

# DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

## Office of the Chief Information Officer

### Information Technology Fund

#### SUMMARY OF RESOURCES

(Dollars in Thousands)

	Enacted/ Requested	Carry over	Supplemental/ Rescission	Total Resources	Obligations	Net Outlays
2021 Appropriation	300,000	71,491	-	371,491	319,050	344,000
2022 Annualized CR	300,000	62,613	-	362,613	336,000	335,000
2023 President's Budget	382,000	37,000	-	419,000	409,000	369,000
Change from 2022	82,000	(25,613)	-	56,387	73,000	34,000

a/ Carryover includes recaptures from prior years. Actual recaptures in 2021 was \$28 million. Planned recaptures in 2022 and 2023 are \$10 million each year.

b/ 2023 President's Budget row reflects the exclusion of planned transfers of \$9 million from Public Housing Fund and \$5 million from Green Resilient Retrofit Program for Utility Benchmarking IT initiatives in both budget authority and outlays. These transfer proposals are discussed in the Legislative Proposal section of this document.

#### PROGRAM PURPOSE

The Information Technology (IT) Fund provides for the infrastructure, systems, and services that support all HUD programs, which include all of HUD's mortgage insurance liabilities, rental subsidies, and formula and competitive grants. The fund also supports all administrative and mission support programs.

#### BUDGET OVERVIEW

The 2023 President's Budget requests \$382 million for the Information Technology Fund, which is \$82 million more than the 2022 annualized CR level. This supports the \$339 million in Operations and Maintenance (O&M) which is required to sustain the foundation of our IT portfolio. These funds support all current IT systems and applications, all of which play a critical role in enabling HUD to meet its mission and administrative functions. These O&M resources maintain and improve existing IT infrastructure, such as computer hardware, network and communications, support services, enterprise software licenses, and cybersecurity. The Budget excludes \$11.8 million for computers, mobile equipment, and related voice and data services for Departmental users that are part of HUD's Working Capital Fund (WCF) budget. This WCF proposal will drive efficiencies and allow offices to strategically address their needs for such equipment and services. The technology provided through the IT Fund also supports grantees, and partners in their efforts to promote affordable rental housing, provides access to homeownership opportunities, creates healthier home environments, and reduces homelessness.

The IT Fund budget also provides \$43 million for new initiatives, including \$29 million in Development, Modernization, and Enhancement (DME) and \$14 million in O&M enhancements, to support the Department's strategic priorities and customer needs. These new capabilities represent the most critical IT investments identified across the Department's program and support offices. These new capabilities are designed to improve delivery of HUD's programs and services, digitize manual processes to improve operational capabilities, and strengthen the stewardship of taxpayer dollars by promoting efficiencies, and consolidating obsolete technology and replacing it with newer solutions that support greater integration between systems. Resources are also included to expand and strengthen cybersecurity at HUD by continuing implementation of a comprehensive cybersecurity program that addresses critical security deficiencies related to cyber risk management, governance, and data protection.

## JUSTIFICATION

### Operations and Maintenance (O&M)

The Budget includes \$339 million for existing O&M services and applications, including planned transitional contract costs, that support HUD's program and administrative offices, IT infrastructure, and cybersecurity. This amount excludes \$11.8 million for end-user IT devices and support that is being requested by the HUD WCF. The three-year breakout of O&M obligations by investment with brief explanations of each investment category are as follows:

(Dollars in Thousands)

Investment	2021 Actual	2022 CR	2023 Request
	O&M	O&M	O&M
<b>Major</b>	<b>41,715</b>	<b>46,070</b>	<b>44,461</b>
Enterprise Grants Management	6,894	8,972	9,241
Multifamily Housing and Healthcare Facilities	4,193	5,490	5,579
Public and Assisted Housing Oversight	5,153	5,596	5,720
Single Family Housing	18,862	22,922	20,831
UNISYS Migration Program - Technology Modernization Fund	6,613	3,090	3,090
<b>Non-Major</b>	<b>39,401</b>	<b>34,366</b>	<b>39,640</b>
Analytical Services	1,362	1,334	1,374
Contact Center	2,247	3,897	4,014
Communications Support	2,712	2,844	4,409
Data Management Services	4,072	2,407	3,727
Digital Services	1,153	-	1,267
Document Management	2,396	3,588	3,696
Facilities and Workplace Services	889	429	156
Financial Management Technology Support	7,320	8,753	9,636
Geospatial Services	1,257	1,666	1,854
Human Resources Automated Services	7,460	3,613	3,663
Legal Oversight	5,517	3,620	3,563
Regulatory Enforcement	3,016	2,215	2,281
<b>Standard</b>	<b>205,538</b>	<b>198,203</b>	<b>253,969<sup>1</sup></b>
Application	462	5,319	5,324
Data Center and Cloud	63,595 <sup>2</sup>	94,892	125,544
Delivery	785	-	-
End User	75,925	63,168 <sup>3</sup>	74,073 <sup>3</sup>
IT Management	400	408	891
IT Security Services	34,783	11,630 <sup>4</sup>	24,782
Network	29,588	22,786	23,355 <sup>1</sup>
<b>eGovernment</b>	<b>975</b>	<b>1,002</b>	<b>930</b>
Disaster Assistance Improvement Plan	55	55	55
eRulemaking Docket	144	170	184
GovBenefits.gov	387	385	379
Grants.Gov	275	278	199
Integrated Acquisition Environment	114	114	113
<b>Total Portfolio</b>	<b>287,629</b>	<b>279,641</b>	<b>339,000</b>
<b>Enacted/Budgeted O&amp;M Resources</b>	<b>260,000</b>	<b>260,000</b>	<b>339,000</b>
<b>O&amp;M Supported by Carryover</b>	<b>27,629</b>	<b>19,260</b>	<b>-</b>

Note: Individual investment descriptions are shown in the Appendix A.

<sup>1</sup> Amount excludes O&M new capabilities: Zero Trust initiative (\$13,854), SharePoint Support (\$150), and Grants Mgt maintenance (\$300), which are included in the summary table for new capabilities.

<sup>2</sup> The 2021 costs exclude \$31 million obligated on the data center contract using 2019 obligated funds. They were made available because they were not able to be utilized as originally intended due to a contract protest.

<sup>3</sup> Excludes \$11.8 million that is budgeted in the Working Capital Fund.

<sup>4</sup> The increase from 2022 is necessary to re-establish full funding for this program that would absorb temporary reductions in 2022 under an annualized CR scenario. 2022 costs exclude any amounts that may be funded by anticipated recaptures.

The Budget requests \$84 million to fund the business applications in Major and Non-Major investments. This supports over 80 IT systems and services across 18 program areas. We continue to pursue consolidated contract vehicles and leverage enterprise capabilities to provide modern applications with greater functionality and to realize lower O&M costs over time.

The Budget requests \$254 million for IT Infrastructure and enterprise capabilities in Standard investments, which includes:

- Services include data center and end user hardware and support, annual technology refresh, network and communications maintenance and upgrades, cloud operations services and infrastructure operations.
- Capabilities includes enterprise software licenses and tools that range from office applications and databases to robust cloud-based software platforms. These are critical to support agile development, solution engineering, and continuous product delivery in a modern and efficient way.
- The 2023 Budget supports operational readiness and program office transitions to modernized technologies with minimal impact to mission operation. This also includes remediating infrastructure-related gaps within HUD's cybersecurity framework (e.g., supply chain risks), and overcoming operational risks associated with multiple legacy contract vehicles. This includes operating the current Data Center and End User contracts while transitioning to the new vehicles.
- \$25 million to continue to bolster cybersecurity by implementing an Information Security Continuous Monitoring and Ongoing Authorization program, assisting to establish Supply Chain Risk Management governance and management strategy and processes, and leveraging innovative security technologies and processes. It also provides cybersecurity training and awareness and enhances Enterprise IT Risk Management processes.

Within the Operations and Maintenance allocation, the Budget assumes O&M funding to fully operate and maintain new applications that will be placed in service in 2023 as individual FHA and PIH modernization workstreams are completed. Such workstreams are completed incrementally and the list below identifies the activities that are scheduled to be in service by 2023.

#### **PIH Modernization**

- Inventory Management System/PIH Information Center
- Native Advantage
- Electronic Voucher Management System
- Grants Enterprise Management System
- Operating Fund Portal
- PIH Data Warehouse

#### **FHA Single Family Housing Modernization**

- Loan Application, Underwriting, Appraisals, and Closing
- Loan Servicing
- Loan Claims & Disposition
- Loan Default Reporting

**New Capabilities**

(Dollars in Thousands)

<b>New Capability</b>	<b>Program Office</b>	<b>Investment Name</b>	<b>2023 Cost</b>
integrated Real Estate Management System (iREMS)	Multi-Family Housing	Multi-Family Housing and Healthcare Facilities	\$5,000
electronic Special Needs Assistance Programs (eSNAPS)	Office of Community Planning and Development	Enterprise Grants Management	\$3,000
Tenant Complaint Customer Relationship Management (CRM)	Multi-Family Housing	Multi-Family Housing and Healthcare Facilities	\$1,500
Financial Mgt. Modernization- Line of Credit Control System (LOCCS)	Office of the Chief Financial Officer	Financial Mgmt. Technology Support	\$5,000
enterprise Geographic Information System (eGIS)	Office of Policy Development and Research	Geospatial Services	\$2,000
Acquisition Tool	Office of the Chief Procurement Officer	Facilities & Workplace Services	\$1,750
NextGen Labor Standards (NGLS)	Office of Field Policy and Management	Regulatory Enforcement	\$1,000
Section 3 Reporting (S3R)	Office of Field Policy and Management	Regulatory Enforcement	\$600
Robotics Automation (RPA)	Enterprise	Digital Services	\$1,500
Enterprise Case Management and Workflow Platform (includes HireNOW initiative)	Enterprise	End User	\$1,000
Microsoft Cloud Services End User Productivity and Security Upgrades	Enterprise	End User	\$3,546
Affirmatively Furthering Fair Housing (AFFH) Compliance Improvements	Office of Fair Housing and Equal Opportunity	Regulatory Enforcement	\$1,000
Computer Aided Facilities Design	Administration	Facilities & Workplace Services	\$800
Disaster Recovery Portal	Office of Policy Development and Research	Geospatial Services	\$500
Grants Management System	Office of Lead Hazard Control and Healthy Homes	Regulatory Enforcement	\$300
www.HUD.gov	Office of Public Affairs	Communications Support	\$200
SharePoint Support	Office of General Counsel	Legal Oversight	\$150
ZeroTrust & Trusted Internet Connection (TIC) 3.0	Enterprise	Network	\$13,854
Security Operations Center (SOC) Apps, Tools, Services	Enterprise	IT Security Services	\$300
<b>Total Portfolio</b>			<b>\$43,000</b>

The Budget includes \$43 million for critical new capabilities that support a broad variety of business priorities and enterprise needs throughout the information technology portfolio. These new capabilities were identified through surveying each office within the Department to identify the most critical operational and programmatic needs. These projects directly support HUD's strategic goals, objectives, and IT priorities and are designed to deliver cost effective services to citizens, improve business operations, address emerging legal requirements, and achieve mission objectives at lower cost and with enhanced cybersecurity. Without funding for new capabilities, HUD will continue to rely on outdated, duplicative, less secure, and expensive-to-maintain systems and manual processes.

Please see **Appendix B** for descriptions of each of the proposed new capabilities. The summaries include mission benefits, target functionality, total costs, and savings potential.

The new capabilities described above range widely in cost and technical complexity. Therefore, HUD will explore how to best streamline the congressional reporting requirement for DME performance plans. Changes to this process would enable the Department to more quickly pursue minor DME enhancements that are much lower in cost and risk compared to larger DME projects.

Examples of minor DME system enhancements that are potential candidates for exemption from the currently required DME performance plan include updating system fields to align with legislative, regulatory, or HUD policy changes, making small changes to the Customer Interface to make it easier to use, minor configuration of Commercial Off the Shelf products, and automating import of data into a system currently manually keyed in by field office staff.

The following table summarizes the 2023 President’s Budget IT Fund Request by type of investment, as classified on the Federal IT dashboard:

(Dollars in Thousands)

Type of Investment	DME	O&M	Total
Major	\$9,800	44,461	54,261
Non-Major	\$13,900	\$40,240	\$54,140
Standard	\$4,846	\$267,823	\$272,669
eGovernment	-	\$930	\$930
<b>Total IT Fund</b>	<b>\$28,546</b>	<b>\$353,454</b>	<b>\$382,000</b>

**Investment Type Definition**

- Major IT investments are those that are critical to the missions of the agency, requiring special management attention and with executive visibility, or that meet certain dollar thresholds.
- Non- major investments do not meet the criteria of a Major or Standard investment and typically provide support to the offices that in turn provide program or administrative support to the mission of the agency.
- Standard IT investment classifications are used by all Federal agencies to account for their IT infrastructure costs, cybersecurity, and management costs. They are OCIO managed enterprise-wide investments that provide IT services to the agency’s mission delivery applications.
- eGovernment is a group of OMB-led initiatives to help transform Federal agencies through eCommerce.

**SUMMARY OF RESOURCES BY PROGRAM**

(Dollars in Thousands)

Budget Activity	2021 Budget Authority	2020 Carryover Into 2021	2021 Total Resources	2021 Obligations	2022 Annualized CR	2021 Carryover Into 2022	2022 Total Resources	2023 President's Budget
Operations and Maintenance	260,000	51,491	311,491	287,645	260,000	26,743	286,743	353,454
Development, Modernization and Enhancements	40,000	20,000	60,000	31,405	40,000	35,870	75,870	28,546
<b>Total</b>	<b>300,000</b>	<b>71,491</b>	<b>371,491</b>	<b>319,050</b>	<b>300,000</b>	<b>62,613</b>	<b>362,613</b>	<b>382,000</b>

**LEGISLATIVE PROPOSALS AND GENERAL PROVISIONS**

The 2023 Budget proposes a General Provision, Section 231, which requests the authority to transfer up to \$10 million from HUD Salaries and Expenses accounts to amounts made available in the Information Technology Fund account.

- The transfer authority would provide flexibility for offices to fund emerging and/or unforeseen IT needs by prioritizing available funds within their S&E allocations. OCIO works closely with HUD offices to identify new requirements and performance issues and OCIO assesses them for possible IT solutions. This transfer authority would provide a direct source of funding for OCIO to move quickly to address a program's immediate needs that were not contemplated during budget formulation.
- This transfer authority is necessary to ensure that IT investments are managed by the CIO within the IT Fund, which was established to pay for IT projects, operations, and services at HUD. The OCIO will ensure the appropriate security, technology, and value of any agency funds used for IT purposes. Implementing proper cybersecurity control outside of CIO control is a significant risk within HUD.

The 2023 Budget also includes transfer authority from the Public Housing Fund and the Green Resilient Retrofit Program accounts to support utility benchmarking IT solutions. The Budget provides a total “up to” transfer amount of \$14 million from these two program accounts.

- For the Public Housing Fund, \$9 million in funding may be used for IT systems upgrades to support longer-term changes to HUD systems to implement benchmarking across the public housing portfolio, to support integration with the Operating Fund process, and to make other systems upgrades to support integration between HUD and EPA systems.
- For the Green Resilient Retrofit Program, \$5 million in funding may be used for upgrades and development of the Office of Housing and HUD-wide systems to collect and analyze data coming from EPA’s Portfolio Manager. Housing proposes to incorporate this data into their existing property tracking database to effectively analyze, compare, and track energy performance and costs across the Multifamily assisted portfolio.

**APPROPRIATIONS LANGUAGE**

The 2023 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, \$382,000,000, of which \$339,000,000 shall remain available until September 30, 2024, and of which \$43,000,000 shall remain available until September 30, 2026: 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 any other information technology purposes for which such amounts were appropriated.*

*Note.—A full-year 2022 appropriation 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, 2022 (Division A of P.L. 117-43, as amended). The amounts included for 2022 reflect the annualized level provided by the continuing resolution.*

**Appendix A**

Enterprise Grants Management	Major	This investment provides Shared Services and information systems to automate the grants management lifecycle (pre-award, award, post-award stages) for formula and competitive programs across HUD.
Multifamily Housing and Healthcare Facilities	Major	HUD's Multifamily and Health Care programs provide mortgage insurance to HUD-approved lenders to facilitate the construction, substantial rehabilitation, purchase and refinancing of multifamily housing and health care facility projects.
Public and Assisted Housing Oversight	Major	This investment provides systems that ensure public, and HUD assisted housing comply with applicable laws and regulations. It provides accurate, credible, and reliable information to assess the condition and financial management of HUD supported properties and ultimately improve the nation's stock of affordable housing. HUD is modernizing outdated systems and automating manual processes used in providing this essential mission function.
Single Family Housing	Major	This investment captures all the systems that support HUD's Single Family programs including mortgage insurance on loans to purchase new or existing homes, condominiums, manufactured housing, houses needing rehabilitation, and for reverse equity mortgages to elderly homeowners. HUD is carrying out a multi-year investment called FHA Catalyst that began in 2019 to modernize FHA's infrastructure and to provide cloud-based platforms to reduce costs, risks and fraud, and bring FHA in line with current industry practices. The modernization approach is flexible with an agile

		approach and includes a single portal for lenders to interact with FHA for the full loan life cycle. Loan components are already in production, providing rapid turnaround and efficiencies to the agency and to the lender community.
UNISYS Migration Program	Major	Unisys Migration will modernize the code base and accelerate the migration of five of HUD's most critical business systems from an on-premises mainframe database to the cloud. Both the existing mainframe and the five COBOL-based applications are expensive to maintain and currently require functional system enhancements to be built in the antiquated mainframe environment, deepening the technical debt associated with the eventual decommissioning of the platform. This investment was partially funded by the government wide Technology Management Fund.
Analytical Services	Non-Major	This investment provides research, evaluation, and reporting to all HUD program offices by providing reliable data and analysis.
Contact Center	Non-Major	This investment is improving interactions between HUD and its customers, starting with FHA activities. It results from a partnership with GSA Centers of Excellence to accelerate HUD's IT modernization initiatives.
Communications Support	Non-Major	This primarily comprises HUD websites as well as customer management tools. It enables HUD to exchange information with other government entities, citizens, stakeholders, and customers to deliver citizen services, implement public policy and serve customers more effectively.
Data Management Services	Non-Major	This includes data exchange, storage, extraction and transformation, recovery, and classification of data. HUD is developing an Enterprise Analytics Platform to integrate sources of data to support business decisions, reporting, data analytics and risk mitigation.
Digital Services	Non-Major	Provides end-to-end digital services to allow more efficient conduct of day-to-day activities, improved reporting, and dashboards for greater risk management, modernized technology to align to standards and improved customer experience.
Document Management	Non-Major	Enables HUD to support the generation, mgmt., and distribution of intellectual capital and electronic media across the business and extended enterprise. This includes content, document, and records management.
Facilities and Workplace Services	Non-Major	Enables HUD to control and report on its facilities, property, and assets. Enables HUD to perform the back-office activities that support the execution of its mission-critical business operations.
Financial Management Technology Support	Non-Major	Provides support for HUD enterprise financial management systems, including interface with shared service core financial system.



Geospatial Services	Non-Major	The investment will allow HUD to enhance existing enterprise geospatial business solutions while leveraging expanded capabilities for data visualization, information management, spatial analysis, and business intelligence for analysts, program staff, and decision makers at all levels of the organization thereby satisfying the common requirement for geospatial data and analytical capabilities in support of the Department’s mission and strategic objective.
Human Resources Automated Services	Non-Major	Includes information systems that perform a variety of HR business functions. The vision is to automate, integrate or replace legacy systems to move towards solutions of a one-stop shop for all HR Services.
Legal Oversight	Non-Major	Enables HUD to maintain guidance to implement laws, developing and tracking, and amendments to public laws.
OIG Information Technology Support	Non-Major	The project is designed to support the operations, management, and decision functions of the OIG.
Regulatory Enforcement	Non-Major	Enables HUD to track, monitor, and report on enforcement activities which Involves activities aimed at direct monitoring and oversight of HUD sponsored programs.
Application	Standard	IT investment for the provisioning of an enterprise-wide shared application capability.
Data Center and Cloud	Standard	An IT investment for the provisioning of an enterprise-wide data center and/or cloud capability.
Delivery	Standard	IT investment for the provisioning of an enterprise-wide shared delivery capability of strategy, planning, development services, operations security, and operations.
End User	Standard	An IT investment for the provisioning of an enterprise-wide end user capability.
IT Management	Standard	This investment covers the costs of HUD Office of Chief Information Officer employees and supporting contractors to ensure that all technology resources are utilized properly and in a manner that provides value for the Department and are managed according to Departmental priorities and needs.
IT Security Services	Standard	Enables HUD to properly orchestrate the IT resources and systems it requires to effectively provide its services and execute its mission. This includes projects such as IT Security Policy Compliance and Ops and ADP Security Staff.
Network	Standard	An IT investment for the provisioning of an enterprise-wide-area network (WAN), local-area network (LAN), and metropolitan-area network (MAN) capabilities.
Disaster Assistance Improvement Plan	eGov	This is a government wide eGov initiative. The managing partner is FEMA.
eRulemaking Docket	eGov	This is a government wide e-Gov initiative. The managing partner for this initiative is the Environmental Protection Agency.

GovBenefits.gov	eGov	This is a government wide e-Gov initiative. The managing partner for this initiative is the Department of Labor.
Grants.Gov	eGov	This is a government-wide eGov initiative. The managing partners for this initiative are the Department of Health and Human Services.
Integrated Acquisition Environment	eGov	This is a government wide-eGov initiative. The managing partner for this initiative is GSA.

## APPENDIX B

### Detailed Summary of New Capabilities

New Capability	Office	FY 2023 Request	Outyear Cost to Implement
integrated Real Estate Management System	Multifamily Housing (MFH)	\$5 million	\$1 million

#### Program Pain Point

The integrated Real Estate Management System (iREMS) is the primary system for the oversight and asset management of insured and assisted properties in the portfolio of HUD’s Office of Multifamily Housing Programs. GSA, GAO, and Multifamily leadership have found that iREMS is vulnerable to unacceptably high risk of data errors from manual input processes, having to use ad hoc tools such as MS Access for reporting, and not interfacing with other systems in real time.

Congressional mandates and Executive Orders that require Multifamily Housing action, such as security, privacy, and records management regulation, energy efficiency programs, FHA pilot programs, and the Rental Assistance Demonstration, are all hampered by an inability to integrate them fully into the Multifamily Housing asset management process in iREMS. Reporting from Asset Management field staff is often inaccurate because of inconsistencies between HEREMS, the underlying source database, and iREMS. Poor quality Housing data continues to increase the risk of HUD failing to meet its monitoring requirements of troubled properties within its portfolio.

#### Mission Benefits

The success of MFH and HUD's mission is deeply tied to the decision-making done from HEREMS to iREMS data processing. Therefore, ensuring the accuracy, completeness, reliability, and timeliness of this data has broad cross-program implications. An improved HEREMS to iREMS database model will serve as the central data repository for all Multifamily Housing, collecting data from more than 20 systems and integrating data across systems. Improved data and reporting in iREMS will provide essential support to HUD’s efforts to provide decent, safe, and sanitary housing for tenants and to ensure program compliance.

#### Target Functionality

- Increase regulatory compliance on currently non-compliant mandates from privacy, cybersecurity, and records management.
- Increase flexibility in responding to the fast-evolving business requirements of MFH by providing more tools to adapt to the forecasted increase in MFH loan applications.
- Enhance decision-making, ensuring the accuracy, completeness, reliability, and timeliness of iREMS/HEREMS data has broad cross-program benefits.

#### Projected Cost Savings

The existing HEREMS/iREMS data model is outdated, expensive, difficult to maintain, and it is currently failing to meet system requirements. IREMS has an estimated \$2 million backlog in

development priorities that continues to grow. Improvements in the system would result in a cost benefit as it would support efficiencies in HUD’s asset management and oversight functions.

New Capability	Office	FY 2023 Request	Outyear Cost to Implement
electronic Special Needs Assistance Programs	Office of Community Planning and Development	\$3 million	\$7-10 million

Program Pain Point

HUD continues to use the e-snaps data system to automate the \$2.5 billion Continuum of Care (CoC) Program Competition. The e-snaps system provides an online data portal for all CoC applicants to prepare and submit to HUD a detailed project application for funding. However, the system is brittle and unstable, approaching 14 years old, which is far beyond the original technical limits of the platform. Basic system changes and updates are costly, and each change risks the stability of the system. HUD staff constantly employ manual interventions to overcome functional gaps in the system. The CoC Program depends completely on e-snaps performance. System failure, or a significant drop in performance, will be catastrophic, public-facing, and detrimental to local communities and homeless assistance providers.

Mission Benefits

A more modern and stable platform would speed up and streamline the CoC application and grant processes for grantees and HUD staff. This reduces risk and uncertainty to grantees who provide direct homeless assistance, which should improve staffing consistency and improve outcomes. Replacing e-snaps would also make it easier for HUD to quickly implement special initiatives like the Youth Homelessness Demonstration Program. A new solution may also provide better integration with HUD financial systems, improved credentialing and authentication of users, and better data integration and standardization with other HUD grant systems.

Target Functionality

- Improved system performance and stability; reduction in current risks related to long term availability and support for acute technical problems.
- Improved efficiency for grants management activities, including reduced administrative burden for HUD staff and grantees, reduced time to award, and improved business automation such as data analytics and financial system interface.

Projected Cost Savings

A modernized e-snaps should reduce costs of:

- Annual Operations and Maintenance of the system by streamlining the annual configurations required to meet the NOFO and other programmatic efforts, allowing further investment into new capabilities and free staff time towards program oversight or analytics.
- Annual licensing for the CSDC/Grantium COTS platform.
- Manual interventions performed by HUD staff, Technical Assistance providers, HUD infrastructure staff, and grantees required due to functional or process gaps in the system, performance issues requiring troubleshooting, repetitive reporting in more than one system, or the manipulations performed to aggregate data originating from multiple systems (SAGE, HDX, e-snaps, LOCCS, etc.).

New Capability	Office	FY 2023 Request	Outyear Cost to Implement
Tenant Complaint Customer Relationship Management	Multifamily Housing	\$1.5 million	None

Program Pain Point

Multifamily (MFH) Asset Management staff, Performance-Based Contract Administrators (PBCAs), the Multifamily Clearinghouse call center, and Field Program Management (FPM) staff are unable to conduct unified intake, tracking and resolution of tenant feedback related to unsafe and unsanitary property conditions or concerns about exigent health and safety conditions in Multifamily-assisted properties. The various parties maintain multiple systems with disparate rudimentary and uncoordinated logging and tracking of information, which is not conducive to ensuring the issues identified by tenants are addressed swiftly and satisfactorily.

As a result, MFH is substantially limited in its ability to understand, track, and address such complaints without a centralized tracking/response system. The current practice of various entities within HUD and contractors logging and acting on feedback independently restricts HUD’s ability to manage its property portfolio in a coordinated manner.

Mission Benefits

An integrated tenant complaint logging and tracking system would allow HUD to effectively assess and act upon a wide variety of complaints regarding properties in its portfolio and take a coordinated approach regardless of the point of intake and allow all entities to track and update progress toward resolution in real time. This would allow HUD to both be more responsive to tenants by ensuring the appropriate party follows up and more efficient by avoiding duplicative work on the same issue.

This integrated tenant feedback tracking system will also enable HUD to better understand the overall volume and nature of complaints both at individual properties and across different portions of our portfolio, such as by city, program, or management agent, resulting in increased awareness of conditions and potential issues within the MFH property portfolio.

Target Functionality

- Full integration as a single system for intake and tracking of tenant complaints by (MFH) Asset Management staff, PBCAs, the Multifamily Clearinghouse call center, and FPM.
- Ability of staff to have real time feedback and reporting on status of tenant complaints and ongoing action tracking and reporting.
- Ability to aggregate instances of tenant feedback within a particular property and across portfolio on an ongoing basis.

Projected Cost Savings

PBCAs and other contractors would not need to invest in standalone system(s). An integrated platform would also reduce duplication of effort across all responsible parties.

New Capability	Office	FY 2023 Request	Outyear Cost to Implement
Financial Mgt. Modernization (LOCCS)	Chief Financial Officer	\$5 million	\$3-5 million

Program Pain Point

The Line of Credit Control System (LOCCS) is the Department’s primary disbursement and funds control system for grants and Housing subsidy programs. LOCCS is not integrated with Oracle Federal Financials, which is the Department’s core accounting system. Instead, the antiquated legacy HUD Central Accounting Program System (HUDCAPS) is used to exchange the allotment and the grants and Housing subsidies financial activity between LOCCS and the core accounting system.

The lack of integration between LOCCS and the core accounting system results in an extended timeline for processing financial transactions that delays disbursements to grantees and Housing’s subsidies tenants, and related financial reporting. The Department is unable to decommission HUDCAPS and its IBM mainframe, which are expensive to maintain and the subject of GAO and OIG audit findings. A separate project to complete the PIH Enterprise Voucher Management System (eVMS) to improve PIH and Public Housing Authority (PHA) operations must also be completed to be able to decommission HUDCAPS.

Mission Benefits

This initiative improves the reliability and quality of financial data, streamlines and strengthens financial management and allows timely grants and Housing subsidies disbursements. By enabling the use of shared services system-to-system integration, it improves productivity and security and consolidates IT infrastructure. It will reduce operations and maintenance costs while removing unsupported and antiquated technology. This project enables HUD to move closer to decommissioning both HUDCAPS and the IBM mainframe which helps to fast-track our path to complete digital transformation.

Target Functionality

The targeted functionality and changes will include:

- Enhance the existing financial interface system, New Core Interface Solution (NCIS), to exchange the allotment, grants and Housing subsidies financial activity between LOCCS and the core accounting system.
- Deactivation of HUDCAPS financial interface capabilities.

Projected Cost Savings

HUD estimates a *possible* reduction in the \$2 million per year for contractor support operations and maintenance costs for HUDCAPS due to the deactivation of the HUDCAPS financial interface capabilities. PIH will still use the remaining HUDCAPS capabilities for all subsidies financial operations and disbursements to PHAs. When the enterprise Voucher Management System (eVMS) is completed, with all HUDCAPS capabilities incorporated, HUD will propose to integrate eVMS with the core accounting system. This is the last step necessary to decommission HUDCAPS and the IBM mainframe.

New Capability	Office	FY 2023 Request	Outyear Cost to Implement
Enterprise Geographic Information System	Office of Policy Development and Research / Office of Community Planning and Development	\$2 million	None

Program Pain Point

Decision makers at all levels rely on the examination of accurate data for the effective development and implementation of data-driven housing policies. To that end, the Office of Policy Development and Research (PD&R) conducts mission-critical analyses of priority housing and community development issues while developing and maintaining the data required for that work. HUD’s Enterprise Geographic Information System (eGIS) program was established in PD&R to manage day to day operations of the Department’s shared geospatial business solution which satisfies the common requirement for geospatial data and analytical capabilities in support of the Department’s mission and strategic objectives. When brought to bear, these data and tools allow personnel to develop and apply actionable intelligence used to craft effective housing policies that are data-driven and equitable in scope. Unfortunately, HUD’s existing enterprise geospatial solution now falls short of what is required to support robust housing and community analysis moving forward, and the inability of public to interface with HUD offices and data sources.

The increasingly obsolete architecture of HUD's existing system limits the scale and scope of the work that program analysts and policy developers engage in. In its current state, analysts cannot effectively use the solution to collaborate with one another on mission-critical assignments that require the examination of sensitive geospatial housing data. This limitation impedes the progress of collaborative projects requiring robust geospatial study and remains a source of considerable frustration for analysts and leadership alike.

#### Mission Benefits

Development, modernization, and enhancement (DME) of HUD's geospatial business solution and enterprise applications will significantly improve the Department's analytical capabilities allowing for greater insights into national housing issues. Improved performance of the updated system will provide expanded access to rich datasets which remain largely unavailable to Departmental staff due to the shortcomings of the current platform. Modernization of HUD's geospatial resources will likewise improve the security posture of the system enabling HUD's program analysts and policy developers to collaborate on assignments requiring the analysis of sensitive (i.e., PII) geospatial data. The proposed upgrade will also empower HUD's program analysts to create analytical reporting tools and standalone applications required by stakeholders, but which cannot currently be developed due to existing system constraints. In addition, HUD's Community Planning and Development (CPD) will benefit from this upgrade to support its mission objectives by modernizing its customer self-service portal as well as improve its data collection and process automation capabilities. The impacted systems for CPD that require updates are: CART (Community Assessment Reporting System), HRL (Housing Resource Locator), TDAT (Tribal Directory Assessment Tool), and CPD-MAPS (Community Planning & Development Maps).

In addition, improvements of the existing system architecture will obviate the current requirement to maintain project-related geospatial data in a cloud-based software as a service (SaaS) environment thus resulting in substantial cost savings for the Department. For example, proposed improvements to HUD's existing geospatial solution include the implementation of a business facing GIS user portal deployed within HUD's network. User activity will take place within HUD's network thereby eliminating the cost required to accommodate collaborative work and data storage in a SaaS environment. Furthermore, enhanced capabilities for application development enabled by system modernization will allow for the in-house creation of new applications. This eliminates the current need to earmark funds for new application development as well as protracted contract negotiations required to secure a vendor for such work.

#### Target Functionality

Modernization of the Department's geospatial business solution and enterprise applications will result in:

- Substantial improvements to system security, performance, user access, and resource management.
- Significantly enhanced capacity for analysis, collaboration, application development, and the crafting of actionable intelligence.
- Considerable cost savings for the Department.

#### Projected Cost Savings

Improving HUD's existing geospatial business solution will allow the Department to realize significant cost savings associated with the storage and maintenance of project-related geospatial data. Moreover, improved capacity for in-house application development will eliminate the need to engage in the prolonged contract negotiations and costs required to secure commercial vendors to provide those services.

New Capability	Organization	FY 2023 Request	Outyear Cost to Implement
Acquisition Tool	Office of the Chief Procurement Officer	\$1.75 million	\$1.25 million

Program Pain Point

The HUD Acquisition Community is not often able to share and archive information, including requirements documents (e.g., Performance Work Statements, Independent Government Cost Estimates) with stakeholders in the form of a “one-stop-shop.” Instead, documents must be shared through e-mail exchanges and stored on a share drive and other repositories that contains information for upwards of one thousand contracts. For the most part, SharePoint is currently used across the enterprise; however, it is not a viable alternative as its limitations do not provide the in-depth requirements for a fully functional acquisition management system.

In addition, the community lacks a secure electronic solution to conduct source selection evaluations and protect proprietary source selection sensitive information. Furthermore, an overarching dashboard is required to track key performance indicators to determine the effectiveness/efficiency of acquisition operations across the enterprise. Microsoft Excel is currently used for this function; however, it is not a viable alternative as it is static and neither efficient nor effective.

Mission Benefits

The HUD Office of the Chief Procurement Officer (OCPO) anticipates that value to the HUD Acquisition Community will be substantial and significant as it will include the relative ease provided to the team of CORs performing contract oversight functions as well as the provision of a central location for developing and maintaining a COR file for each contract managed by the acquisition team. This ensures near full proof audit compliance with an accurate account of data provided for each contract; effective and efficient management of the source selection evaluation process; and an overarching dashboard that provides an accurate assessment of the health of the acquisition system.

A fully operational Acquisition Management Support System (AMSS), Source Selection Evaluation Management System, and Acquisition Dashboard will provide approximately 500 licenses. Therefore, key members of the Integrated Project Team, Integrated Acquisition Team, including the team of CORs, OCPO (Contracting Officer and Contract Specialist), Program Officials (FAC-P/PMs), Budget Officials, and senior management within the organization will have access allowing for ease of sharing information across different job functions in addition to the benefits previously discussed. Finally, a successful rollout will bring agencywide advantages that will enable users to have real time insights into how their program is performing across the enterprise and make course corrections as necessary. This would significantly increase transparency of efforts and collaboration across the enterprise while significantly reducing poor acquisition planning. One of the greatest benefits will be the direct addressing of acquisition pain points thus resulting in the streamlining of acquisitions across the enterprise.

Target Functionality

An Acquisition Management Support System for HUD will result in:

- The Acquisition Community and its team of Contracting Officer Representatives (CORs) and Program/Project Managers (P/PMs) being able to perform critical oversight function on key requirements and contracts that support HUD operations and provide proper record storage and retrieval of requirements and contract documents and deliverables.
- Effectively managing requirements planning processes, pre-award processes, source selection evaluation management suite, post award data management including period of performance (POP) and funding based on fiscal year, user management; and
- Provision of overarching dashboard to track key performance indicators determining the effectiveness/efficiency or lack thereof of acquisition operations across the enterprise.

Projected Cost Savings

Compared to current processes, implementing the AMSS will allow HUD to recapture approximately 130,000 hours of staff time each year spread out across HUD’s acquisition community. Time can be redirected to higher value acquisition related activities, such as providing efficient and effective acquisition management and improved processes ultimately reducing time to procure.

New Capability	Organization	FY 2023 Request	Outyear Cost to Implement
Section 3 Reporting/_NextGen Labor Standards	Office of Field Policy and Management	\$1.6 million	

Program Pain Point

HUD is a major driver of infrastructure and job creation and contributes to worker empowerment and economic opportunities throughout the nation. The Department ensures that construction workers are paid prevailing wages on HUD-funded development and administers programs that seek to increase employment of low and very low-income community residents. The Department uses two systems for Section 3 and enforcement of the Davis-Bacon Related Acts: Section 3 Performance Evaluation and Reporting System (SPEARS), and Labor Relations 2000 (LR2000).

Section 3 Reporting \$600,000

The Section 3 program requires that recipients of certain HUD financial assistance, to the greatest extent possible, provide training, employment, contracting and other economic opportunities to low- and very low-income persons, especially recipients of government assistance for housing, and to businesses that provide economic opportunities to low- and very low-income persons. The Department recently finalized a new regulation for the Section 3 program, which requires a new system to capture statutory requirements from grantees and contractors. Without having a working system for grantees, specifically Housing Authorities, to report on Section 3, HUD cannot perform its statutory and regulatory responsibilities to ensure compliance with the new rule.

NextGen Labor Standards (NGLS) \$1.0 Million

The Office of Labor Standards Enforcement and Training (LSET) is responsible for HUD's overall compliance with the Federal prevailing wage requirements applicable to HUD-assisted and insured housing and community development programs covered under the Davis-Bacon and Related Acts (DBRA). The current system, LR2000, is antiquated, non-compliant, and must be replaced to close-out a longstanding audit finding by the Office of Inspector General. LR2000 is non-compliant with cybersecurity standards because it is on an outdated server and Operating System and is allowed to operate under a Risk-Based Decision (RBD) Memorandum from the HUD’s OCIO. The system will be replaced by the Next Generation Labor Standards (NGLS) application. HUD is also unable to adequately monitor grantees to ensure compliance with prevailing wage requirements. The current statutory requirements ensure skilled workers are paid a fair wage to build the critical infrastructure communities desperately need.

Mission Benefits

This funding will enable the Department to provide a reporting platform for approximately 5,000 grantees to report on Section 3 compliance, as well as for 7,000 contractors to report on DBRA requirements. Both systems would enable the Department to meet statutory requirements and assist grantees to empower low and very low-income workers, in addition to ensuring workers are paid prevailing wages.

Target Functionality

- Reporting platform for approximately 5,000 grantees and 7,000 contracts to meet Section 3 Rule and DBRA reporting requirements.



- Integration with other HUD programs for Department-wide Section 3 and DBRA data collection and analysis.
- Ability to generate and review reports for quality and accuracy, as well as enhanced assessment of program effectiveness.

Projected Cost Savings

S3R and NGLS will significantly reduce staff hours required to complete manual processes and allow for automated collection, analysis, reporting and enhanced assessments of program effectiveness.

New Capability	Office	FY 2023 Request	Outyear Cost to Implement
Robotic Process Automation (RPA)	Enterprise	\$1.5 million	Additional amounts subject to Cost-Benefit

Program Pain Points

Robotic Process Automation (RPA) has supported HUD offices to automate manual and repetitive tasks. This investment builds on recent test cases in which 12 HUD bots have begun to support various functions such as tracking de-obligations, mass emailing, consolidating data from multiple sources, account management, approval workflows, and mathematic calculations.

Mission Benefits

Robotic applications save significant amounts of staff hours needed to perform routine functions. RPA will reduce human error in executing these functions and enable offices to shift scarce staff hours to high-valued work such as planning, analysis, coordination, and/or training.

Target Functionality

The RPA program has amassed a pipeline of 40 potential automations. This funding will be used to continue improving HUD's operational efficiencies. Demand from program offices is expected to grow in 2023 and beyond.

- There are 12 bots that are in various stages of the system development lifecycle, including five bots to automate two critical financial statement processes. However, the work has paused pending additional resources for this effort.
- With the requested funding, development will ramp up in 2023 to continue converting manual and repetitive business processes such as data downloads, reporting, and tracking/monitoring processes.

Projected Cost Savings

To date, the 12 automations have saved approximately 5,000 staff labor hours annually. Automations are used as a low cost, high impact solution to fill business process gaps, standardizing procedures, and eliminate human error. Substantial additional savings will be realized with additional investments to support future enhancement requests.

New Capability	Office	FY 2023 Request	Outyear Cost to Implement
Enterprise Case Management and Workflow Platform	Enterprise	\$1 million	Up to \$7 million depending on cost benefit

Program Pain Point

HUD defines Case Management as a broad set of use cases that involve the intake of requests from users and the fulfillment of those requests through a digital workflow process. An enterprise case management platform will enable HUD to solve a variety of pain points that cut across different program areas. Across HUD, there is limited ability to quickly stand-up workflow and case

management-based applications while simultaneously adhering to IT policies. This leads to: “shadow IT” solutions that are unsupported by OCIO or continued reliance on inadequate or non-existent technology solutions. HUD plans to leverage the ServiceNow platform which will provide HUD a common platform on which to create applications with robust security, privacy and policy controls implemented centrally by OCIO. ServiceNow is a commercial cloud-based, low-code digital workflow platform that provides the foundation on which to configure tailored applications to meet specific business requirements, while other low-code technologies exist within HUD, ServiceNow is best-suited to handle enterprise-wide internal case management and workflow applications such as HR functions, IT Help Desk, and Facilities Management.

The initial use case for case management and workflow platform will be address the lack of automation and centralization of data for OCHCO for resolving HR related cases including employee and contractor onboarding. The currently lack of a holistic IT solution for HR related cases leads to data integrity issues, lack of an authoritative centralized source of HR data, limited reporting capabilities, delayed time to hiring and onboarding employees and contractors, and inability for analytics based continuous improvement. The pain points related to HR cases affects all HUD employees and contractors and depresses the velocity at which HUD can operate across the board.

#### Mission Benefits

This 2023 funding request will be a continuation of 2022 request (\$2M) and will be used to deploy and mature a ServiceNow-based enterprise case management platform. By adopting an enabling enterprise platform, HUD OCIO anticipates that it will be able to more quickly design, build, and deploy a wide variety of applications to meet their customers tailored business needs. A common platform that can be securely controlled and governed at the enterprise-level, while giving program offices more direct control of business functionality of their applications will drastically improve the speed and consistency of software delivery. Currently, case management functionality is housed in disparate systems which drive numerous inefficiencies; an enterprise case management platform will broadly consolidate licenses, infrastructure, development, and O&M costs and allow HUD to build momentum in a focused and unified enterprise direction.

Each use case that will leverage the enterprise case management platform has its own mission benefits that it will produce. In the HR Transformation use case described previously, it is expected that HUD will be able to hire and onboard employees more effectively and efficiently helping HUD deliver on its overall mission. Secretary Fudge has committed to rebuilding HUD’s depleted workforce which has lost 20 percent of its staff since 2012 and ServiceNow will help achieve this human capital goal.

#### Target Functionality

- HUD envisions ServiceNow will become the standard platform to use for critical internal-facing applications such as HR Case Management, IT Help Desk ticketing, Facilities Management (Workspace Hoteling), and more.
- The HR Transformation use case will provide an end-to-end holistic electronic onboarding experience for new employees and contractors which will lead to dramatically shorter onboarding times.

#### Projected Cost Savings

The case management and workflow platform based on ServiceNow will be used for multiple new business requirements needs as well as modernization of legacy systems. A single use case of modernizing and retiring the Adaptive Case Management Suite (ACMS/eCase) is projected eliminate \$2.8M of O&M and license expense annually. This would not be considered a net reduction of costs as the ServiceNow solution will incur similar (if not higher) annual O&M and licensing costs. HUD will ultimately realize greater value through economies of scale – increased adoption of the platform and more applications built upon it will consolidate HUD-wide licensing and O&M costs that are currently distributed across several solutions.

New Capability	Office	FY 2023 Request	Outyear Cost to Implement
Microsoft Cloud Services End User Productivity and Security Upgrades (G3 EMS E3 to G5 EMS E5 License Upgrade)	Enterprise	\$3.5 million	None

Program Pain Points

OCIO must modernize HUD’s communication technology to meet today’s challenges. The current hardwired desk phones are outdated, limited by physical location, and are therefore ineffective. Updating the agency’s calling capability by integrating existing technologies will modernize the telecommunication infrastructure; bridge the gap between the need of a static physical location and an agile, flexible, remote user; and maximize dollars spent on annual O&M cost.

The coupling of technologies will create a hinge point that will allow the agency to maximize the unique capabilities of each component, while maintaining and managing it as a single system. The telephony capability(ies) will derive from two existing technologies, softphone and handphone. A softphone is a software program for making telephone calls over the internet using a computer rather than dedicated hardware. This solution can be installed on a desktop, mobile device, or other solution that make/accept calls. The hard phone solution is the traditional phone; however, it too communicates over the internet.

The Telephone integrated solution will use a Voice over Internet Protocol (VOIP) and TEAMS calling features. Although these technologies can complete a calling session as a standalone technology; they lack the capability to bridge all the gaps that exists for the forming environment of the HUD employee (office, mobile, telework). The hinge point between the two is the appropriate license upgrade for each user of TEAMS and VOIP. In addition to merging these technologies to get the desire telephonic solution, the licenses will allow HUD to take full advantage of the enhancements in Microsoft Office 365, which provides each user additional capabilities, such as: (1) audio conferencing and calling capabilities in the cloud, (2) enhances PowerBI to PowerBI Pro, and (3) enhanced identity and threat protection with integrated and automated security.

Mission Benefits

The greatest benefit to this integrated solution is it seamlessly follows the employee when working in the office, on the move(mobile) or in telework status. To obtain an integrated telephonic solution with use of TEAMS, an upgrade from G3 to G5+EMSE5 series license is required. By upgrading to the G5 licenses, employees will experience a more collaborative environment with an auto-generated conference dial-in number in Microsoft TEAMS meetings with external participants.

In addition to enhancing the employees’ work experience when in the office, mobile or teleworking; the solution maximizes the use of Microsoft Suite licenses subscriptions. The upgraded license will allow every employee to have access to the entire Office 365 suite, such as Microsoft Word, Excel, PowerPoint, Outlook, PowerBI and other Office 365 products.

Target Functionality

- Extend identity and threat protection with integrated and automated security to help stop damaging attacks. Bring together information protection and advanced capabilities
- Get audio conferencing and calling capabilities to allow external participants via generated dial-in numbers
- Benefit from Power BI capabilities that help realize significant business value from data

Projected Cost Savings

SharePoint has historically relied on Microsoft INFOPATH to display, collect, and store data forms; INFOPATH is now being phased out and replaced with PowerBI. Data that is displayed, stored, and managed on SharePoint now requires license for PowerBI Pro, which is included with the G5 + EMS

E5 license upgrade. There are no direct cost savings; however, program offices and the agency will experience cost savings through the application, sharing of dashboards, reports, and security.

There is a perpetual increase of \$20 per user in upgrading from G3 EMS E3 to G5 EMS E5. There is no increase in cost beyond standard margins for inflation except when the organization increases number of contractor and Federal FTEs.

New Capability	Office	FY 2023 Request	Outyear Cost to Implement
Affirmatively Furthering Fair Housing (AFFH) Compliance Improvements	Office of Fair Housing and Equal Opportunity	\$1 million	\$1.5 million

Program Pain Point

The Fair Housing Act, requires HUD and recipients of Federal funds from HUD to affirmatively further the policies and purposes of the Fair Housing Act, also known as “affirmatively further fair housing” or “AFFH.” The obligation to affirmatively further fair housing requires recipients of HUD funds to take meaningful actions, in addition to combating discrimination, that overcome patterns of segregation and foster inclusive communities free from barriers that restrict access to opportunity based on protected characteristics. To facilitate the review of data from funding recipients, two legacy systems were created for the implementation of the 2015 Affirmatively Furthering Fair Housing Rule: the Data and Mapping Tool (AFFH-T) and the AFFH User Interface (AFFH- UI). The AFFH-T is online and has been maintained but was never fully actualized. It provides information at the local government level but does not have information at the PHA or State level. However, to provide more updated maps, better useability, and more information FHEO is requesting additional funding to make improvements to the tool.

The AFFH UI was taken offline January 2018 and a new system will be needed to comply with any future Notice of Proposed Rulemaking on AFFH. The current AFFH Interim Final Rule (IFR) does not require use of an UI, as it only requires voluntary submission, which can take any format. The IFR also eliminates certain requirements involved in the 2015 rule. A Notice of Proposed Rulemaking (NPRM) will likely contemplate a completely different process and structure from the 2015 rule and assessment tool. As such, only a new system will work.

Mission Benefits

The AFFH-T will provide grantees an opportunity to see maps and demographical information from vetted and reliable sources that will assist in their understanding of the unique factors of their jurisdiction. The tool already includes information on poverty rates, environmental factors, access to food, availability of healthcare, access to schools etc. However, we would like to use the funding to add additional data points and enhance customer useability. The changes to the tool will aid funding recipients in the process of creating goals that target their unique challenges. Additionally, by expanding the types of grantees and recipients (PHAs and State grantees) that can utilize the information provided in the data and mapping tool we will increase the successful implementation and execution of AFFH.

The AFFH-UI will provide grantees with a portal for digital filings of AFFH reports that will replace a cumbersome paper-based process. Electronic filing of reports will make it easier to submit and review the files required by the AFFH rule. Other benefits include:

- Integration with other business systems will reduce redundancy of data across multiple systems.
- Automated FHEO Reviewer Instructions will enable completion of assessment reviews within the required timeline.
- Increased system interoperability and information sharing within the Department and among other Federal agencies and external organizations.

Target Functionality

- An updated AFFH-T will provide funding recipients with updated demographic information to better aid in goal setting to adhere with the mandate of AFFH.
- The AFFH-UI solution shall provide a basic reporting module to monitor the activities associated with the submissions and review processes.
- The AFFH-UI solution will have routing, tracking, and other data functions to incorporate reporting both for end users and management.

Projected Cost Savings

This project provides electronic filing capability to grantees, which has been a cumbersome paper-based process and will generate the Notice of Receipt, rather than it having to be manually typed and issued. These will save labor costs for both HUD staff and grantees.

New Capability	Office	FY 2023 Request	Outyear Cost to Implement
Computer Aided Facility Management	Administration	\$0.8 million	None

Program Pain Point

The Space and Asset Management Division (SAMD) experiences significant difficulty managing, evaluating, and maintaining information on spatial data and space-related information on the HUD Headquarters facilities in the National Capitol Region. Critical information such as occupancy, vacancy, square footage, space-type space assignments, and utilization rates are not currently tracked or updated in an accurate, efficient, or effective manner.

In addition, the two current systems: Federal Asset Management Enterprise System (FAMES), HUD’s inventory management system of record, is limited in its operations; as well as the existing Administrative National Services Requests Supplies System (ANSRS), HUD’s workplace ticket request system of record, is antiquated.

Mission Benefits

SAMD will need to procure and implement a Computer Aided Facilities Management (CAFM) system that would address and solve several problems and needs. The CAFM system would provide a central repository for space information that can be easily accessed, queried, and analyzed with real time, up-to-date data; and allow SAMD to manage HUD’s portfolio of lease holdings and space data effectively and efficiently. SAMD could easily track and update HUD’s footprint in satellite buildings/headquarters, manage personnel move/add/change tasks by name, occupancy and vacancy data, floor plan drawing record management, project management, space reservation functionality, and personal property asset management. Through algorithms, a CAFM system would generate space utilization rates of usable square footage and identify areas that are not in compliance with GSA’s space utilization guidelines. SAMD would meet the overarching goal of space consolidation in headquarters, thus reducing lease holdings in the DC area and reallocating funds saved from leased space.

Target Functionality

- More efficient data retrieval and reporting, allowing SAMD to quickly analyze underutilized spaces and target these areas for future reduce the footprint (RTF) projects
- Track and maintain property inventory within the CAFM’s interactive and integrated floor plan drawing environment. With simple pick-drag-and-drop functionality, property assignments can easily be moved to new locations within the floor plan whenever an employee move is conducted and updated, simultaneously and seamlessly updating the inventory with new location information; and
- With the data collected and analyzed within a CAFM system, the SAMDSMB will be able to improve its efforts in restacking the building and reorganizing space by Program Office with

the goal of collocating entire program areas on the same floor (if possible) and ensuring adjacency opportunities with other Program Offices.

Projected Cost Savings

Integrating multiple modules into one CAFM system streamlines data management. The antiquated ANSRS system fails to meet current business requirements causing time management issues and decreased productivity. Retiring the FAMES application could save \$570,000. Furthermore, reducing underutilized leased spaces in HUD’s portfolio can save millions of dollars in rent annually.

New Capability	Office	FY 2023 Request	Outyear Cost to Implement
Disaster Recovery Portal	Office of Policy Development and Research	\$0.5 million	\$165,000 over 5 years

Program Pain Point

HUD has identified the need for a new process and tools for data sharing with FEMA and CDBG-DR grantees. This project will eliminate the need for Individual Assistance Information Sharing Access Agreements (ISAAs) between FEMA and HUD also with FEMA and CDBG-DR grantees as it will make that data readily available to grantees through the Disaster Recovery Data Portal (DRDP) application. It will also eliminate the need for requesting data from FEMA to perform the CDBG-DR allocations process when congressional funds are appropriated.

While data being shared is similar, or in fact the same data, it requires multiple resources from multiple program areas within HUD and FEMA to request and process data sets. If the bidirectional data exchange process was in a completed stage that data could be shared within HUD to multiple resources/programs in a fashion designed to only make available, the necessary program data to only those with a valid need to know and manage one data set for multiple users. This would also ensure that all users are accessing the same data and would eliminate a misunderstanding of the data as well and ensure all areas are utilizing the same data.

Mission Benefits

Real time data sharing enables decision making that is focused on elimination of duplication of benefits, adequate assistance value to the customer, ability for multiple programs to utilize one standard data set, correct and accurate FEMA data for HUD and HUD CDBG-DR grantee use, enhanced disaster survivor support functions and enhance data security across multiple Federal agencies.

The Disaster Recovery Portal (DRDP) is within HUD’s purview of the project and HUD will share the ‘new processes’ aspect with FEMA. FEMA will solely fund their efforts’ development needs. In addition, DRDP will provide the ability to avoid duplication of benefits between FEMA, HUD, and SBA assistance; the ability to identify geographical areas that are the most at risk due to high level of unmet needs; the ability to complete early determination of projects at the CDBG-DR grantee level that will provide/return disaster survivors to long term sustainable housing; and reduction in duplication of efforts by multiple Federal agencies in similar processes. This in turn will reduce the need for multiple touch points with applicants that are related to similar cross agency processes. Hence, this project has the capability to enhance the disaster survivor experience as mandated in the Disaster Recovery Reform Act of 2018. HUD’S cost to FEMA is approximately \$415K over the next 7 years, but will increase once any further development begins.

Target Functionality

DRDP will result in:

- Real time data sharing to enable informed and immediate decision making
- Ability for multiple programs to utilize one standard data set
- Provide correct, accurate, and the most up to data available data

Projected Cost Savings

As this is a cross agency effort between FEMA and HUD therefore the overall Federal benefit is shown below:

DRDPD and the new processes will result in significant cost savings to both agencies. We estimate that HUD grantees pay approximately \$13 million average annual housing repair or rehabilitation assistance payments to homeowners who are also reimbursed for these costs by FEMA. By providing timely and automated matching and delivery of data, we estimate that at least one half of these duplicate payments will be avoided and reduces the need for labor intensive and time-consuming efforts to recover the excess payments. We also estimate that FEMA will save approximately \$900,000 annually.

New Capability	Organization	FY 2023 Request	Outyear Cost to Implement
Healthy Homes Grant Management System	Office of Lead Hazard Control and Healthy Homes	\$0.3 million	None

Program Pain Point

HHGMS requires perfective and adaptive maintenance to continue to conform to evolving congressional and program office business requirements.

Mission Benefits

Healthy Homes Grant Management System (HHGMS) is a grants management system using the Salesforce platform that provides application processing, document management, grant tracking, and quarterly progress reporting for the Office of Lead Hazard Control and Healthy Homes (OLHCHH) and grantee users. The OLHCHH will need support to continue using this system but will require enhancements and expanded functionality.

Target Functionality

- Upgrade and maintain an existing Web-based system.
- Perform system maintenance and operational support to enhance OLHCHH grant application (pre-award cycles), and grants management and reporting systems (post-award cycles).

Projected Cost Savings

- Implementation of required enhancements and expanded functionality will yield savings of grantee labor time of 10 percent, and OLHCHH government technical representatives and managers labor time, 15 percent.
- This translates into reducing fully loaded labor costs annually by \$202 thousand for grantees and \$112 thousand for HUD staff, totaling \$314 thousand annually.
- For grantees, this operationalizes as increased number of homes made lead safe and healthy (vs. administrative costs); for OLHCHH, as capacity to monitor increased number of grants within and outside of HHGMS usage.

New Capability	Organization	FY 2023 Request	Outyear Cost to Implement
www.HUD.gov API & App Development	Office of Public Affairs	\$0.2 million	None

Program Pain Point

Currently the Department has a significant amount of information, data, and resources that are beneficial to the public but has no expedient way in which to consolidate and present the information in a user-friendly way on its website. Development dollars are limited and trying to excavate the

information in its various current iterations is costly and time consuming. It also is not conducive to transparency.

Mission Benefits

The development of APIs will ensure the Department’s content is ready for easy sharing and redistribution to deliver our mission directly to more citizens, not only via HUD channels but potentially expanding our Departmental information and services exponentially by allowing the content to be more easily embedded or interwoven throughout external sites or other applications. APIs can be used to distribute services and information to new audiences and in specific contexts that can be customized to provide tailored user experiences. Making data available via API will also improve data quality review and cleanup.

Target Functionality

API creation for integration into websites such as:

- Affordable Apartments
- Housing Counselors
- Public Housing Authorities

Projected Cost Savings

Adoption of APIs versus individual legacy access of data by various systems could provide substantial savings in both development and maintenance for the Department. Once built for one application that same API can be used for others.

New Capability	Organization	FY 2023 Request	Outyear Cost to Implement
SharePoint Support	Office of General Counsel	\$0.2 million	None

Program Pain Point

OGC uses SharePoint for many purposes such as consolidating program performance information that is used in Congressional and OMB communications, the eDiscovery Program, and to manage and track enforcement referral investigations and other compliance monitoring activities. OGC SharePoint development projects require greater technical knowledge and a deeper understanding of software design and development techniques.

Limited support services are currently provided under the legacy eDiscovery Program support contract. The current limited SharePoint support is not sufficient to meet OGC’s ever-growing development requirements and increased project complexity. In addition, utilizing the new HUD O365 development tools to improve project efficiencies, requires greater technical knowledge and a deeper understanding of software design.

Mission Benefits

DOJ, litigation opposing counsel, Congress, OIG, and FOIA requesters all rely on the Department’s eDiscovery program to work smoothly and timely. The improvements to SharePoint applications will ensure HUD’s ability to manage all aspects of the program, including managing the queue of requests. HUD relies on OGC’s Clearance Calendar, Reports to Congress application, compliance monitoring activities, and other products and will benefit from SharePoint improvements.

Target Functionality

Continued functionality for key Department-wide and OGC applications will provide transparency, streamlined data collection, and business process administration for HUD mission support at a low cost. This also allows OGC to maximize the benefits provided by OCIO’s enterprise investment in SharePoint and O365 software development tools.



Projected Cost Savings

OGC could potentially save one full-time FTE Tier 3 for SharePoint troubleshooting, administration, and design advice.

New Capability	Office	FY 2023 Request	Outyear Cost to Implement
Network Enterprise Zero Trust Solution	Enterprise	\$13.9 million	\$4-5 million

Program Pain Points

Modern cyber security requirements and methodology needs are ever changing due to increasingly complex operations in today’s cyberspace. With an increased amount of HUD users working remotely, the need to implement a more secure cybersecurity strategy is required.

The HUD enterprise requires a Zero Trust solution with an over-arching function of real-time visibility and data protection when accessing cloud services, websites, and private apps. The agency’s zero trust solution must encompass a multitude of security features that dominates attack surfaces and possess artificial intelligence that provides indicators of the next attack.

Our solution must be data driven. A data centric approach will enable enterprise users and managers the ability to make security decisions based on real time activities. Moreover, the security decisions must include application rule sets, data flow indicators, meta data analysis, and cloud native security that integrates with a Secure Access Service Edge (SASE) solution.

The current inline security solution lacks the ability to scale with enterprise growth; it’s a single chokepoint and incapable of monitoring and alerting on internal security violations. The zero-trust solution for the agency will be a solution in keeping with the concepts of trust no person, no application, at no time. All activities and access will be monitored in real time, logged, and reported.

Mission Benefits

Zero-trust is quickly becoming industry standard and will improve the agency’s safety and integrity of financial data, personal identifiable information (PII) increases shared protection, end-point connections, access points, and provides greater accountability in managing the overall safety and security of sensitive data within HUD.

Target Functionality

- “Never trust, always verify” - Ensures that every device, user, and entity that accesses any HUD asset is verified and validated as an authorized user through authentication
- Perimeter-less security - Ensures that network security no longer continues accepting access by users based on properties such as physical boundaries of the network
- Mutual authentication – All IoT and WiFi will require two-way authentication

Integration efforts:

Phase I (Year 1) \$13.9M

- Conduct enterprise network and security assessment.
  - Conduct pilot testing and engineering requirements.
- Develop & integrate zero trust solutions

Phase II (Year 2-5) \$4-5M annually (\$16-20M)

- O&M
- Purchase annual license subscription

Projected Cost Savings

N/A

New Capability	Office	FY 2023 Request	Outyear Cost to Implement
Security Operations Center- Applications, Tools, Services	Enterprise	\$0.3 million	None

Program Pain Point

HUD requires a holistic enterprise view of cybersecurity to proactively detect and respond to events that disrupt or threaten normal IT operations. HUD has actively promoted its HUD’s Cyber Program to accelerate cyber threat detection, notification, and responses across HUD by maturing its newly launched Security Operations Center (SOC) and enabling capabilities to help minimize the impact of cyber-attacks. The current HUD Cybersecurity applications and tools have been used and maintained throughout the past few years to accommodate security risks and threats identified many years ago (approximately 5-7 years). With the increased threat landscape and expanded telework operations (which has extended the HUD network boundaries), additional security tools and applications are required to provide proactive threat detection, analysis, and prediction.

Mission Benefits

The plan is to provide the HUD SOC with additional security tools and applications to proactively monitor, detect, and respond to the increasing cybersecurity threats and attacks on the HUD network and its data.

- Enable ongoing awareness of information security, vulnerabilities, and threats.
- Collect and analyze cyber threat intelligence to inform cybersecurity operations.
- Centralized incident management capability to proactively track, manage and report incidents.
- Enable a recovery capability with a strategy and technology that minimizes the impact of attacks.

Target Functionality

The request is for known and proven security tools and applications to support but not limited to:

- Application security and scanning
- Port detection, review, and monitoring
- Artificial Intelligence (AI) SOC applications

Projected Cost Savings

Currently, HUD SOC/CIRT do not have OITS owned and operated SOC/CIRT applications or appliances. This will help avoid the cost associated with a security incident.