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ZenLM: The Mastermind intelligence layer
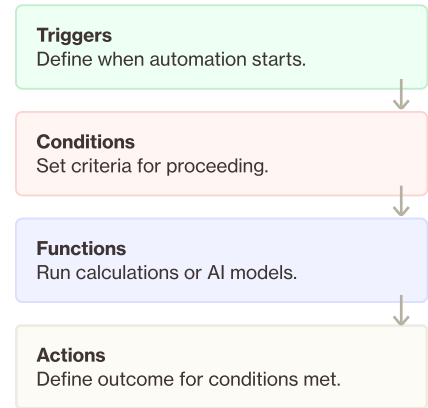
AI purpose-built for autonomous finance and unmatched accuracy

What is ZenLM?

ZenLM is the intelligence layer that powers autonomous finance operations. Developed by AppZen, this proprietary AI framework combines domain-specific, transformer-based models with LLMs tailored specifically for finance processes. ZenLM delivers hallucination-free decision-making with accuracy, contextual awareness, and explainability that generic models cannot achieve.

What is Mastermind automation?

To operationalize ZenLM, organizations need a framework that connects AI-based decision making to process execution. The Mastermind AI Automation Platform is that no-code decision automation framework for finance. It deeply integrates ZenLM's AI functions across finance systems with a flexible process engine using triggers, conditions, functions, and actions.

Triggers
Define when automation starts.

Conditions
Set criteria for proceeding.

Functions
Run calculations or AI models.

Actions
Define outcome for conditions met.

ZenLM model categories

Finance Worker Model
Automate routine finance tasks

Complete complex, specialized tasks with high accuracy

TRANSFORMED PROCESSES
Processing invoices
Matching POs
Predicting GL codes
Validating receipts
Performing detailed compliance checks

User Interaction Models
Communicate clearly

Write email replies and spend analyses; recommend policies

TRANSFORMED PROCESSES
Writing vendor replies
Manager notifications
Process explanations offering guidance based on AI analysis

Document Understanding
Capture document data

Gather and validate data in every language, any document layout

TRANSFORMED PROCESSES
Accurately reading and verifying invoices
Receipts
Statements
Sign-in sheets
Hotel folios
Missing receipt affidavits
Card transactions

Semantic Understanding Models
Accurately categorize financial data

Contextualize and categorize documents, transactions, and written communications.

TRANSFORMED PROCESSES
Accurately classifying vendor spend
Accurately classifying employee spend
Sorting and labeling emails
Sorting and labeling invoices
Sorting and labeling documents in multiple languages

Feedback Models
Optimize and improve AI assistants

Refine and improve based on user feedback and performance metrics

TRANSFORMED PROCESSES
Learning based on team interactions
Learning based on completed tasks
Optimizing based on team interactions
Optimizing based on completed tasks

Process Insights
Improve processes with AI analysis

Identify and share spend patterns; recommend policy changes

TRANSFORMED PROCESSES
Delivering actionable analyses of expense audit configurations
Delivering actionable analyses of team spend behaviors
Delivering actionable analyses of vendor transactions

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ZenLM vs generic LLMs: Performance benchmarks

Autonomous finance processing requires highly accurate AI decision making. The ZenLM model suite provides superior performance on metrics across key finance tasks, compared to generic LLMs.

Finance Task	ZenLM F1 Score	Generic LLM F1 Score
Invoice Line to PO Matching	87	37
Account Segment Code Prediction	70	38
Company Segment Code Prediction	91	49
Duplicate Expense Detection	85	46
Unauthorized Expenses	84	65
Key/Value Pair Extraction	76	53
Supplier ID Prediction	98	85

ZenLM outperforms generic LLMs

30-50 pts

Higher F1 accuracy in critical finance tasks

What is an F1 Score?

F1 scores measure accuracy on a scale of 0-100, balancing precision (correctness of positive predictions) and recall (finding all relevant items). Higher scores mean better performance in real-world finance tasks.

Drive automation with ZenLM + Mastermind

ZenLM powers Mastermind's autonomous processing. Combining ZenLM model functions creates process automation "recipes" and drives hands-free decision-making in T&E and AP workflows.

T&E Expense Audit

AI function		Use cases
`GET_LINE_UNAUTHORIZED_EXPENSE_CAT is First class`	→	Flag first-class airfare violating company T&E policy
`GET_LINE_RISK_LEVEL_DUPE_EXP_ACROSS_REPORTS is High-risk`	→	Notify employees of duplicate receipt submissions
`GET_LINE_RISK_MERCHANT_CAT is Bars`	→	Identify businesses classified as bars/adult entertainment
`RECEIPT_DATE_VALUE () does not exist`	→	Flag receipts missing valid transaction dates

AP Invoice Processing

Functionality		Use cases
Approval Chain Routing	→	Route invoices by supplier, PO type, and amount through multi-step approval flows
Named Exception Handling	→	Direct specific mismatches to appropriate roles (PO Requester, etc.)
Task Assignment & Escalation	→	Auto-assign exceptions or escalate through approval hierarchy
Auto Approval Logic	→	Enable auto-approval for invoices below threshold or validated with high confidence

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Only ZenLM + Mastermind enables true autonomous finance

It takes more than LLMs or simple workflow tools to transform finance operations into truly autonomous systems — where decisions are made without human intervention, risks are flagged intelligently, and approvals follow dynamic policy logic. It takes purpose-built AI models with structured outputs and an integrated understanding of finance data, policies, and hierarchies. You need a decision automation framework that can orchestrate actions based on AI insight.

Only Mastermind Automation Platform combines these requirements:

ZenLM's precise AI functions for high-accuracy decisions
A no-code orchestration engine for scalable process logic
Native integrations with ERP, AP, and T&E systems
Human-in-the-loop workflows where needed, with full explainability

Compare purpose-built finance AI vs generic AI process automation

Mastermind with ZenLM delivers true autonomous finance operations while generic solutions struggle with accuracy, integration, and governance challenges that limit their effectiveness.

Feature	ZenLM + Mastermind	Generic Process automation + LLM
Domain Specificity	Finance-trained AI models with structured outputs	Requires configuration and tuning
Accuracy & Hallucination Risk	F1: 76–98, near-zero hallucinations	F1: 37–65, up to 41% hallucination risk
Time to Value	2–4 weeks (pretrained + ready-to-use)	3–6 months of rule/ model building
Autonomy Level	End-to-end autonomous decisions and approvals	Partial automation, mostly workflow-based
Governance & Compliance	Built-in risk flags, override logic, and audit trail	Manual setup required
System Integration	Native to ERP, T&E, AP platforms	May need custom connectors
User Experience	Embedded workflows + AI explanations	Requires multiple system hops
Process Intelligence	Pattern detection, spend analysis, policy coaching	Limited to hardcoded rules or templates
Feedback Learning	Learns from users to improve outcomes	No structured improvement path

By the numbers

0%
Hallucinations in mission-critical tasks

90%+
Precision in audit models

80%
Reduction in manual review*

100%
Customizable, explainable AI with continuous improvement

95%+
Automation coverage across T&E and AP workflows

* Results may vary