

NASCIO STATE IT RECOGNITION AWARDS

The 35.5x Catalyst: Modernizing Missouri's Agricultural Grant Review with Responsible AI



Missouri Office of Administration: Information Technology Services Division (OA-ITSD)

Category: Artificial Intelligence

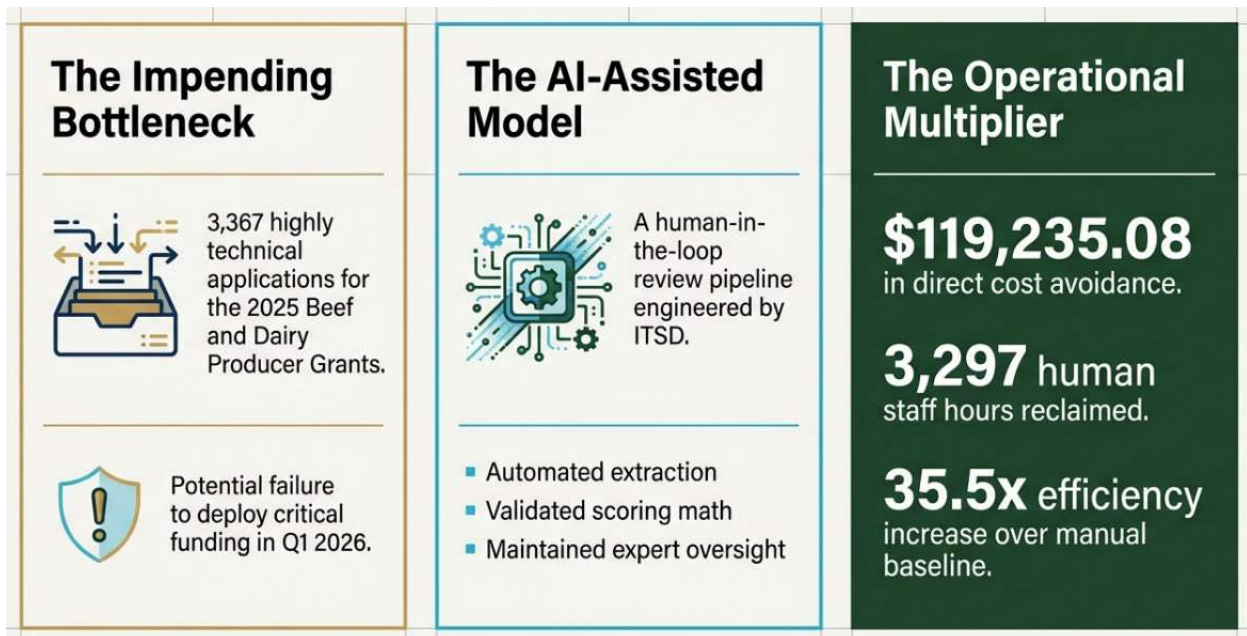
Project Dates: January 1, 2026 - March 31, 2026

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EXECUTIVE SUMMARY

The Missouri Agricultural and Small Business Development Authority (MASBDA) faced a surge of 3,367 grant applications, threatening to delay critical funding for producers. The Office of Administration, Information Technology Services Division (ITSD) partnered with MASBDA to launch an AI-assisted review system aligned with [Executive Order 26-02](#), which directs the Office of Administration to identify high-potential AI applications to increase government efficiency and enhance the quality of services delivered to Missourians. The system resulted in a 35.5x efficiency multiplier by reducing labor from 3,367 hours to 70, avoided \$119,235.08 in costs, and enabled on-time notifications in Q1 2026. This project demonstrates Missouri's leadership in responsible, transparent, high-impact AI deployment across government services.



PROJECT DESCRIPTION

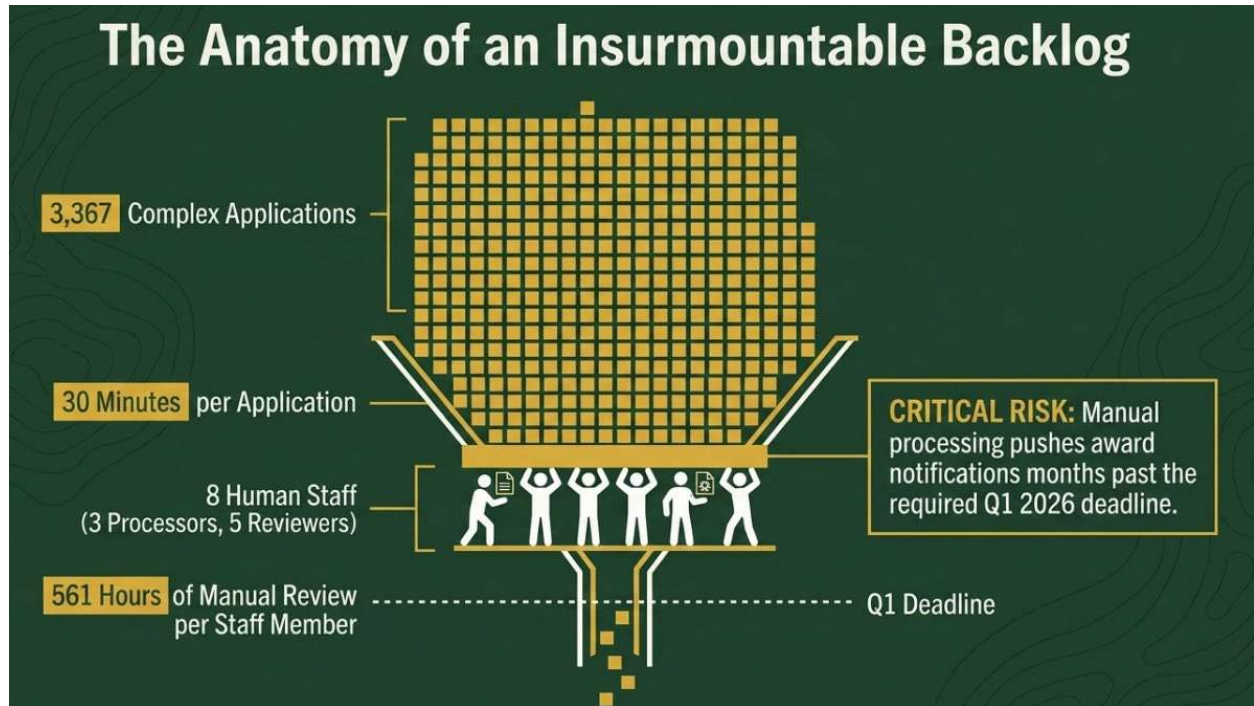
IDEA

For Missouri's beef and dairy producers, the turn of the year is usually a season of planning and preparation. However, as 2026 began, our agricultural community was held in a state of high-stakes anticipation. Following the launch of the Beef and Dairy Producer Grants in September 2025, the Missouri Agricultural and Small Business Development Authority (MASBDA) was met with an unprecedented "high volume of applications" that tested the limits of our traditional review systems. Thousands of applications poured in—each containing detailed technical and financial information—far exceeding the manual processing capacity of traditional review methods.

The grant program offered to fund up to 75% of project costs, capped at \$40,000 per producer. With applications due December 31, 2025, MASBDA faced a surge of highly detailed proposals requiring careful evaluation for eligibility, cost-share compliance, and overall merit. Completing this review manually would have delayed awarding decisions well beyond the intended first quarter of 2026. By early 2026, faced with a backlog that threatened to delay critical investments in farm

facilities and equipment, the Department looked toward a new horizon of innovation: Artificial Intelligence (AI).

Also, in January 2026, Governor Mike Kehoe issued Executive Order 26-02, establishing a statewide framework for responsible AI adoption to streamline government operations. ITSD quickly aligned its support with this directive and identified MASBDA's backlog as an opportunity to demonstrate the practical value of AI in state government by rapidly designing and deploying an AI-enabled solution that accelerated the review process without compromising accuracy or oversight.



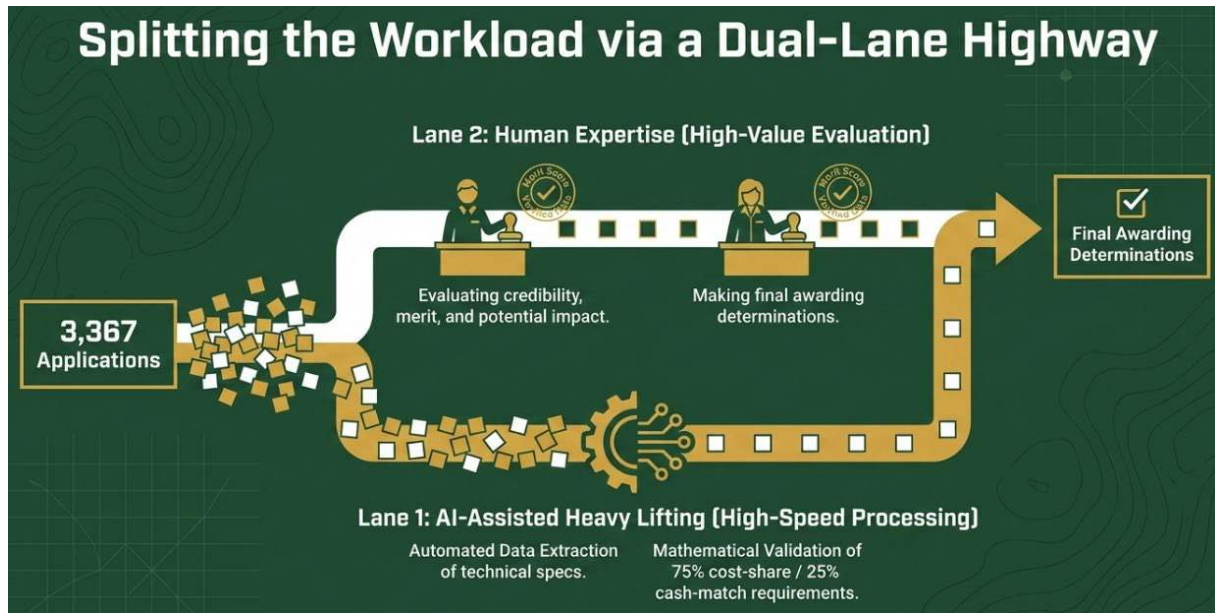
IMPLEMENTATION

Implementation followed a structured, cross-agency process based on Missouri's AI Executive Order Steering Committee framework. ITSD designed AI-powered data extraction, validation, and classification tools, while MASBDA experts refined scoring criteria. Using a human-in-the-loop approach, the system automated repetitive tasks while ensuring final scoring remained with subject-matter experts. This process is documented in supporting grant articles and executive directive.

ITSD collaborated closely with MASBDA leadership to design an AI-assisted workflow that:

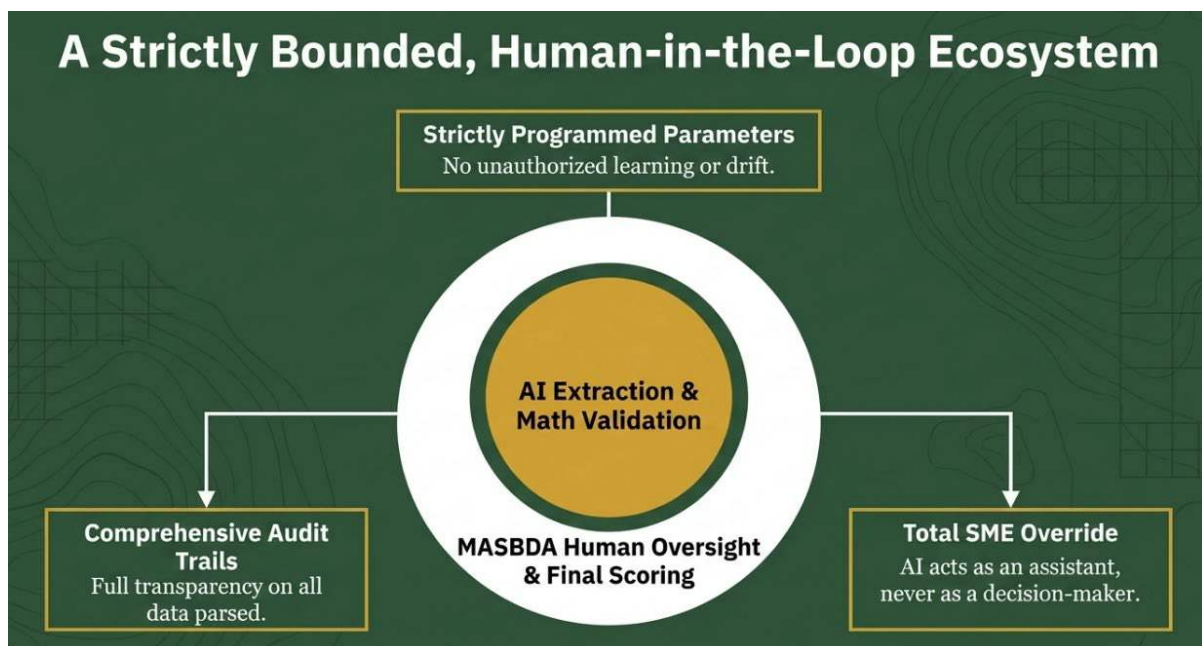
- **Automated Data Extraction:** AI tools scanned and categorized thousands of files, dramatically reducing time spent on manual data entry.
- **Supported Scoring Accuracy:** Algorithms cross-checked applications against cost-share thresholds and other program requirements, helping reviewers focus on qualitative evaluation.
- **Maintained Human Oversight:** Consistent with the Executive Order, AI served as an assistant—not a decision-maker—ensuring final scoring remained the responsibility of MASBDA subject matter experts.

- Enhanced Process Transparency: ITSD implemented safeguards and audit trails to ensure the AI-supported workflow met state standards for accountability.



By deploying AI-assisted review tools, the Department was able to:

- Accelerate Data Processing:** Automated systems quickly parsed technical specifications for equipment and facilities across thousands of files, a task that previously required manual entry.
- Enhance Scoring Accuracy:** AI tools assisted our human reviewers by ensuring that every application was cross-referenced against the strict 75% cost-share and 25% cash-match requirements with mathematical precision.
- Maintain Transparency:** Consistent with the Governor’s mandate, our AI integration prioritized human oversight, ensuring that final determinations remained in the hands of our agricultural experts while the technology handled the administrative heavy lifting.



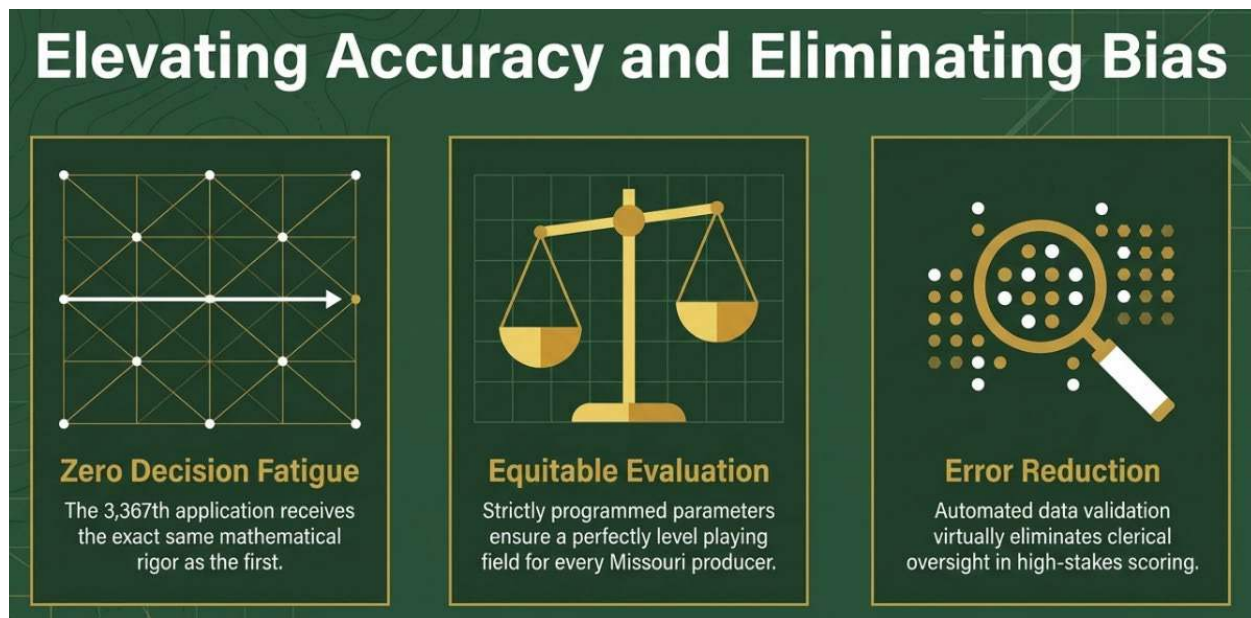
IMPACT

The results have been transformative. By leveraging AI, the Department was able to uphold its promise to notify recipients in the first quarter of 2026, successfully navigating a backlog that once seemed insurmountable.

These grants represent more than just financial aid; they are a critical investment in Missouri's economic backbone. Because we embraced AI to shorten the review window, our beef and dairy producers are now receiving funds for the upgrades they need—on a timeline that keeps pace with the modern agricultural business cycle.

The impact of the project is more strongly shown in the numbers the project achieved:

- 3,367 hours reduced to 70 total hours
- \$122,693.48 traditional cost reduced to \$3,458.40 with AI
- \$119,235.08 cost avoidance
- 3,297 staff hours reclaimed
- 35.5× efficiency multiplier



These improvements accelerated award notifications, ensured equitable evaluations, eliminated fatigue-driven errors, and created a repeatable model for future cycles.

The management of 3,367 grant applications traditionally requires extensive commitment of human capital and state funds. By implementing an AI-driven review process, the department has successfully transformed a multi-month administrative burden into a streamlined, high-accuracy operation.

The Manual Benchmark (Baseline):

- Before AI integration, the process relied on a two-phase human review system.

- Total Personnel: 8 staff members (3 processors, 5 reviewers).
- Total Labor: 3,367 man-hours (30 minutes per application, per phase).
- Total Personnel Cost: \$122,693.48
- Operational Reality: Staff faced high workloads (up to 561 hours per person), leading to inevitable fatigue and potential for subjective bias.

The AI-Assisted Model

- The AI-driven approach shifted the focus from repetitive manual labor to technical setup and high-speed computation.
- Team Labor: 70 total hours (40 hours data prep + 30 hours programming).
- Resource Cost: \$720.00 for compute power.
- Total Implementation Cost: \$3,458.40

Diagnostic Comparison: Manual Baseline vs. AI-Assisted Reality	
Manual Benchmark	AI-Assisted Model
Total Labor: 3,367 Hours	Total Labor: 70 Hours (40 prep + 30 programming)
Personnel Cost: \$122,693.48	Implementation Cost: \$3,458.40 (\$720 compute)
Risk Profile: High workload (561 hrs/person), inevitable decision fatigue, potential subjective bias.	Advantage: Clinical precision, strictly leveled playing field, zero decision fatigue.

The review was completed with clinical precision, utilizing a fraction of the time and budget. The transition to AI produced a dramatic return on investment across every key performance indicator:

- Beyond the balance sheet, the AI-assisted review provides institutional benefits that human-only teams cannot replicate:
- Elimination of Fatigue: Unlike human reviewers, AI does not experience "decision fatigue," ensuring the 3,367th application is evaluated with the same rigor as the first.
- Removal of Bias: The AI follows strictly programmed parameters, ensuring every Missouri producer is judged on a perfectly level playing field.
- Increased Accuracy: Automated data validation reduces the risk of clerical errors or oversight in the merit scoring process.
- Repeatability: The process is now a "turn-key" solution. For future grant cycles, the framework is already built, allowing for even faster deployment.

The decision to utilize AI for the Beef and Dairy Grant review didn't just save the department \$119,235.08; it reclaimed over 3,300 hours of staff time that can now be redirected toward high-value agricultural initiatives.

In short: the AI team did in 70 hours what would have taken a human team nearly two years of standard 40-hour work weeks to finish.

The MASBDA project now serves as one of the first success stories under Missouri's "GREAT" initiative and demonstrates how technology—when applied thoughtfully—can strengthen service delivery without sacrificing accuracy, fairness, or transparency.

The Multiplier Effect

35.5×

Efficiency Multiplier

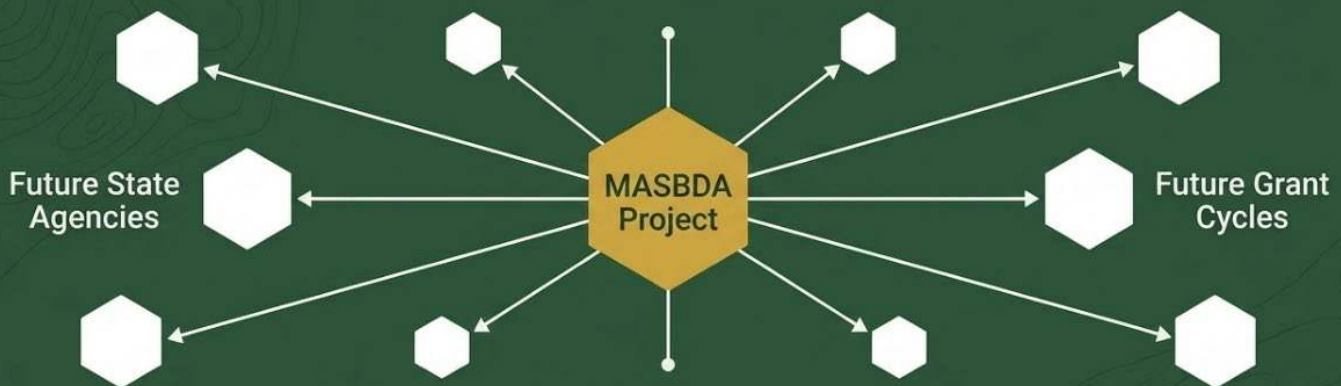
\$119,235.08

Total Cost Avoidance

Two years of traditional administrative work completed in just 70 hours.

ITSD will continue to partner with state agencies to responsibly apply emerging technologies, ensuring Missouri's government remains efficient, innovative, and centered on serving its citizens.

A Turn-Key Blueprint for Missouri's Future



The Immediate Win

On-time Q1 2026 notifications, allowing beef and dairy producers to build and upgrade on schedule.

The Synthesis Insight

MASBDA built a foundational AI infrastructure. This repeatable, turn-key solution is now adaptable for all future grant cycles and state agencies under the Missouri GREAT initiative.