Information Resources Management

STRATEGIC PLAN

FISCAL YEARS 2024-2026

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MESSAGE FROM THE DIRECTOR

Sandra L. Thompson
Director, Federal Housing Finance Agency

The Federal Housing Finance Agency (FHFA) plays a vital role in promoting access to sustainable mortgage credit nationwide, ensuring liquidity is available for affordable rental housing, and protecting the safety and soundness of the housing finance system through our supervision of Fannie Mae, Freddie Mac, and the Federal Home Loan Bank System (together, the regulated entities).

FHFA relies heavily on information technology (IT) and data. IT enables us to process and understand the massive amounts of data and complex economic models vital to developing insights about the regulated entities' impact on the mortgage market and the effects of the mortgage market on families, communities, and the broader economy. IT also helps us create safer, faster, and more efficient Agency operations and share our data and information with other government agencies and research organizations.

Going forward, our technology must transform at the speed and scale necessary to support the work of the Agency. FHFA's Information Resources Management (IRM) Strategic Plan for Fiscal Years 2024 – 2026 provides a roadmap to ensure that we equip and empower our workforce with the platform, software, information, data, and analytic capabilities needed to fulfill the Agency's mission. We value our workforce and will continue to invest in professional development as we modernize our IRM architecture.

The IRM Strategic Plan prepares FHFA to achieve six core goals:

1. Modernize our technology infrastructure
2. Improve the customer experience
3. Safeguard our technology and data
4. Enhance data governance
5. Expand capabilities for analytics and Artificial Intelligence (AI)
6. Continue to be a preeminent source of housing data and research

Sincerely,

Sandra L. Thompson
Director, Federal Housing Finance Agency

ABOUT THE FEDERAL HOUSING FINANCE AGENCY

The Federal Housing Finance Agency (FHFA) was established by the Housing and Economic Recovery Act of 2008, amending the Federal Housing Enterprises Financial Safety and Soundness Act of 1992. The Agency is responsible for the effective supervision, regulation, and housing mission oversight of the Federal National Mortgage Association (Fannie Mae); the Federal Home Loan Mortgage Corporation (Freddie Mac); Common Securitization Solutions, LLC (CSS); and the Federal Home Loan Bank System, which includes 11 Federal Home Loan Banks (FHLBanks) and the Office of Finance (OF), a joint office of the FHLBanks. FHFA's mission is to ensure that Fannie Mae, Freddie Mac, and the FHLBanks (together, the regulated entities [1]) fulfill their mission by operating in a safe and sound manner so that they serve as a reliable source of liquidity and funding for housing finance and community investment throughout the economic cycle. Since September 6, 2008, FHFA has also served as the conservator of Fannie Mae and of Freddie Mac (together, the Enterprises).

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1   OF and CSS are not separate "regulated entities" as the term is defined by statute (see 12 U.S.C. § 4502(20)). Rather, OF is part of the FHLBank System, and CSS is an affiliate of the Enterprises. However, for convenience, references to the "regulated entities" in this report should be read to also apply to OF and CSS, unless otherwise noted.

PURPOSE OF THE IRM STRATEGIC PLAN

The purpose of FHFA's Information Resources Management (IRM) Strategic Plan for Fiscal Years 2024 – 2026 is to provide direction, organizational alignment, and prioritization for key Information Technology (IT) and data initiatives. Implementation of the IRM Strategic Plan will maximize the impact of information resources on FHFA's mission and ongoing operations.

IRM STRATEGIC PLAN OVERVIEW

The Paperwork Reduction Act of 1995[2] established IRM requirements that were most recently amended by Open, Public, Electronic, and Necessary (OPEN) Government Data Act, a part of the Foundations for Evidence-Based Policy making Act of 2018.[3] This document satisfies the federal requirement to develop and publish an IRM Strategic Plan.[4] IRM encompasses data, information, and related resources, such as IT personnel, equipment, funds, and information technology. Accordingly, FHFA's IRM Strategic Plan is composed of two complementary components – an IT Strategy and a Data and Analytics Strategy.

IT Strategy

IT is a strategic asset that serves as a backbone to support the achievement of the Agency's mission. FHFA invests in technology to support the ability of its workforce to achieve the Agency's mission-essential functions[5] and strategic goals. Both technology assets and IT governance practices require constant attention to find the greatest return on investment (ROI) and keep pace with the Agency's evolving needs. The IT Strategy describes systematic, coordinated activities and IT governance practices through which FHFA will optimize the Agency's technology investments, capabilities, and associated lifecycle performance and risks.

Data and Analytics Strategy

Data is the cornerstone of information and decision making. Leveraging data as a strategic asset requires assembling needed data and enabling Agency-wide adoption of the best practices for its use. The Data and Analytics Strategy prioritizes improving Agency data governance and management while expanding the Agency's ability to make use of advanced analytics, including evaluating emerging artificial technology (AI) technologies. The strategy also incorporates

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2   Pub. L. No. 104-13, 109 Stat. 163 (1995).

3   Pub. L. No. 115–435, Title II, Stat.5534 (2019).

4   44 U.S.C. § 3506(b)(2).

5   Mission Essential Functions are the essential functions directly related to accomplishing the agency's mission as set forth in its statutory or executive charter.

FHFA's Open Data Plan,[6] as required under the OPEN Government Data Act,[7] as well as its ongoing commitment to serve as a preeminent source of housing finance data.

ALIGNMENT WITH FHFA'S STRATEGIC PLAN FY22-FY26

The FHFA Strategic Plan: Fiscal Years 2022-2026,[8] highlights how FHFA accomplishes its mission and ensures the regulated entities operate in a safe and sound manner to serve as a reliable source of liquidity for equitable and sustainable housing finance and community investment. The IRM Strategic Plan sets out how FHFA's IT and data governance functions will work together to leverage information resources in achieving the Agency's mission. The IRM Strategic Plan also describes how certain Agency objectives are supported or implemented through information resources management. Below are some examples of how efforts highlighted in the IRM Strategic Plan support key components of the Agency's Strategic Plan.

Agency Strategic Plan – Goal 2

OBJECTIVE 2.3 SERVE AS A RELIABLE SOURCE OF INFORMATION AND ANALYSIS ON THE STATE OF HOUSING FINANCE MARKETS AND RELATED ISSUES.

The IRM Strategic Plan prioritizes continued efforts to expand FHFA's ability to provide data, analysis, and research to the public with a particular emphasis on housing affordability, sustainability, and equity. Enhancing internal data governance and management, as well as improving the public's ability to discover and use data available on FHFA's website, will help to increase FHFA's ability to provide data, analysis, and research while expanding the use and impact of what FHFA publishes.

Agency Strategic Plan – Goal 3

OBJECTIVE 3.1 CULTIVATE A HIGH-PERFORMING, DIVERSE, ACCOUNTABLE, AND ENGAGED WORKFORCE.

The IRM Strategic Plan will ensure that the Office of Human Resources Management, hiring managers, and executive leadership have access to the tools and human capital data needed to lead an engaged workforce throughout the entire human capital lifecycle. IT workforce planning and professional development will align current and future workforce requirements to the

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6   The Open Data Plan described under Strategic Goal 6, below.

7   Pub. L. No. 115-435 (2019).

8   The FHFA Strategic Plan: Fiscal Years 2022-2026 is available at: https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/FHFA_StrategicPlan_2022-2026_Final.pdf.

Agency's mission and strategy. In addition, the IRM strategy will keep FHFA positioned as an employer of choice in the federal government by ensuring employees across the Agency have the tools they need to perform their duties effectively and efficiently.

OBJECTIVE 3.2 ENSURE EFFICIENT AND EFFECTIVE STEWARDSHIP OF AGENCY RESOURCES.

Understanding how Agency resources are being invested and ascertaining the value of those investments over the long-term require the ability to collect data about resources used during operations and the capability to rapidly scale, organize, connect, secure, protect, recover, analyze, and understand the implications of various resourcing scenarios. These capabilities support governance and are underpinned by technology and processes to expedite data management activities that would otherwise be too slow for timely decision making. FHFA will continue to enhance its information security stewardship of resources under the Zero Trust program[9] to ensure confidentiality, integrity, and availability of data and systems.

OBJECTIVE 3.3 DELIVER HIGH-QUALITY SUPPORT SERVICES THAT PROMOTE THE AGENCY'S MISSION EFFECTIVENESS AND SAFEGUARD THE AGENCY'S INFRASTRUCTURE.

Organizations that succeed in creating excellent customer experiences universally leverage customer information collection. The continuous feedback required to optimize support services must be collected efficiently, avoiding survey fatigue and various feedback biases that can undermine the usefulness of feedback. Additionally, tracing a clear connection between the Agency's support services and their impact on mission achievement requires the integration of multiple datasets often only achievable with the aid of data management and analytics.

9　　Zero Trust is described under Strategic Goal 3, below.

STRATEGIC GOAL 1:
MODERNIZE TECHNOLOGY INFRASTRUCTURE TO IMPROVE MISSION ACHIEVEMENT AND EMPOWER INNOVATION

Technology infrastructure refers to the architecture, software, and services needed to support the collection, processing, storage, analysis, and communication of information. This includes physical hardware, cloud computing services, networking, databases, data integration and visualization tools, machine learning platforms, and other technologies that enable efficient and effective analysis to support data-driven decision making. A technology infrastructure includes the IT workforce, along with solution development and user support services.

A large-scale IT migration from on-site servers to cloud-based systems is imperative to allow the Agency to fully realize the value of its technology and data investment. Cloud-based technologies offer superior flexibilities to meet future demands including:

- Rapid and scalable processing capacity supporting both growth and reduction based on demand;
- A pay-as-you-go model, that reduces capital expenditures and physical space needs; and
- Financial savings through the transfer of significant aspects of operations and maintenance to cloud service providers.

In addition to the flexibility and efficiency afforded by cloud migration, FHFA requires an environment that allows rapid development of many prototypes for data analytics, application programing interfaces, and data integration. As the speed of technology advancements increases, FHFA must have technology capabilities that can evolve and scale to support the processing demands of larger and more complex data.

The Agency must reduce the time required to introduce, adopt, and operationalize new analytic initiatives and innovations. To achieve this, the Agency will migrate to an open enterprise architecture[10] and to microservice-based software applications. An open architecture will help "future proof" the Agency's technology infrastructure so that data can be permanently housed and the shared assets and applications that use this data can change over time in response to evolving mission and business needs.

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10   Enterprise architecture is the process by which organizations standardize and organize IT infrastructure to align with business goals.

OBJECTIVE 1.1: MODERNIZE AGENCY PLATFORMS AND TRANSITION TO THE CLOUD

Means & Strategies to achieve the objective include:

1. Complete Agency technology stabilization and modernization projects by remediating the remaining aging hardware located at on-premise datacenters to cloud service providers and designing solutions to ensure stability and resiliency;

2. Establish clear policies and procedures to reinforce Agency-wide integration of IT services, systems, and processes;

3. Modernize the external hosting platform to a scalable and supportable cloud computing model to meet the analytical needs of the Agency's external partners;

4. Establish a multi-year implementation plan for Data and Analytics Platform modernization that provides new capabilities such as AI, Machine Learning (ML), and Natural Language Processing.

OBJECTIVE 1.2: UNIFY THE AGENCY'S ENTERPRISE ARCHITECTURE

Means & Strategies to achieve the objective include:

1. Enhance the Agency's enterprise architecture capability by documenting existing systems and developing a plan to retire or integrate legacy systems into a unified enterprise resource architecture;

2. Establish a multi-tiered IT governance system that will be overseen by an IT Governance Board supported by topic-focused subcommittees with clear levels of authority;

3. Leverage the Agency's integrated planning process[11] to effectively align multi-year IT investment and prioritization decisions;

4. Build and deploy a virtualized test environment to allow training and testing of new technologies, security patches, and software upgrades prior to installation in a manner that does not negatively impact the integrity or timeliness of mission-related products and services; and

5. Implement data cataloging and metadata management software to make Agency data easier to use.

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11   An integrated planning process supports evidence-based decision-making by encouraging integration throughout the planning lifecycle.

OBJECTIVE 1.3: ACCELERATE ACCESS TO CUTTING-EDGE AND EMERGING TECHNOLOGIES AND ANALYTICS

Means & Strategies to achieve the objective include:

1. Develop a research and development sandbox environment[12] and expand access to Agency stakeholders to test and assess emerging AI, analytic, and data management tools for inclusion into the Data Analytics Platform;

2. Expand the risk analysis framework to support use of non-Federal Risk and Authorization Management Program (FedRAMP)[13] cloud solutions;

3. Perform an annual technology review to evaluate and update FHFA's technology roadmap to ensure the Agency remains current with technology trends; and

4. Automate data ingestion and pipelines for analytics, data visualization, and decision support.

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12 A sandbox is an isolated virtual environment, where users can safely experiment with new software, applications, and technology without negatively impacting production systems and services.

13 FedRAMP is a government-wide program that promotes the adoption of secure cloud services across the federal government by providing a standardized approach to security assessment, authorization, and continuous monitoring for cloud products and services.

STRATEGIC GOAL 2:
SHAPE TECHNOLOGY SERVICES TO IMPROVE CUSTOMER EXPERIENCE

Achieving FHFA's mission requires successful delivery of technology services. Agency investment in IT should improve the customer experience by providing consistent quality and effectiveness, leading to improved productivity.

The Office of the Chief Operating Officer (OCOO) will strengthen relationships with internal stakeholders to better understand mission priorities and IT requirements. Increasing engagement during planning and delivery will drive timely, effective, mission-enabling IT tools and services. Stakeholder feedback will help identify which tools and services should continue and where improvements are required. By responsively identifying needs and technology options, OCOO can prototype and pilot different options and incrementally adopt solutions that provide the best value to the Agency. This approach will allow broad participation in service selection, design, and testing.

OCOO will establish and report on relevant key performance indicators to deliver IT that is reliable, available, and secure while modernizing technologies. OCOO will ensure users have access to the appropriate training needed to realize the potential value of each IT service.

In addition to this stakeholder-driven feedback, OCOO will leverage digital services to capture performance information that enables service improvements. These digital services will allow detection and resolution of technology service performance issues before an issue is reported manually.

OBJECTIVE 2.1: PARTNER WITH STAKEHOLDERS TO IDENTIFY SOLUTIONS AND SPUR ADOPTION

Means & Strategies to achieve the objective include:

1. Simplify and standardize the catalog of services to satisfy the needs of Agency stakeholders through a single source access and delivery mechanism;

2. Provide solutions to enable meaningful in-office and hybrid work through solutions that support purposeful, well-planned, optimized in-person collaboration when required;

3. Partner with customers and vendors to host an exploratory technology engagement forum at least annually;

4. Establish a repeatable technology deployment methodology that standardizes and integrates communication, change management, training, and support services into deployment schedules; and

5. Develop job-centric technology training and certification tracks mapped to Agency job series and create a catalog of available training resources and coaching.

OBJECTIVE 2.2: IMPROVE SERVICE DELIVERY PERFORMANCE

Means & Strategies to achieve the objective include:

1. Identify and report on performance indicators that ascertain the value of technology, trade-off comparisons, overall performance, customer service delivery, and satisfaction;

2. Conduct an annual portfolio evaluation to identify service gaps and prioritize remediation and improvement opportunities; and

3. Enable configuration management to ensure IT systems can be tailored where feasible to specific user needs versus a "one size fits all" approach.

OBJECTIVE 2.3: PRIORITIZE COMMERCIAL TECHNOLOGY SOLUTIONS AND PROCESS AUTOMATION

Means & Strategies to achieve the objective include:

1. Institutionalize buy vs build technology standards based on ROI and ability to meet mandatory system and user requirements;

2. Develop and deploy a review process for custom software development requests;

3. Reduce the number of disparate commercial software solutions and/or federal lines of business to minimize the need for external data synchronization; and

4. Formalize a centralized process for IT service and system requests that will enable prioritization and appropriate resource allocation.

STRATEGIC GOAL 3:
SAFEGUARD FHFA DATA AND TECHNOLOGY ASSETS

FHFA is committed to ensuring the confidentiality, integrity, and availability of its data and IT assets while continuing to adapt and respond to the complexities in the cybersecurity landscape. Continuous improvements are driven by guidance from internal risk analyses, FHFA's Office of the Inspector General, the Government Accountability Office (GAO), Office of Management and Budget (OMB) memoranda, and Department of Homeland Security Presidential Directives and Binding Operational directives.

An effective cybersecurity program must continually evolve and adapt to an ever-changing threat landscape. A key element of the Agency's security program is its ongoing adoption of the Zero Trust[14] framework and National Institute of Standards and Technology guidance to identify, protect, detect, respond, and recover from dynamic threats, risk, and incidents.

Agency investment in cybersecurity will strengthen safeguards by modernizing and optimizing IT security operations. FHFA will accomplish Strategic Goal 3 by implementing IT investment and portfolio decisions that achieve a risk-based balance between mission needs and Agency cybersecurity priorities.

OBJECTIVE 3.1: ADOPT AN IT SECURITY AND COMPLIANCE POSTURE CONSISTENT WITH THE AGENCY'S REGULATORY AND SUPERVISORY FUNCTIONS

Means & Strategies to achieve the objective include:

1. Coordinate cross functional teams working on the implementation of Zero Trust to identify programmatic and human capital inter-dependencies and create a comprehensive risk profile;

2. Enhance the existing IT security risk assessment process to maintain an awareness of other Financial Institutions Reform, Recovery and Enforcement Act (FIRREA) agencies' security and compliance postures, and inform the IT Governance Board when a risk and opportunity trade-off decision is required in the best interest of mission execution;

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14 Under the ZeroTrust framework, all IT resources must be continuously authenticated, authorized, and validated before they are granted access to systems and data. See, https://www.whitehouse.gov/briefing-room/presidential-actions/2021/05/12/executive-order-on-improving-the-nations-cybersecurity/

3. Implement the DevSecOps[15] methodology to highlight the importance of IT security Agency-wide; and

4. Automate IT security operations to the maximum extent possible.

OBJECTIVE 3.2: OPTIMIZE TECHNOLOGY LIFECYCLE MANAGEMENT AND IMPROVE INVESTMENT TRANSPARENCY

Means & Strategies to achieve the objective include:

1. Improve the Agency's tracking of technology resources to increase transparency into the quantity, cost, and management of IT investments;

2. Implement the use of technology capital planning investment control processes that provide value-based visibility via cost benefit analyses and evaluate ROI against expected outcomes;

3. Implement scheduled IT portfolio reviews to ensure that Agency technology investments remain aligned and prioritized with strategic goals;

4. Develop a robust technology sourcing strategy that mitigates supply chain challenges; and

5. Implement cybersecurity and architecture governance that enables FHFA to migrate to a secure cloud environment.

OBJECTIVE 3.3: ADDRESS GEOGRAPHIC DEPENDENCIES, SINGLE POINTS OF FAILURE, AND GAPS IN SYSTEM DISASTER RECOVERY PLANS

Means & Strategies to achieve the objective include:

1. Evaluate the value and feasibility of implementing a multi-vendor hybrid cloud approach to mitigate vendor concentration risk;

2. Mirror cloud-based infrastructure in geographically dispersed back-up sites;

3. Develop detailed recovery plans that meet federal standards and include testing at regular intervals;

4. Develop policies and standards for version/configuration control of internally developed software tools, along with robust documentation for each tool to eliminate over-reliance on individual developers; and

5. Conduct a skill analysis of IT staff to identify areas of limited expertise and key person risk.

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15   DevSecOps is a software development, security and operational methodology that elevates security to an equal status with development and operations. It relies on automation and best practices that keep production moving quickly.

STRATEGIC GOAL 4:
ENHANCE AGENCY-WIDE DATA GOVERNANCE AND LIFECYCLE DATA MANAGEMENT

FHFA seeks to enhance its data governance and lifecycle data management policies and processes to ensure that the Agency continues to leverage data as a strategic asset. Data governance is critical to ensure the Agency manages data effectively and complies with federal statutes, regulations, standards, and guidance.

In the short-term, FHFA will continue to build its Agency-wide data governance framework with principles, organizational structures, roles, responsibilities, and decision-making processes that integrate with its other governance processes. Effective Agency-wide data governance will ensure that the collection of data is sufficient and well-coordinated.

FHFA's Comprehensive Data Inventory (CDI) provides an Agency-wide view of data assets and helps staff quickly locate data assets relevant to their needs. Consistent with the OPEN Government Data Act, the Agency will maintain and continue to expand its CDI. FHFA will also enhance its training efforts to continue to raise awareness of its CDI.

Improvements to lifecycle data management through matured planning and practices can help FHFA leverage data assets while reducing management and storage costs. FHFA will continue its existing efforts to assess data management practices for priority data assets to determine if any improvements may be needed.

OBJECTIVE 4.1: ADVANCE AN AGENCY-WIDE DATA GOVERNANCE FRAMEWORK THAT FACILITATES ACCESS TO AGENCY DATA ASSETS WHILE ENSURING PRIVACY AND SECURITY

Means & Strategies to achieve the objective include:

1. Clarify roles and responsibilities for data management, use, and related governance;

2. Align governance approaches for data storage and analytics activities currently stored on network drives with those in place for the Data and Analytics Platform;

3. Advance data governance efforts necessary to implement Zero Trust, including refinement of access controls to recognize tiers of data sensitivity; and

4. Enhance data governance and management for administrative and operations data assets, including developing new data architectures supporting cloud-based data storage.

OBJECTIVE 4.2: IMPROVE IDENTIFICATION OF DATA NEEDS AND DATA ACQUISITION PROCESSES

Means & Strategies to achieve the objective include:

1. Review the inventory of regularly submitted reports to verify ongoing reporting needs and enhance efficiency in submission processes;
2. Identify and assess needs for additional data and corresponding infrastructure; and
3. Strengthen existing processes and support for acquiring or collecting large, structured data assets.

OBJECTIVE 4.3: IMPROVE DATA INVENTORY AND DOCUMENTATION

Means & Strategies to achieve the objective include:

1. Implement CDI standards that codify existing federal requirements;
2. Conduct a needs assessment as part of acquiring metadata management software;
3. Develop additional training for staff to expand the internal use of FHFA's data; and
4. Provide staff a one-stop shop for data and analytics resources on FHFA's intranet.

OBJECTIVE 4.4: STRENGTHEN LIFECYCLE DATA MANAGEMENT PLANNING

Means & Strategies to achieve the objective include:

1. Create and deploy a new data management assessment tool to help identify data management gaps;
2. Ensure lifecycle data management plans – including data storage and persistence requirements, data accuracy and quality assessments, and data lineage – remain current; and
3. Assess future needs for cloud data storage for each data asset.

STRATEGIC GOAL 5:
EXPAND CAPABILITY FOR AI, ADVANCED ANALYTICS, AND DATA VISUALIZATION

The Agency will continue to invest, modernize, and expand its data and analytics capabilities. This includes developing the workforce capacity necessary to leverage modern analytics tools and the governance needed to ensure responsible use of those tools, including AI.

The Agency will continue its efforts to migrate from legacy data and analytics platforms to a new platform that will better enable scalability through a cloud delivery model. FHFA will also gradually transition data management and analytics processes to cloud-based workflows using open-source languages.

FHFA has a robust infrastructure supporting self-service dashboarding and other business intelligence services. Building on this success, the Agency will continue to promote the use of self-service dashboards by further developing data architectures and additional strategic planning and governance around dashboard development.

OBJECTIVE 5.1: COMPLETE THE TRANSITION TO THE NEW DATA AND ANALYTICS PLATFORM

Means & Strategies to achieve the objective include:

1. Complete migrating the legacy data and analytics platforms to the new data and analytics platform;

2. Promote migrating data management processes to cloud-based workflows using open-source languages while maintaining legacy tools where needed;

3. Adopt a non-proprietary format for storing large, structured data assets to ensure compliance with the requirements of the OPEN Government Data Act; and

4. Develop additional training for staff on cloud-based workflows and open-source languages.

OBJECTIVE 5.2: ENSURE RESPONSIBLE USE OF AI AND CLOUD-BASED ADVANCED ANALYTICS TECHNIQUES

Means & Strategies to achieve the objective include:

1. Develop governance policies and processes that implement statutory requirements, executive orders, and other federal guidance related to safe, secure, and trustworthy AI;

2. Develop or procure training programs for AI, ML, and cloud-based analytics tools;

3. Migrate analytics and statistical modeling processes to cloud-based workflows using open-source languages, while maintaining legacy tools where needed; and

4. Foster best practices and improve tools for code management.

OBJECTIVE 5.3: ENHANCE GOVERNANCE AND USE OF SELF-SERVICE DASHBOARDS

Means & Strategies to achieve the objective include:

1. Strengthen governance for deployment of dashboards, including creation of standard reporting templates; and

2. Identify opportunities to improve and expand self-service data visualization and reporting tools.

STRATEGIC GOAL 6:
DELIVER HIGH QUALITY HOUSING FINANCE DATA PRODUCTS AND ANALYSIS (OPEN DATA PLAN)

The Agency's FY 2022 – 2026 Strategic Plan states that "FHFA will continue to promote transparency and market stability by monitoring and reporting on trends in housing and mortgage markets." While some of FHFA's data is limited to internal Agency use, the Agency publishes a large quantity of data. Source: FHFA is the Agency's initiative to be a preeminent provider of housing finance data products and research to the public. The Agency's flagship data product, the FHFA House Price Index®, is widely used throughout the housing finance industry as an important measure of trends in home prices. The National Mortgage Database® supports policymaking and research efforts and helps identify and understand emerging mortgage and housing market trends. The regular Uniform Appraisal Dataset Aggregate Statistics release is the first publicly available data on appraisals and provides insights on property valuation and trends in the appraisal industry. In addition, FHFA's fair lending data products enable the public to monitor compliance with fair lending statutes and practices.

FHFA's 2024 – 2026 Open Data Plan, represented by this strategic goal and its objectives, advances the goals of the OPEN Government Data Act. The Agency is committed to:

- Identification of priority data assets for public release, including continuing to produce data assets derived from established data sources that provide information on risk and equity in the mortgage and housing markets;
- Pursuing opportunities to ensure the public can more easily find and use the Agency's public data assets;
- Ensuring public data assets are machine-readable and consistently available through application program interfaces;
- Data asset quality evaluation and improvement;
- Routine updates to the Federal Data Catalogue (i.e., Data.gov); and
- Data asset usage evaluation and collaboration with the public.

FHFA is a leading provider of research, monitoring, and analysis on the state of the housing finance system. FHFA's ability to provide these services is strengthened when it builds data sharing relationships and collaborates with other federal agencies and external stakeholders.

OBJECTIVE 6.1: IDENTIFY NEW OPPORTUNITIES TO PROVIDE DATA TO THE PUBLIC WHILE PROTECTING PRIVATE OR SENSITIVE INFORMATION

Means & Strategies to achieve the objective include:

1. Expand public access to data and statistics based on the National Mortgage Database Aggregate Statistics, National Survey of Mortgage Originations Survey, the Uniform Appraisal Dataset Aggregate Statistics, and the Public Use Database; and

2. Continue to evaluate additional opportunities to provide data to the public where full or partial disclosure is permissible.

OBJECTIVE 6.2: IMPROVE DISCOVERABILITY AND USABILITY OF FHFA'S PUBLIC DATA

Means & Strategies to achieve the objective include:

1. Ensure public data assets are machine readable and provide high quality information;

2. Improve the organization of FHFA.gov Data, Tools, and Reports webpages;

3. Continue making public data assets discoverable on Data.gov;

4. Improve Application Program Interface access to public data assets;

5. Identify opportunities to leverage AI chat bot functionality on FHFA.gov to help the public find available information and data; and

6. Develop processes to better understand how the public values and uses FHFA data.

OBJECTIVE 6.3: CONTINUALLY IMPROVE THE AGENCY'S ABILITY TO SHARE DATA

Means & Strategies to achieve the objective include:

1. Continue to build, deploy, and maintain a federal database on appraisals;

2. Expand human, governance, and technical capacities needed to build a "restricted data access" program that provides external researchers access to non-public housing data, when appropriate; and

3. Identify opportunities to improve and participate in federal data sharing efforts.

CHALLENGES AND RISKS THAT MAY HINDER ACHIEVEMENT OF STRATEGIC GOALS

FHFA's current technology infrastructure reflects the urgency present when the Agency was formed in the financial crisis of 2008. Decisions prioritized speed to support individuals or specific programs tasked to address a national crisis. As needs arose, new tools were added, but they were rarely integrated across the Agency. This project-based build strategy resulted in platforms and applications with a high degree of customization that continue to require manual, labor-intensive processes to connect and maintain. While the initial program/project-based IT development strategy was effective to meet urgent needs, it will not allow FHFA to continue to be effective over time.

Although FHFA's current methodology was effective for satisfying urgent needs during rapid growth, it has limited operational effectiveness as the organization has matured. Systems are not able to effectively evolve to accommodate new initiatives or to adopt new technology capabilities, which creates significant risk to an organization that depends heavily on data and information flow.

The Agency's current-state evaluation indicated that processes, people, and programs are largely siloed, and elements of FHFA's IT systems are at the end of their useful lifecycles. There is the potential that, without updates, the current state will create excess cost, risk, and inefficiencies that prevent FHFA from advancing its strategic goals. The following key issues are addressed by the objectives in this strategic plan:

- **FHFA lacks an Agency-wide enterprise architecture.** While some resources are shared across the Agency, each of the mission offices and support functions have their own unique system architectures. This approach has created several essentially independent subsystems that are not integrated or even necessarily connected to each other.

- **Hardware lifecycle concerns.** Some elements of IT infrastructure are reaching their end of life and may no longer be supportable. When the technology can no longer be upgraded or supported, FHFA risks disruption of core processes and analyses, security vulnerabilities, and inability to access data.

- **Lack of technology redundancy.** FHFA has centralized its technology in the Washington, D.C. area. Physical attacks or natural disasters could compromise the ability of employees to access critical data for analysis and reporting.

- **Lack of skills redundancy.** FHFA programs act independently of each other and lack processes for knowledge transfer across the Agency. Critical skills and "tribal knowledge" required to meet objectives could be lost as subject matter experts (SMEs) retire or leave

the Agency. Additionally, a lack of database management expertise results in many time-consuming manual processes that produce delays and increase costs.

- **Customized solutions.** Activities such as data access, querying, governance, and evaluation are dependent on specific SMEs. FHFA's ability to complete its mission could be compromised as individuals retire or leave the Agency.

- **Fragmented processes and user bases.** Employees may understand the requirements of certain tasks but may not know where they can find resources or appropriate protocols. Documentation of internal processes is inconsistent. When documentation exists, it is often incomplete. Information sharing among various offices can be limited, which results in process duplication, inefficiency, and risk to accuracy.

- **Lifecycle data management gaps.** FHFA leverages more than 100 data assets to support its mission. In some instances, lifecycle data management plans do not exist or are not adequate to ensure each data asset is managed efficiently. This can lead to increased storage costs, disorganized "data swamps," and data not meeting quality standards.

STRATEGIC PLANNING PROCESS

FHFA referenced the following documents in the development of this IRM Strategic Plan:

- President's Management Agenda[16]

- FHFA Strategic Plan Fiscal Year (FY) 2022-2026[17]

- Foundations for Evidence-Based Policymaking Act of 2018, including Titles 1, 2 & 3[18]

- Federal Data Strategy[19]

- Interagency Task Force on Property Appraisal and Valuation Equity (PAVE) Action Plan to Advance Property Appraisal and Valuation Equity[20]

- FHFA People Plan (internal)[21]

- FHFA Enterprise Risk Management (ERM) Framework (internal)[22]

FHFA contracted with the General Services Administration (GSA) Center for Analytics Excellence to conduct an organization-wide assessment of data and analytics capacity and infrastructure. The GSA team conducted more than 70 interviews with over 100 FHFA executives, managers, SMEs, and employees. This assessment helped inform the strategic goals and objectives in this IRM Strategic Plan.

Once the GSA assessment was complete, FHFA's Data Governance Committee provided additional input from across the Agency to identify additional challenges and opportunities.

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16   https://www.whitehouse.gov/omb/management/pma/

17   https://www.fhfa.gov/AboutUs/Reports/Pages/FHFA-Strategic-Plan-Fiscal-Years-2022-2026.aspx

18   https://www.congress.gov/115/plaws/publ435/PLAW-115publ435.pdf

19   https://strategy.data.gov/

20   https://pave.hud.gov/actionplan

21   The FHFA People Plan is the Agency roadmap for evolving the employee experience and further engaging the talented and motivated people who carry out the FHFA mission.

22   The FHFA ERM Risk Management Framework documents the Agency's methods and approach for implementing ERM practices building on OMB, GAO, and Committee of Sponsoring Organizations of the Treadway Commission guidance.

ROLES AND RESPONSIBILITIES

The success of this IRM Strategic Plan requires the participation and support of a wide range of stakeholders within FHFA. The key stakeholders and their roles are as follows:

- **FHFA Executive Leadership:** The Executive Leadership team is responsible for providing overall guidance and direction for the Agency, including support for the modernization of the data and analytics infrastructure.

- **FHFA Chief Information Officer (CIO):** The CIO oversees the Agency's IT infrastructure accessibility and security, including software tools and hardware, to support FHFA's mission and operations.

- **FHFA Chief Data Officer (CDO):** The CDO is responsible for developing and implementing the Agency's data management and governance policies and procedures and ensuring the quality and accessibility of FHFA's data.

- **FHFA Division and Office Directors:** The Division and Office Directors are responsible for ensuring that their respective teams are aligned with the Agency's mission and operations and actively engaged in data and technology modernization efforts.

- **FHFA Data Governance Committee (DGC):** DGC helps ensure the Agency makes decisions concerning data governance and lifecycle data management in a collaborative and informed manner in furtherance of FHFA's mission.

Federal Housing Finance Agency

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Information Resources Management

**STRATEGIC PLAN
FISCAL YEARS 2024-2026**