FY2025 SNAP Process and Technology Improvement Grant (PTIG) Application Draft

Applicant: Maryland Department of Human Services (DHS) **Submitting Office:** Office of Benefits Access (OBA), Family Investment Administration (FIA) **Submission Date:** August 4, 2025
USDA FNS, FY2025 Process and Technology Improvement Grant Application The Predictive Benefits Access Initiative: The Supervisory "Cockpit"

Executive Summary

The Moore-Miller Administration has a clear mandate to modernize government under a "Data-Driven, Heart-Led" philosophy. However, this effort is confronted by a "vise grip" of crises: a severe state budget deficit, burdensome federal mandates from H.R. 1, and Maryland's critically high SNAP Payment Error Rate (PER) of 13.64%. In response, the Office of Benefits Access (OBA) has developed the **Predictive Benefits Access Initiative (PBAI)**, a unified strategy to build a resilient, intelligent, and proactive benefits ecosystem.
This application seeks a Process & Technology Improvement Grant of **$1,731,300** to fund a foundational component of the PBAI: the **Supervisory "Cockpit."** This AI-powered dashboard is the frontline tool of our broader **Predictive Benefits Access Model (PBAM)**, designed to proactively identify and mitigate errors before they occur. Crucially, the integrity of this system is guaranteed by the **Maryland AI Validation Engine (MAIVE)**, our proprietary, automated evaluation framework that ensures all AI deployments are accurate, equitable, and legally defensible. This 18-month project represents the first operational phase of a multi-year strategy, establishing a national model for responsible, human-centered AI governance in public benefits administration.

I. Project Narrative

A. Project Design (35 points)

Problem Analysis: Maryland's SNAP program faces a significant operational and fiscal crisis, driven by a 13.64% Payment Error Rate (PER) for FFY 2024, which triggers a potential total liability of $27,957,820. This is exacerbated by the administrative burdens of H.R. 1. The root cause is a reactive model where supervisors receive Quality Control (QC) data too late for effective intervention. As one supervisor stated, "We get the QC data so late, it's like trying to coach a game after it's already over." This project directly addresses this systemic failure by shifting from a reactive to a predictive model of quality assurance.
Implementation Plan: This project will be implemented as Phase 1 of the state's comprehensive Predictive Benefits Access Initiative. The core of the PBAI is the **Predictive Benefits Access Model (PBAM)**, an AI-driven engine with three pillars. This PTIG grant will fund the primary tool for **Pillar 2: Proactive Problem Identification & Resolution**.
Conceptualization Ideation: Strategic Anchors

- **Predictive Analytics with QC Data:** Harnessing historical QC data to identify patterns and forecast cases likely to contain payment errors.
- **Real-Time Flagging Mechanisms for Caseworkers:** Cases meeting high-risk thresholds

are flagged prior to case processing, prompting deeper reviews.
- **Supervisor Pre-Case Coaching:** Flagged cases are routed for pre-case coaching and reviews for error-prone case types.
- **Integrated Training Impact Tracing:** Dashboard overlays show the shift in PER before and after targeted training, linking practice improvement directly to field outcomes.
- **Root Cause Drilldowns:** Staff can interact with anonymized error examples to learn from missteps and reinforce policy nuances.

Conceptualization Ideation: Dashboard Modality To understand the dashboard's power, consider how it would transform FFY 2024 payment error data into an actionable management tool for an LDSS Supervisor:

- **The Scenario:** A supervisor logs in and her Landing Page immediately shows that "Shelter & Utility Deductions" is a top error driver. A "Trend Alert" widget flashes red: "ALERT: Shelter & Utility errors spiked by 500% in Q4."
- **The Drill-Down:** She clicks the alert. The Diagnostic Drill-Down module opens, showing a clear line graph of the quarterly trend. Below it, a chart reveals the root cause: "Sub-type Analysis: 60% of Q4 errors were due to incorrect application of the seasonal cooling SUA."
- **The Action:** The Proactive Caseload module on the same page automatically displays a list of current, active cases flagged with a similar risk profile. Simultaneously, the Solutions Hub displays links to the specific job aid for calculating the summer cooling SUA. The supervisor can now intervene on current cases and assign targeted training, all in one place.

The core development activities for this project are:

- **The Supervisory "Cockpit" (Real-Time QA Dashboard):**
  - **Activity:** Develop and deploy the "Cockpit," an interactive dashboard providing supervisors with real-time dynamic risk scoring for their caseloads.
  - **Deliverables:** A functional, user-tested Supervisory "Cockpit" integrated with the Maryland Benefits system.
- **The Predictive Guardian (Predictive Data Model):**
  - **Activity:** Refine and deploy the machine learning models that power the "Cockpit's" risk-scoring capabilities.
  - **Deliverables:** An enhanced predictive model for PER, fully integrated with the dashboard.

AI Governance and Trust: The Maryland AI Validation Engine (MAIVE) The integrity of this project is guaranteed by **MAIVE**, our proprietary evaluation framework adapted from industry-leading open-source methodologies. MAIVE uses an automated "LLM-as-Judge" pipeline to rigorously and continuously test our AI models against the **Maryland Capability Curriculum (MCC)**—a comprehensive, state-specific dataset of real-world scenarios. This ensures our tools are accurate, unbiased, and trustworthy before they reach a single caseworker.

Sustainability: This 18-month project is the foundational first phase of a 5-year strategic roadmap for the PBAI. The tools developed will be integrated into the core operational budget of the Maryland Benefits system. The sustainability of the broader initiative is further secured by a comprehensive funding strategy that includes a partnership with philanthropic funders to support long-term evaluation and future enhancements.

B. Impact and Evaluation (30 points)

Our data-driven evaluation plan is centered on the MAIVE framework and the Activities/Indicators Tracker.

- **Quantifiable Impact:**
  - **PER Reduction:** Direct measurement of the SNAP PER to assess progress towards the 6% federal threshold within the 18-month project period.
  - **Error Rate Reduction:** Tracking of Maryland's specific error categories through monthly QC and Program Review Analysis meetings.
- **Evaluation Measures:**
  - **MAIVE Performance Metrics:** The primary evaluation measure will be the automated accuracy scores generated by MAIVE. Deployment will be gated on models achieving a 95% or higher accuracy rate against the Maryland Capability Curriculum.
  - **Caseworker Feedback & HCD:** The **Benefits Access Working Group (BAWG)**, comprised of frontline staff and supervisors, will serve as the primary vehicle for user acceptance testing (UAT) and providing continuous feedback.

C. Organizational Experience, Staff Capability, and Management (15 points)

Organization Capacity & Governance: The **Office of Benefits Access (OBA)** is formally designated as the central Program Management Office (PMO) for this initiative, ensuring unified leadership and preventing the fragmentation that has plagued past modernization efforts. OBA possesses the mandate, expertise, and strategic blueprints to execute this project successfully in partnership with the Maryland Benefits team.

Oversight and Key Staffing: The project will be led by **Graham O'Neill, PTIG Grant Director,** with support from **Lauren Molineaux, PTIG Program Lead,** and **Vivek Chandroth, PTIG Product & Technology Director.**

Augustin Ntabaganyimana, Executive Sponsor. Augustin provides strategic leadership across Maryland's Department of Human Services public benefits programs, guiding policy implementation, service integration, and cross-jurisdictional collaboration.

Graham O'Neill, PTIG Grant Director

- Provides strategic direction for the PTIG, aligning the project with departmental goals to modernize benefits delivery and reduce administrative burden.
- Brings over 15 years of expertise in benefits administration, data-driven process improvement, and implementing technology solutions in human services.

Vivek Chandroth, PTIG Product & Technology Director

- Leads the project's product and technical strategy, overseeing the design to ensure scalability, resilience, and state control.
- Oversees all AI/ML engineering and data analysis for the project's solutions and manages the technical teams.

Lauren Molineaux, PTIG Program Manager

- Leads statewide strategy for policy development, program design, and implementations to improve benefits access.
- Previous experience includes administering Maryland's TANF and Energy Assistance Programs and working for the Federal Administration for Children and Families.

Anthea Seymour, PTIG Operations Lead

- Leads statewide strategy for public benefits operations, including compliance, innovation, and payment error reduction.
- Nearly 30 years of public service focused on system implementation, business process

improvement, and project management.

Towanaka Young, PTIG QC Lead

- Initiates, plans, and designs evaluation projects to provide detailed and statistically valid management information to improve program performance.
- Responsible for DHS's data collection, analysis, and reporting of benefit accuracy and timeliness for SNAP.

Labelle Hillgrove, PTIG Policy Lead

- Leads statewide strategy for SNAP policy development, program design, and implementations.
- Over 20 years of progressive experience in human services delivery, specializing in public assistance benefit programs.

PII Safeguarding: All data and client personally identifiable information (PII) will be protected in accordance with Section 11(e)(8) of the Food and Nutrition Act of 2008, Federal regulations at 7 CFR 272.1(c), and the Privacy Act of 1974.

D. Budget Appropriateness and Economic Efficiency (20 points)

The proposed budget of **$1,731,300** is designed for fiscal prudence and is based on detailed technical estimates for the 18-month project period. A detailed, line-item budget will be submitted as a separate appendix.

Expense	Total
FIA Estimate Total	**$748,500.00**
Maryland Benefits Estimate Total	**$982,800.00**
Grand Total	**$1,731,300.00**

V. Activities/Indicators Tracker

The following tracker maps project activities to FNS objectives and the indicators that will measure success.

Objective #	2. Improve administrative infrastructure and day-to-day SNAP operations in processing applications and determining eligibility.
Activity	Develop and deploy the Supervisory "Cockpit" Dashboard.
Indicator(s)	Percentage of LDSS supervisors utilizing the dashboard monthly.
Activity	Integrate AI for Supervisory Case Reviews into the "Cockpit".
Indicator(s)	Number of potential errors flagged by the AI tool prior to case finalization.
Activity	Refine and deploy the Predictive Caseload Intervention Model.
Indicator(s)	Accuracy score of the model as measured by the MAIVE framework.
Activity	Conduct monthly BAWG meetings for UAT and feedback.
Indicator(s)	Number of feedback items logged and incorporated into development sprints.

VIII. Conclusion

This PTIG grant proposal outlines a robust, data-driven, and forward-looking strategy to significantly reduce Maryland's SNAP PER. By funding the Supervisory "Cockpit," this grant will operationalize the first phase of the state's landmark Predictive Benefits Access Initiative. This project, governed by the rigorous MAIVE framework, will achieve quantifiable improvements in efficiency and fiscal responsibility while establishing Maryland as the national leader in modern, responsible, and human-centered benefits administration.

Appendix A: Project Timeline (18-Month Plan)

This project will be executed over an 18-month period, beginning January 1, 2026, to align with the state's strategic roadmap. The timeline is structured to accommodate a full 12-month development cycle while ensuring a rapid and efficient path to statewide implementation.

Phase	Timeframe	Key Activities & Milestones
Phase 1: Project Initiation & Design	Jan 2026 – Mar 2026 (**3 months**)	- Finalize Partnership: Execute formal agreement with Maryland Benefits. - Finalize Design: Conduct intensive HCD workshops with LDSS staff via the BAWG. - **Milestone:** Technical specifications and final design document complete.
Phase 2: Development, Testing & Launch	Apr 2026 – Mar 2027 (**12 months**)	- Develop Dashboard: Execute rapid, agile development sprints. - Refine AI Models: Train and test predictive models against the MAIVE framework. - User Acceptance Testing (UAT): Conduct rigorous UAT with the BAWG. - Statewide Deployment: Phased Go-Live of the dashboard. - **Milestone:** Dashboard is live and in use by all LDSS staff across Maryland.
Phase 3: Training, Evaluation & Transition	Apr 2027 – Jun 2027 (**3 months**)	- Develop Training Materials. - Conduct Trainings. - Monitor & Evaluate: Gather initial 90-day performance data. - Transition to State Support. - **Milestone:** Final performance report for FNS is completed and submitted.

Appendix B: A Note on Budget Evolution and Final Validation

The budget figure of **$1,731,300** presented in this application is the result of a rigorous, iterative refinement process. Initial estimates evolved as the project timeline was adjusted to accommodate a full 12-month development cycle, ensuring the final plan is both ambitious and operationally feasible. This total represents the most accurate estimate based on the detailed technical and programmatic scoping completed to date. As a final step in our internal due diligence, this figure will be subject to a final validation by FIA executive leadership prior to the execution of the grant agreement. This standard procedural step ensures full alignment and fiscal accountability.