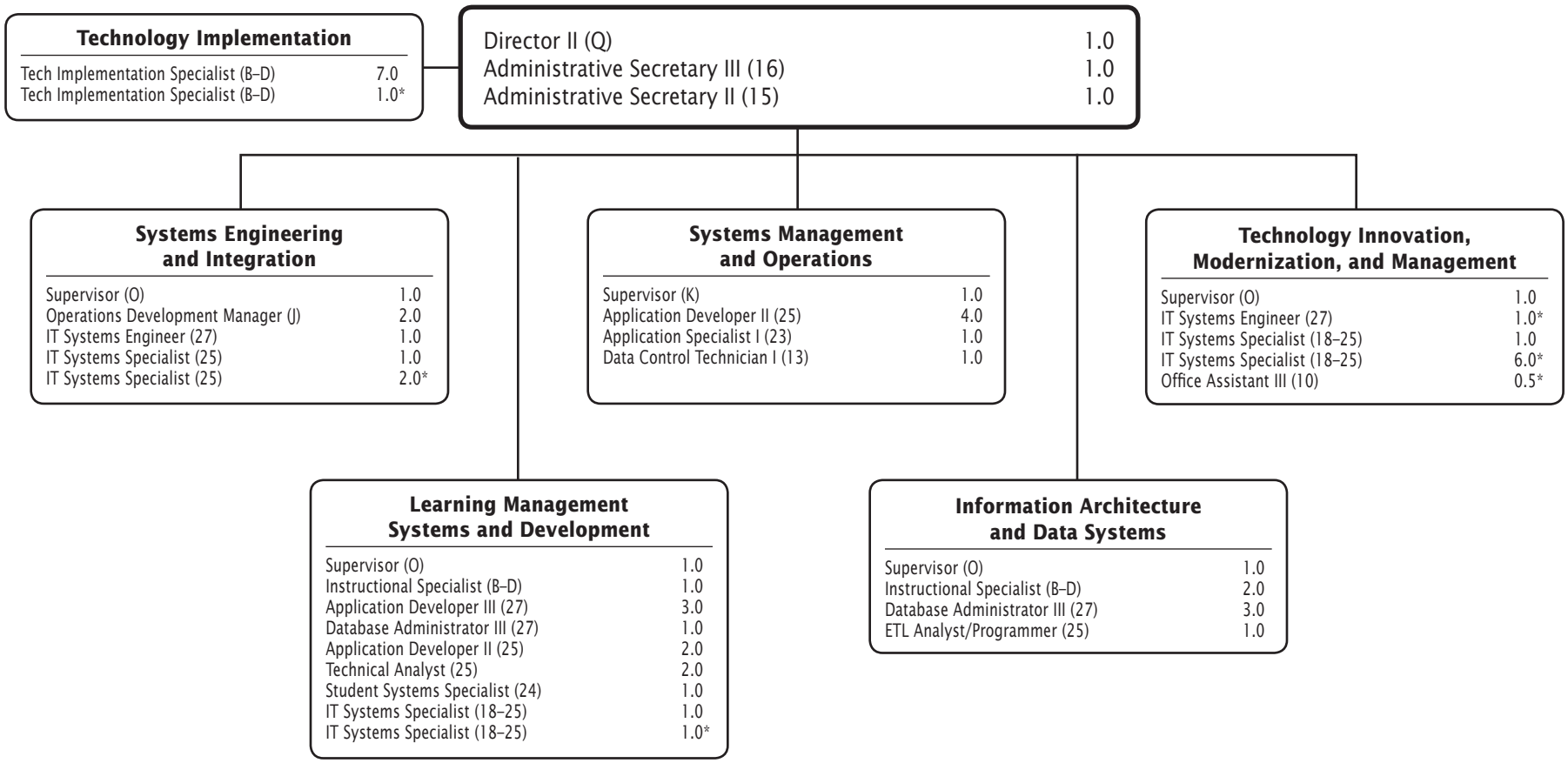
Strategic Accelerator—$1,645,946

Focus on Operational Excellence—$1,645,946

There are several strategic accelerators that focus on operational excellence. They are as follows:

- For FY 2021, $246,688 for 2.0 technology implementation specialist positions in the Department of Technology Integration and Learning Management Systems is added to support an online and hybrid professional development program to train staff at schools and offices. In addition, $66,655 is added to chapter 10, Department of Employee and Retiree Services, for employee benefits.
- There is an increase of $942,014 for equipment maintenance for Student Information Systems and $400,000 for stipends/summer pay for training staff to use the new portal. In addition, $30,600 is added to chapter 10, Department of Employee and Retiree Services, for employee benefits.
- The budget for Systems Management and Operations is increased by $57,244 for a web planning tool annual maintenance support, which helps students to explore and develop their postsecondary plans.

Department of Technology Integration and Learning Management Systems



F.T.E. Positions 43.0

*In addition, there are 11.5 positions funded by the Capital Improvements Program Budget.

Department of Technology Integration and Learning Management Systems - 435/428/442/445

Description	FY 2019 Actual	FY 2020 Budget	FY 2020 Current	**FY 2021 Request**	FY 2021 Change
01 Salaries & Wages					
Total Positions (FTE)	42.000	42.000	42.000	**43.000**	1.000
Position Salaries	$4,357,365	$4,561,174	$4,561,174	**$4,784,534**	$223,360
Other Salaries					
Summer Employment					
Professional Substitutes					
Stipends		18,459	18,459	**418,459**	400,000
Professional Part Time		96,767	96,767	**96,767**	
Supporting Services Part Time		2,711	2,711	**2,711**	
Other					
Subtotal Other Salaries	90,646	117,937	117,937	**517,937**	400,000
Total Salaries & Wages	4,448,011	4,679,111	4,679,111	**5,302,471**	623,360
02 Contractual Services					
Consultants		283,122	283,122	**283,122**	
Other Contractual		4,667,136	4,667,136	**5,679,987**	1,012,851
Total Contractual Services	3,883,818	4,950,258	4,950,258	**5,963,109**	1,012,851
03 Supplies & Materials					
Textbooks					
Media					
Instructional Supplies & Materials					
Office		14,204	14,204	**14,204**	
Other Supplies & Materials		58,874	58,874	**67,579**	8,705
Total Supplies & Materials	63,547	73,078	73,078	**81,783**	8,705
04 Other					
Local/Other Travel		8,413	8,413	**8,413**	
Insur & Employee Benefits					
Utilities					
Miscellaneous					
Total Other	3,920	8,413	8,413	**8,413**	
05 Equipment					
Leased Equipment					
Other Equipment					
Total Equipment					
Grand Total	$8,399,296	$9,710,860	$9,710,860	**$11,355,776**	$1,644,916

Department of Technology Integration and Learning Management Systems - 435/428/442/445

CAT	DESCRIPTION	10 Mon	FY 2019 ACTUAL	FY 2020 BUDGET	FY 2020 CURRENT	**FY 2021 REQUEST**	FY 2021 CHANGE
	435 Dept. of Techn Integration and Learning Mgmt.						
2	Q Director II		1.000	1.000	1.000	**1.000**	
1	O Supervisor			1.000	1.000	**1.000**	
1	J Operations Development Manager		2.000	2.000	2.000	**2.000**	
3	BD Technology Implementation Spec		5.000	5.000	5.000	**7.000**	2.000
1	27 IT Systems Engineer			1.000	1.000	**1.000**	
1	25 IT Systems Specialist			1.000	1.000	**1.000**	
2	16 Administrative Secretary III		1.000	1.000	1.000	**1.000**	
1	15 Administrative Secretary II		1.000	1.000	1.000	**1.000**	
	Subtotal		**10.000**	**13.000**	**13.000**	**15.000**	**2.000**
	428 Techn Innovation, Modernization, and Mgmt.						
1	O Supervisor			1.000	1.000	**1.000**	
1	K Supervisor		1.000				
1	27 IT Systems Engineer		1.000				
1	25 IT Systems Specialist		2.000	1.000	1.000	**1.000**	
	Subtotal		**4.000**	**2.000**	**2.000**	**2.000**	
	442 Learning Mgmt Systems & Development						
1	O Supervisor		2.000	1.000	1.000	**1.000**	
1	BD Instructional Specialist		3.000	1.000	1.000	**1.000**	
1	27 Applications Developer III		1.000	1.000	1.000	**3.000**	2.000
1	27 Database Administrator III		1.000	1.000	1.000	**1.000**	
1	25 Applications Developer II		7.000	3.000	3.000	**2.000**	(1.000)
1	25 IT Systems Specialist			1.000	1.000	**1.000**	
1	25 Technical Analyst		1.000	1.000	1.000	**2.000**	1.000
1	24 Student Systems Specialist		1.000	1.000	1.000	**1.000**	
1	23 Applications Specialist I		1.000				
1	13 Data Control Technician I		2.000				
	Subtotal		**19.000**	**10.000**	**10.000**	**12.000**	**2.000**
	445 Systems Mgmt and Info Architecture						
1	O Supervisor			1.000	1.000	**1.000**	
1	K Supervisor		2.000	1.000	1.000	**1.000**	
1	BD Instructional Specialist			2.000	2.000	**2.000**	
1	27 Database Administrator III		3.000	3.000	3.000	**3.000**	
1	25 Applications Developer II		1.000	5.000	5.000	**4.000**	(1.000)
1	25 IT Systems Specialist		1.000				
1	25 ETL Analyst/Programmer		1.000	1.000	1.000	**1.000**	
1	25 Technical Analyst		1.000	1.000	1.000		(1.000)
1	23 Applications Specialist I			1.000	1.000	**1.000**	

Department of Technology Integration and Learning Management Systems - 435/428/442/445

CAT	DESCRIPTION	10 Mon	FY 2019 ACTUAL	FY 2020 BUDGET	FY 2020 CURRENT	**FY 2021 REQUEST**	FY 2021 CHANGE
	445 Systems Mgmt and Info Architecture						
1	13 Data Control Technician I			2.000	2.000	**1.000**	(1.000)
	Subtotal		**9.000**	**17.000**	**17.000**	**14.000**	**(3.000)**
	Total Positions		**42.000**	**42.000**	**42.000**	**43.000**	**1.000**

Department of Infrastructure and Operations

446/423/424/433/447/448/451

MISSION The Department of Infrastructure and Operations (DIO) manages the enterprise-wide technical systems, including the data center, network connections, e-mail, and telephones, as well as facilitates the implementation of effective, secure, and reliable hardware and software solutions.

MAJOR FUNCTIONS

Database Administration *(Operational Excellence)*

The department creates, maintains, backs up, recovers, and monitors enterprise databases including: Online Administrative Student Information System (OASIS); online student look-up; period-by-period attendance; grading and reporting; Financial Management System; and all student and business systems.

Staff improves the security and performance of enterprise databases through the installation of updates and ensuring operational efficiencies with their front-end/application counterparts. Additionally, staff continues to consider ways to expand the accessibility of the data through opportunities in the cloud. The department continues to procure more robust server hardware as well as the migration of critical databases to improved database operating systems. This work helps to fortify the data infrastructure to strengthen and support parent and community engagement efforts.

Data Center *(Operational Excellence)*

The department operates, monitors, and provides technical support for MCPS central servers and related equipment. Staff responsibilities include configuring high-speed printers and scanners; providing 24-hour access to essential student and administrative databases and applications including payroll, student attendance, student enrollment, retirement, asset management, financial management, report cards, and online materials ordering application systems; and maintaining the data center facility. Staff support the nucleus of all of the core technologies that serve as host to nearly all of the MCPS applications and network connections.

Telecommunications *(Operational Excellence)*

The department designs, installs, monitors, and supports local- and wide-area networks (LAN/WAN), which include wired and wireless networks in schools and offices. As part of this work, staff monitor the connection to the Internet and county government, the security firewall, and the intrusion detection/prevention equipment. Staff are responsible for invoicing, maintaining, and supporting all telephone and combined telephony systems (wired, wireless, cellular) encompassing school and office voice mail systems, data transmission lines, and voice circuits. Staff research, plan, expand, and modernize existing systems as both technology and location needs evolve.

Information Security *(Operational Excellence)*

The department is responsible for the Internet protection systems required by the *Children's Internet Protection Act* (CIPA) and *Protecting Children in the 21st Century Act*. Staff responsibilities include monitoring and investigating all violations of MCPS Regulation IGT-RA, *User Responsibilities for Computer Systems, Electronic Information, and Network Security*; processing all legal eDiscovery requests; ensuring business continuity of the Data Center functions and maintaining an off-site recovery location; and maintaining the E-Rate Program funded under the *Telecommunications Act of 1996*.

Significant improvements and upgrades in Information Security include firewalls that enhance intrusion prevention technology and act as a supplement to new cloud-based protections at the Domain Name System level, upgrades to web filtering to protect against potentially harmful online content, and e-mail upgrades that protect against malware and harmful attacks when a user is compromised.

Enterprise Systems Administration *(Operational Excellence)*

The department designs systems architecture for new or upgraded applications and installs, manages, and supports enterprise servers that house the technology systems used by staff and students as well as parents/guardians. Staff responsibilities include ensuring the efficient operation of systems, as well as preventive security measures; managing enterprise-wide user accounts for the MCPS network and all application systems; managing the MCPS e-mail system operations and upgrades; operating and maintaining of Storage Area Networks; managing enterprise-wide data backup solutions and disaster recovery technology support; and researching emerging industry trends and standards and recommending enhancements to systems.

Significant improvements include an upgraded storage area network and an increased commitment to virtual servers to reduce the physical footprint and energy

consumption from significant number of required servers; performance enhancements to the e-mail platform by localizing some of the high-volume and high-demand content; and major improvements to optimize user management through the rebuilding of servers that maintain data for staff and students.

IT Help Desk *(Operational Excellence)*

The department supports a wide range of technology infrastructure, hardware, and more than 100 enterprise-wide and school- and office-based applications. Staff responsibilities include participating in ongoing operational and application training in order to resolve basic network issues; supporting new application inquiries, responding to software questions, and keeping abreast of current MCPS technology; collaborating with other technologists in order to communicate useful information and timely solutions to frequently asked questions on the Help Desk website; and collaborating with appropriate staff and departments to create support plans for all MCPS enterprise applications.

Technical Services and Support *(Operational Excellence)*

The department is responsible for computer software and hardware support in non-school-based offices. Staff responsibilities include maintaining the closed-circuit security camera systems and access control systems; providing integration services, application deployment, network administration, computer image support, on-site equipment repair and upgrades; maintaining a database and inventory for both warranty and non-warranty maintenance of supported equipment; providing warranty repair of procured equipment; providing technical support for computers and multimedia equipment; and collaborating with the Procurement Unit and MCPS Television staff to review and make recommendations on all multimedia equipment.

School Technology Support *(Operational Excellence)*

The department provides technical support to schools while maintaining the operational readiness of new and existing hardware and software. It is responsible for ensuring that all school-based technologies are in working order or is entered into a repair or replacement process. The department is also responsible for network administration—servers, workstations, printer maintenance and repair, and software installation and upgrades. The department partners with administrators, teachers, media specialists, and central services staff to prepare for distance learning, online testing, and other events requiring technical assistance.

OVERVIEW OF BUDGET CHANGES

FY 2021 RECOMMENDED BUDGET

The FY 2021 recommended budget for this office is $10,200,615, an increase of $354,130, from current FY 2020 budget. An explanation of this change follows.

Same Service Level Changes—$67,345

Realignments to Meet Expenditure Requirements and Program Priorities—($73,548)

Realignments are budgeted to address priority spending needs in this department. There is an increase of $84,469 for a 1.0 project manager position in Telecommunication Systems to support the E-rate program, which is offset by a decrease of $45,399 for a 1.0 computer operator position from the Data Center, and $30,361 for a 0.5 information technology system specialist (ITSS) position from Enterprise System Administration. In addition, $8,709 from program supplies is realigned to support the increase of the 1.0 project manager position.

There also is a realignment of $73,548 for a 1.0 ITSS position from Telecommunication Systems to chapter 7, Office of the Chief Operating Officer, for a 1.0 video records specialist position. Lastly, in the Data Center, $165,773 from lease/purchase is realigned to program supplies to facilitate the migration from Cisco to Mitel Phone Systems which allows for streamlined telecom services with a more robust and efficient system.

Other—$140,893

As a result of rate changes, there is an increase of $142,185 for contractual maintenance. This increase includes funding of $11,025 for Milestone to support maintenance of cameras installed in school buildings, $124,459 for Oracle to support the audit and renewal fee, $2,091 for the Schneider Annual Maintenance fee that supports a current backup power to operate at maximum efficiency and optimal performance, $396 for Elixir Technologies for annual maintenance of digital transformation of communication, $2,566 for the Microsoft Premier Support annual fee to obtain support from Microsoft for all critical Microsoft Systems, including Windows Server operating system, email, and structured query language databases, $824 for Big IP Maintenance load balancing technology, and $824 for Nutanix annual maintenance of the virtual server. In addition, there also is a decrease of $1,292 for lease payments.

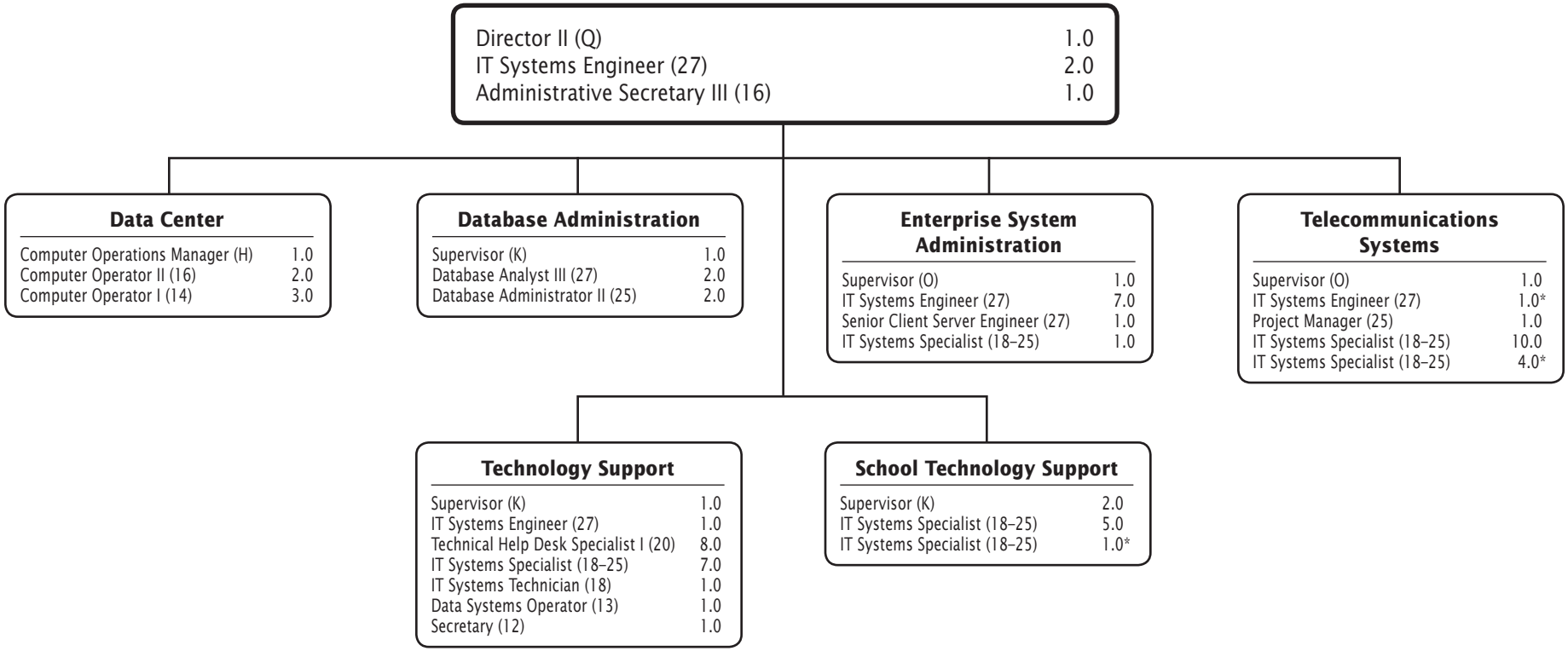
Strategic Accelerator—$286,785

Focus on Operational Excellence—$286,785

There are two strategic accelerators that focus on operational excellence, as follows:

- For FY 2021, $271,785 is added to equipment maintenance to upgrade the HelpDesk software platform.
- There is an increase of $15,000 to support annual maintenance, software upgrades, and other critical fixes to the phone systems installed in schools and offices.

Department of Infrastructure and Operations



F.T.E. Positions 64.0

*In addition, there are 6.0 positions funded by the Capital Improvements Program Budget.

Department of Infrastructure and Operations - 446/423/424/433/447/448/451

Description	FY 2019 Actual	FY 2020 Budget	FY 2020 Current	**FY 2021 Request**	FY 2021 Change
01 Salaries & Wages					
Total Positions (FTE)	64.500	65.500	65.500	**64.000**	(1.500)
Position Salaries	$6,207,148	$6,533,499	$6,533,499	**$6,468,660**	($64,839)
Other Salaries					
Summer Employment					
Professional Substitutes					
Stipends					
Professional Part Time					
Supporting Services Part Time		13,976	13,976	**13,976**	
Other		7,831	7,831	**7,831**	
Subtotal Other Salaries	10,646	21,807	21,807	**21,807**	
Total Salaries & Wages	6,217,794	6,555,306	6,555,306	**6,490,467**	(64,839)
02 Contractual Services					
Consultants		5,000	5,000	**5,000**	
Other Contractual		2,611,724	2,611,724	**3,040,694**	428,970
Total Contractual Services	2,545,608	2,616,724	2,616,724	**3,045,694**	428,970
03 Supplies & Materials					
Textbooks					
Media					
Instructional Supplies & Materials					
Office		10,040	10,040	**10,040**	
Other Supplies & Materials		270,767	270,767	**427,831**	157,064
Total Supplies & Materials	313,156	280,807	280,807	**437,871**	157,064
04 Other					
Local/Other Travel		7,907	7,907	**7,907**	
Insur & Employee Benefits					
Utilities					
Miscellaneous					
Total Other	5,875	7,907	7,907	**7,907**	
05 Equipment					
Leased Equipment		385,741	385,741	**218,676**	(167,065)
Other Equipment					
Total Equipment	482,718	385,741	385,741	**218,676**	(167,065)
Grand Total	$9,565,151	$9,846,485	$9,846,485	**$10,200,615**	$354,130

Department of Infrastructure and Operations - 446/423/424/433/447/448/451

CAT	DESCRIPTION	10 Mon	FY 2019 ACTUAL	FY 2020 BUDGET	FY 2020 CURRENT	**FY 2021 REQUEST**	FY 2021 CHANGE
	446 Dept of Infrastructure & Operations						
1	Q Director II		1.000	1.000	1.000	**1.000**	
1	27 IT Systems Engineer		1.000	2.000	2.000	**2.000**	
1	16 Administrative Secretary III		1.000	1.000	1.000	**1.000**	
	Subtotal		**3.000**	**4.000**	**4.000**	**4.000**	
	423 Technology Support						
10	K Supervisor		1.000	1.000	1.000	**1.000**	
10	27 IT Systems Engineer		1.000	1.000	1.000	**1.000**	
10	25 IT Systems Specialist		7.000	7.000	7.000	**7.000**	
1	20 Technical Help Desk Spec I		8.000	8.000	8.000	**8.000**	
10	18 IT Systems Technician		1.000	1.000	1.000	**1.000**	
10	13 Data Systems Operator		1.000	1.000	1.000	**1.000**	
1	12 Secretary		1.000	1.000	1.000	**1.000**	
	Subtotal		**20.000**	**20.000**	**20.000**	**20.000**	
	424 School Technology Support						
10	K Supervisor		1.000	2.000	2.000	**2.000**	
10	25 IT Systems Specialist		5.000	5.000	5.000	**5.000**	
	Subtotal		**6.000**	**7.000**	**7.000**	**7.000**	
	433 Telecommunications Systems						
10	O Supervisor		1.000	1.000	1.000	**1.000**	
10	25 IT Systems Specialist		11.000	10.000	10.000	**10.000**	
1	25 Project Manager					**1.000**	1.000
10	18 IT Systems Technician		1.000	1.000	1.000		(1.000)
	Subtotal		**13.000**	**12.000**	**12.000**	**12.000**	
	447 Database Administration						
1	K Supervisor		1.000	1.000	1.000	**1.000**	
1	27 Database Analyst III		2.000	2.000	2.000	**2.000**	
1	25 Database Administrator II		2.000	2.000	2.000	**2.000**	
	Subtotal		**5.000**	**5.000**	**5.000**	**5.000**	
	448 Data Center						
1	H Computer Operations Mgr		1.000	1.000	1.000	**1.000**	
1	16 Computer Operator II Shift 2		1.000	1.000	1.000	**1.000**	
1	16 Computer Operator II Shift 3		1.000	1.000	1.000	**1.000**	
1	14 Computer Operator I Shift 1		2.000	2.000	2.000	**1.000**	(1.000)
1	14 Computer Operator I Shift 2		1.000	1.000	1.000	**1.000**	
1	14 Computer Operator I Shift 3		1.000	1.000	1.000	**1.000**	
	Subtotal		**7.000**	**7.000**	**7.000**	**6.000**	**(1.000)**
	451 Enterprise System Administration						
1	O Supervisor		1.000	1.000	1.000	**1.000**	

Department of Infrastructure and Operations - 446/423/424/433/447/448/451

CAT	DESCRIPTION	10 Mon	FY 2019 ACTUAL	FY 2020 BUDGET	FY 2020 CURRENT	**FY 2021 REQUEST**	FY 2021 CHANGE
	451 Enterprise System Administration						
1	27 Sr Client Server Engineer		2.000	1.000	1.000	**1.000**	
1	27 IT Systems Engineer		5.000	7.000	7.000	**7.000**	
1	25 IT Systems Specialist		2.500	1.500	1.500	**1.000**	(.500)
	Subtotal		**10.500**	**10.500**	**10.500**	**10.000**	**(.500)**
	Total Positions		**64.500**	**65.500**	**65.500**	**64.000**	**(1.500)**

Department of Business Information Services

421/429

MISSION The Department of Business Information Services (DBIS) plans, develops, implements, and supports high-quality business solutions contributing to the effective management of human, fiscal, and operational resources across all aspects of the school system.

MAJOR FUNCTIONS

Enterprise Resource Planning (ERP) Program Management and Support *(Operational Excellence)*

The ERP program modernizes and upgrades Montgomery County Public Schools (MCPS) core business systems that have reached their end of life. This multi-year program was launched in FY 2019 and is projected to complete in FY 2023. Once this program is fully implemented, schools and offices will be better served through modern supported technologies, more efficient business processes, and an enhanced end-user experience.

The upgrade of the Human Resources Information System (HRIS) will occur in FY 2020. This upgrade is in alignment with the MCPS Strategic Planning Framework as part of the Enterprise Resource Planning Program. The technology infrastructure is being upgraded and a new reporting system implemented providing enhanced operational excellence in human resource management. This upgrade is an important step in preparing for future migration of the HRIS to a cloud-based or other modern technology.

The implementation of the cloud-based Financial Management System (FMS) is occurring in FY 2020. Work on the new integrated budgeting system was initiated as part of the Enterprise Resource Planning Program. The project is scheduled for completion in FY 2021. Leveraging best business practices and contemporary functionalities will result in user-friendly, integrated software systems that are accessible through a variety of web browsers and mobile applications.

Human Capital Management *(Operational Excellence)*

The department implements and supports human capital management solutions by providing applications and systems to facilitate operational excellence in the delivery of services for human resource management, professional development, and career management. These systems include: Human Resources Information System (HRIS); Payroll Attendance and Collection System; School Allocations Execution; Employee Self-Service portal and applications; Professional Development Online; MCPS Careers/Applicant Tracking System; Extracurricular Activity salary processes; and the Substitute Employee Management System).

HRIS serves as the authoritative source for all personnel information integrating demographic information, leave management, payroll, and employee benefit functions that are essential to the effective management of human capital. In collaboration with the Office of Human Resources and Development and the Employee and Retiree Service Center, staff streamline operations for essential business functions in schools and offices. Manual paper processes are replaced with online functions that enable staff to enter and view data related to staffing allocations, process extracurricular activity assignment salary verifications, and identify languages spoken by staff in schools. Online collection of such data eliminates multiple points of paper handling and expedites office processes. These processes ensure the most up-to-date information is provided for processing and recording each transaction for data analysis and response to inquiries. Additionally, processes that previously took several days to complete are now accomplished within hours.

Financial Management *(Operational Excellence)*

The department develops, implements, and supports financial management solutions and integrated enterprise systems. These systems include the following: Financial Management System; Financial Monitoring System; Salary Simulation Administration; School Funds Online; Online Independent Activity Funds collection system; and Budget Management Application.

The Financial Management System integrates supply chain, financial, and budgeting functions, providing access to essential information and streamlining financial processes for schools and offices as well as service providers and external agencies

School and Business Operational Technologies *(Operational Excellence)*

The department develops, implements, and supports a variety of solutions essential to the operation of schools and central offices. Ranging from 24/7 browser-based and mobile access to school library media information to document storage of student, employee, and fiscal records, these applications provide resources that support excellence and equity for all students. These systems include: Destiny Library Manager; Database of

Accountable Evaluations system; Document Management System; Student Member of the Board election system; Capital Improvements Plan application; Facility Availability System; and the Transportation Information Management System.

The Destiny Library Manager Library catalog provides an eBook/eAudiobook reader that streamlines accessibility to features such as read aloud, notetaking, and navigation through eBooks. Through a mobile application, students and families can access Destiny resources from anywhere as well as download eBooks and eAudiobooks. As with popular online systems, Destiny Discover catalog searches provide related resources with "you may also like…" that broadens their exposure to what their media center provides for their use and enjoyment.

The Student Member of the Board election is conducted every school year with all eligible secondary school students casting their vote in their school. This is a county election with the winner being sworn in as an elected official. The planning and coordination for the in-school online election was successfully managed by Business Information Services with 73,584 votes cast representing 85 percent of the students eligible to vote. The voting process was conducted successfully resulting in the election of the 42nd student member of the Board of Education.

OVERVIEW OF BUDGET CHANGES

FY 2021 RECOMMENDED BUDGET

The FY 2021 recommended budget for this department is $9,950,343, an increase of $962,103 from current FY 2020 budget. An explanation of this change follows.

Same Service Level Changes—$37,863

Realignments to Meet Expenditure Requirements and Program Priorities—$0

Realignments are budgeted to address priority spending needs in this department. There is a decrease of $84,469 for a 1.0 application developer II position and a corresponding increase of $84,469 for a 1.0 technical analyst position within Enterprise Resource Planning (ERP) Program Management and Support.

Additionally, in ERP Program Management and Support, $220,000 is realigned to contractual services for implementation and advisory services related to the Human Capital Cloud System. To support this realignment, $150,000 is realigned from program supplies, and $70,000 from dues, registrations, and fees.

Other—$37,863

As a result of rate changes, there is an increase of $14,950 for contractual services in the Department of Business Information Services. This increase includes funding for the Aztech Professional Services for application tracking system for the Office of Human Resources and Development (OHRD), fingerprinting and badging, E-rate document retention, and product upgrade.

There also is an increase of $22,913 for contractual maintenance. This increase includes funding of $250 for the Aztech Professional Services; $1,278 for the BSI Tax Factory; $2,735 for sustaining support for end of life products; $17,835 for Power School Human Resource Online; $140 for the Legal Edge; $53 for Melissa data; and $2,872 for Oracle TALEO. There also is a decrease of $2,250 for the annual maintenance of the Human Resource Information System (HRIS) as it relates to supporting the payroll program.

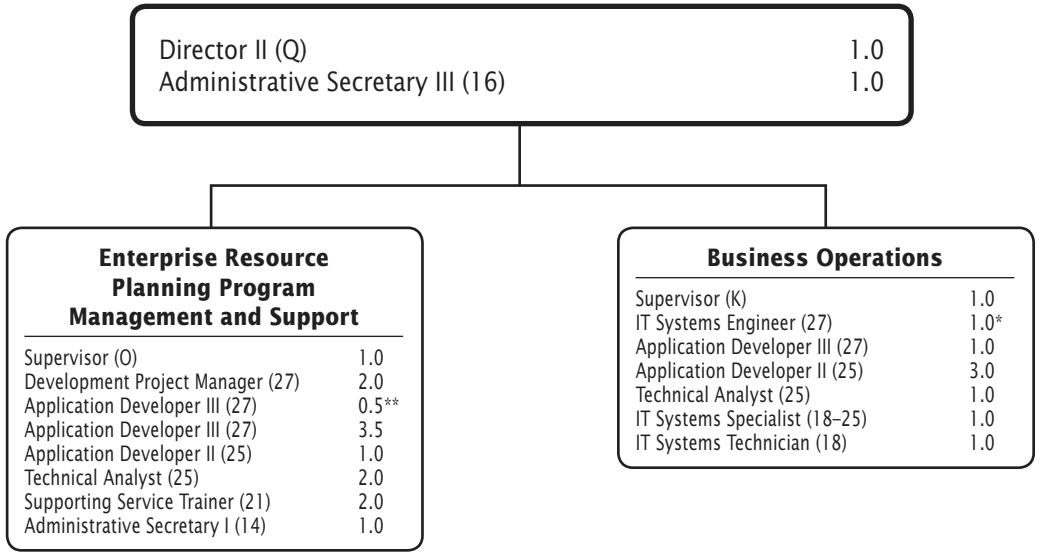
Strategic Accelerator—$924,240

Focus on Operational Excellence—$924,240

There are several strategic accelerators that focus on operational excellence, as follows:

- For FY 2021, there is an increase of $140,306 for 2.0 supporting services trainer positions for ERP Program Management and Support. In addition, $54,958 is added to chapter 10, Department of Employee and Retiree Services, for employee benefits.
- An increase of $300,000 in contractual services for the ERP and HRIS to provide access to actionable information associated with fingerprinting and badging of volunteers and contractors.
- An increase of $40,193 in contractual maintenance for tax table software and Application Tracking and Recruiting Systems.
- An increase of $443,741 to supplement supporting services part-time salaries to provide support for the hybrid cloud implementation. In addition, $28,997 is added to chapter 10, Department of Employee and Retiree Services, for employee benefits.

Department of Business Information Services



F.T.E. Positions 22.5

*1.0 position funded by the Capital Improvements Program Budget
**0.5 position funded by the Employee Benefits Trust Fund

Department of Business Information Services - 421/429

Description	FY 2019 Actual	FY 2020 Budget	FY 2020 Current	**FY 2021 Request**	FY 2021 Change
01 Salaries & Wages					
Total Positions (FTE)	19.000	20.500	20.500	**22.500**	2.000
Position Salaries	$1,823,880	$2,081,069	$2,081,069	**$2,221,375**	$140,306
Other Salaries					
Summer Employment					
Professional Substitutes					
Stipends					
Professional Part Time					
Supporting Services Part Time		253,477	253,477	**697,218**	443,741
Other					
Subtotal Other Salaries	46,721	253,477	253,477	**697,218**	443,741
Total Salaries & Wages	1,870,601	2,334,546	2,334,546	**2,918,593**	584,047
02 Contractual Services					
Consultants		33,959	33,959	**333,959**	300,000
Other Contractual		6,207,798	6,207,798	**6,505,854**	298,056
Total Contractual Services	6,252,556	6,241,757	6,241,757	**6,839,813**	598,056
03 Supplies & Materials					
Textbooks					
Media					
Instructional Supplies & Materials					
Office					
Other Supplies & Materials		206,497	206,497	**56,497**	(150,000)
Total Supplies & Materials	107,813	206,497	206,497	**56,497**	(150,000)
04 Other					
Local/Other Travel		100,940	100,940	**30,940**	(70,000)
Insur & Employee Benefits					
Utilities					
Miscellaneous					
Total Other	1,454	100,940	100,940	**30,940**	(70,000)
05 Equipment					
Leased Equipment					
Other Equipment		104,500	104,500	**104,500**	
Total Equipment	231,949	104,500	104,500	**104,500**	
Grand Total	$8,464,373	$8,988,240	$8,988,240	**$9,950,343**	$962,103

Department of Business Information Services - 421/429

CAT	DESCRIPTION	10 Mon	FY 2019 ACTUAL	FY 2020 BUDGET	FY 2020 CURRENT	**FY 2021 REQUEST**	FY 2021 CHANGE
	421 Dept of Business Info Services						
1	Q Director II		1.000	1.000	1.000	**1.000**	
1	M Team Leader		1.000				
1	K Supervisor			1.000	1.000	**1.000**	
1	27 Applications Developer III		4.500	1.000	1.000	**1.000**	
1	27 Development Proj Manager		2.000				
1	25 Applications Developer II		6.000	3.000	3.000	**3.000**	
1	25 IT Systems Specialist		1.000	1.000	1.000	**1.000**	
1	25 Technical Analyst		1.000	1.000	1.000	**1.000**	
1	18 IT Systems Technician		1.000	1.000	1.000	**1.000**	
1	16 Administrative Secretary III		1.500	1.000	1.000	**1.000**	
	Subtotal		**19.000**	**10.000**	**10.000**	**10.000**	
	429 Enterprise Resource Planning Program						
1	O Supervisor			1.000	1.000	**1.000**	
1	27 Applications Developer III			3.500	3.500	**3.500**	
1	27 Development Proj Manager			2.000	2.000	**2.000**	
1	25 Applications Developer II			2.000	2.000	**1.000**	(1.000)
1	25 Technical Analyst			1.000	1.000	**2.000**	1.000
1	21 Supporting Service Trainer					**2.000**	2.000
1	14 Administrative Secretary I			1.000	1.000	**1.000**	
	Subtotal			**10.500**	**10.500**	**12.500**	**2.000**
	Total Positions		**19.000**	**20.500**	**20.500**	**22.500**	**2.000**