

**DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
OFFICE OF THE CHIEF INFORMATION OFFICER
INFORMATION TECHNOLOGY FUND
2020 Summary of Resources**

(Dollars in Thousands)

	Enacted/ Requested	Carryover	Supplemental/ Rescission	Total Resources	Obligations	Outlays
2018 Appropriation	267,000	98,333 ^a	-	365,333	217,768	254,607
2019 Annualized CR	267,000	157,559	-	424,559	279,000	314,200
2020 Request	280,000	152,665	-	432,665	279,000	385,200
Change from 2019	13,000	(4,894)	-	8,106	-	71,000

a/ Includes \$5 million transfer from Technology Modernization Fund

1. Program Purpose and Budget Overview

The Information Technology (IT) Fund provides for the infrastructure, systems, and services that support all Department of Housing and Urban Development (HUD) programs, which include all of HUD’s mortgage insurance liabilities, rental subsidies, and formula and competitive grants. It also provides services for all administrative and mission support programs. The 2020 request of \$280 million, along with funds that will be carried over from fiscal year 2019, supports Operations and Maintenance (O&M) activities (sustaining current systems and applications) and Development, Modernization, and Enhancement (DME) initiatives.

2. Request

The requested budget provides for the operation of current IT systems and applications that support HUD’s business, administrative functions, and the IT infrastructure (such as computer hardware, network and communications, support services, enterprise software licenses, and cybersecurity). The budget will also provide for critical new investments in technology to support the President’s Management Agenda (PMA) and HUD strategic plan. These will improve delivery of services to citizens, and promote the effective stewardship of taxpayer dollars. Smart IT investment is critical to realizing efficiencies and improving customer access to HUD

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services. The Office of the Chief Information Officer (OCIO) is pursuing development and modernization initiatives that leverage enterprise technology to promote decent, safe, and affordable housing for Americans, provide access to homeownership opportunities, create healthier home environments, and reduce homelessness.

The planned investments will lead to improved program performance and lower technology costs by achieving economies of scale through integration and consolidation of IT systems, and greater use of enterprise capabilities. In accordance with Federal Information Technology Acquisition Reform Act (FITARA) and Executive Order 13833, the CIO is expanding oversight and management of IT spending. Furthermore, the CIO is working with program offices to define their technology needs, digitize manual processes, and improve end-user experiences. The request will also strengthen cybersecurity with full implementation of continuous monitoring for security threats and other enhancements, consistent with Executive Order 13800. It will support the maintenance and expansion of valuable enterprise capabilities, such as architecture design and implementation and the continuous integration and delivery of new products into current operations, thus reducing duplicative data entry and inefficient processes.

3. Justification

At the \$280 million requested level, HUD will accelerate the scope and pace of its ambitious modernization plans. OCIO is investing in modernization, security upgrades, and leveraging the cloud and emerging technology across its programs to replace standalone capabilities within each mission area. The agency is continuing the transition to an enterprise approach for common functionality (such as case and workflow management, records and data management, and reporting/business intelligence) and expanding its cybersecurity program. Applications and infrastructure are being moved to the cloud and capacity expanded in architecture design and implementation, in-house solution engineering, and continuous integration and delivery of new products into operations. These will expand the capacity to deliver timely and cost-effective new projects.

The 2020 budget request builds upon the critical modernization of IT systems that will begin in 2019. HUD is collaborating with the GSA Centers of Excellence to conduct current state assessments and requirements for development to begin implementing these recommendations in 2020. These efforts will accelerate modernization to maximize impact to the public and return on investment to taxpayers. OCIO is also prioritizing new investment initiatives across the entire IT portfolio, and these new capabilities and technologies will strengthen and modernize mission programs and enterprise support functions. The result will be a mix of direct mission and support proposals to consolidate systems, provide enterprise capabilities, and reduce customer burden through improved program operating efficiencies. By using an agile approach, HUD will deliver new functionality incrementally, while maximizing flexibility and minimizing risk. OCIO will identify common areas of functionality required by the HUD enterprise and provide IT solutions aligned to each specific function (or closely grouped functional bundles) that any program office or line of business can use.

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Current and planned modernization investments include the following:

Cloud Migration: HUD received \$20 million from the government-wide Technology Modernization Fund and will migrate five of HUD's most critical business systems from a Unisys/COBOL mainframe to a modern Cloud platform. These systems control the disbursement of billions of dollars. Modernizing the database technology platform will tighten security with the latest encryption mechanism, authentication, and authorization techniques. Transitioning from an on-premise physical hardware environment to a cloud virtual machine environment is a significant improvement in consolidating and modernizing the infrastructure. The project will also substantially reduce costs for licenses, operation and maintenance, and end user support. This funding complements the FHA and financial management improvements described below.

FHA Systems Modernization: This multi-year investment will modernize FHA's antiquated systems, which have not kept up with technology improvements in the industry. FHA is the world's largest mortgage insurer with a single-family mortgage portfolio in excess of \$1 trillion to low-income, first-time, and other targeted home owners. The following investments will modernize or build systems to support Mortgage Insurance origination: electronic (eCase) Binder, Automated Underwriting and Endorsement system, Counterparty and Case Management, Appraisal Scoring, and Data Analysis. This will result in systems to better capture and process extensive volumes of data, enhanced storage and processing capabilities to handle the migration from paper forms to a digital environment, and the ability to analyze and manage insured loans comprehensively across all phases of the mortgage insurance life cycle. FHA will also transform the business processes to align with HUD's new systems and platforms.

Enterprise Subsidies Management Program (eSM): The eSM has been established to modernize HUD's subsidies programs to include business process, financial management, and technology to better serve families in need of decent and affordable housing. This will transform and ultimately optimize the utilization of \$35 billion in housing subsidies, which include both Tenant-Based Rental Assistance (TBRA) and Project-Based Rental Assistance (PBRA). In the current environment, programmatic functions are performed using manual processes, and outdated systems including Public & Indian Housing (PIH) Information Center - Inventory Management System (PIC-IMS), Tenant Rental Assistance Certification System (TRACS), Automated Renewal & Amendment Management Subsystem (ARAMS), and Voucher Management System (VMS). Financial management and disbursements also use legacy systems that will be ultimately replaced. OCIO initiated the electronic Voucher Management System (eVMS) to automate the accurate calculation of \$22 billion in HUD payments to Public Housing Agencies (PHAs) and will eventually perform subsidy calculations for other programs.

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Enterprise Data Management (EDM): This EDM program is based on three key pillars: data consolidation, increased governance, and Cloud based big data technology platform. HUD has many disparate systems across multiple program areas that collect a vast amount of data. These silos result in significant data challenges, that impede the ability to holistically analyze information to make well informed decisions and increase costs. The EDM program provides data across systems and applications and supports the rapid creation of new applications/functionality. It will enable the collection of all of HUD's data into a consolidated environment for enhanced analytics and data integration. This is a multi-year initiative that involves migrating numerous systems of varying complexity in line with the target architecture. HUD will continue to onboard these systems and support future data requirements by enhancing the "data lake" and analytic capabilities. This will improve data security and enforce more consistent management and utilization of critical HUD data, while reducing administrative overhead through standardization of processes.

Grants Management: HUD is improving the grants making process by streamlining, modernizing, and consolidating the systems for HUD's eight separate grant programs. This includes the systems used for the management, evaluation, and financial aspects of eight separate grants programs. This work will address problems with manual and duplicative processes and grants documents across the agency; lack of accountability; high operating costs; and lack of connectivity to its core financial systems.

OCIO is also reviewing all of its current systems contract requirements and continues to consolidate and reduce contract scope, duplications, and excessive service levels to realize savings that may be reinvested in modernization and security upgrades. OCIO continues to assess and streamline the current operating environment by executing a prioritized set of enhancements to the IT infrastructure, which will modernize and consolidate the existing outdated legacy platforms. This will reduce the security vulnerabilities of IT applications and will reduce long-term IT costs.

The planned improvements will gradually lower costs by achieving economies of scale and streamlined technology, driven by integration and consolidation of IT systems and greater use of enterprise shared services. In 2020, HUD will complete reforming its IT infrastructure to a more agile, modern, mobile-friendly environment, utilizing a federal shared service provider. This initiative is known as the HUD Enterprise and Architecture Transformation (HEAT) and includes transitioning to enterprise software agreements and FedRamp cloud solutions, implementing GSA strategic sourcing contracts, migrating all computer hardware into two multi-tenant shared data centers, and moving enterprise applications to the Cloud. The result will be increased efficiency, enhanced internal monitoring and management capabilities, and optimized IT Infrastructure services.

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HUD continues to increase spending in all five functions of the Cybersecurity Framework (CSF) to strengthen its cybersecurity capability to further reduce enterprise exposure to vulnerabilities and reduce the overall risks to the Department. Increased spending supports data loss prevention (DLP), continuous diagnostic and mitigation (CDM), forensic capabilities, and the continued implementation of the Cybersecurity Framework and Security Operations Center (SOC). It also expands the Detect function with a new Cybersecurity Incident Response and Vulnerability Management contract that will include a Cyber Hunt capability to increase the Department's ability to Detect, Respond, and Recover and expand upon SPLUNK capabilities which provides HUD with Security Information and Event Management. HUD has also bolstered its Detect and Identify functions with the establishment of the Enterprise Wide Cybersecurity Independent Verification and Validation (IV&V) contract that provides Penetration Testing and validation of the implementation of the CSF Strategic Plan. Finally, HUD has made a major investment in a phased transition of the Re-Authorization of HUD's General Support Systems and Major Applications to Continuous Authorization/Ongoing Authorization to provide risk determinations and risk acceptance decisions more frequently to keep pace with mission/business requirements and organizational risk tolerance.

HUD is committed to using technology to the fullest, to better serve citizens, retire obsolete and inefficient IT systems, and reduce the cost and complexity of its applications. OCIO's goal is to "build systems once and use them many times," reforming HUD's IT infrastructure through consolidation, utilizing enterprise capabilities, and improving the effectiveness and efficiency of programs and operations. As HUD begins to incorporate its infrastructure improvements and new capabilities into its operations, it will pursue contractual and operational adjustments to maximize efficiencies. Going forward, carryover will be maintained at minimum levels for unanticipated needs.

IT Resource Statement

In accordance with OMB Circular A-11, Section 51.3, the Department of Housing and Urban Development (HUD) provides the following statements:

- (a) The Chief Information Officer (CIO) has reviewed, and had significant input in approving all IT Investments included in this budget request.

- (b) The Chief Financial Officer (CFO) and CIO state that the CIO had a significant role in reviewing planned IT support for major programs and for significant increases and decreases in IT resources reflected in this budget.

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(c) The FITARA common baseline rating for Element D, that the CIO reviews and approves major IT Investment portion of budget request, is at Level 3 (Fully Implemented). HUD has developed and implemented a plan to ensure that all common baseline FITARA responsibilities are in place.

(d) The CIO certifies the use of incremental development practices for current and proposed new IT investments in all programs throughout HUD.

General Provisions

The 2020 Budget includes a General Provision related to the IT Fund (Sec. 229). This provision is described further in “Fiscal Year 2020 General Provisions”.

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**OFFICE OF THE CHIEF INFORMATION OFFICER
INFORMATION TECHNOLOGY FUND
Summary of Resources by Program**

(Dollars in Thousands)

Budget Activity	2018 Budget Authority	2017 Carryover Into 2018	2018 Total Resources	2018 Obligations	2019 Annualized CR	2018 Carryover Into 2019	2019 Total Resources	2020 Request
Operations, Maintenance, Development, Modernization and Enhancements	267,000	98,333 ^a	365,333	217,768	267,000	157,559	424,559	280,000
Total	267,000	98,333	365,333	217,768	267,000	157,559	424,559	280,000

a/ Includes \$5 million transfer from Technology Modernization Fund

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**OFFICE OF THE CHIEF INFORMATION OFFICER
INFORMATION TECHNOLOGY FUND
Appropriations Language**

The 2020 President's Budget includes the appropriation language listed below:

For the development, modernization, and enhancement of, modifications to, and infrastructure for Department-wide and program-specific information technology systems, for the continuing operation and maintenance of both Department-wide and program-specific information systems, and for program-related maintenance activities, \$280,000,000, shall remain available until September 30, 2021: Provided, That any amounts transferred to this Fund under this Act shall remain available until expended: Provided further, That any amounts transferred to this Fund from amounts appropriated by previously enacted appropriations Acts may be used for the purposes specified under this Fund, in addition to any other information technology purposes for which such amounts were appropriated.

Note.—A full-year 2019 Annualized CR for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Act, 2019 (Division D of P.L. 115-245, as amended). The amounts included for 2019 reflect the annualized level provided by the continuing resolution.