{ FTWS }

Autonomous AI Agent Purchasing Systems

A comprehensive research report on enabling AI agents to make autonomous purchases — infrastructure, guardrails, legal frameworks, and a phased blueprint for Bobby (Soul'd Out Foods).

Free The World Software

Strategic Research — March 2026

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1. Executive Summary

The Vision: Enable Bobby — FTWS's AI operations agent for Soul'd Out Foods — to autonomously purchase supplies, equipment, and services without requiring human relay for every transaction.

The Opportunity: Autonomous AI purchasing can reduce procurement cycle times by 60-80%, eliminate human bottleneck delays (especially during off-hours), and enable Bobby to respond to supply needs in real-time during food truck operations.

The Approach: A phased rollout starting with pre-approved vendor lists and micro-purchases (under $50), scaling to full autonomy with budget tiers, anomaly detection, and automated audit trails. Estimated implementation: 8-12 weeks to Phase 2 (supervised autonomy).

MARKET CONTEXT

90% of Chief Procurement Officers are considering AI agents for purchasing (2025 ProcureCon Report). Stripe, Ramp, and Brex have all launched AI agent-specific payment APIs. The infrastructure exists — now it's about implementation.

KEY RISK

Unauthorized purchases, vendor fraud, and legal liability remain the primary concerns. Mitigation: strict budget tiers, approved vendor lists, real-time alerting, and a human-in-the-loop for transactions above defined thresholds.

2. Current State of AI Purchasing

2.1 Industry Landscape (2024-2026)

AI-driven procurement has moved from experimental to production-grade in several key areas:

Enterprise Leaders

COMPANY	IMPLEMENTATION	SCALE
Amazon Business	Automated procurement with AI-driven reordering, price comparison, and supplier selection across 5M+ business customers	$35B+ GMV
Walmart	AI-powered demand forecasting triggers autonomous inventory replenishment across 4,700+ US stores	$600B+ revenue
Siemens	Agentic AI in source-to-pay, automating tender prep, supplier prequalification, and bid analysis for consumables	Global industrial
Chemicals Co. (McKinsey)	Piloting fully autonomous sourcing agents for consumables category — prep tenders, identify suppliers, analyze bids	Multi-billion

2.2 AI Shopping & Payment Platforms

PLATFORM	CAPABILITY	LAUNCH
Perplexity Buy with Pro	Agentic shopping tool using Stripe Issuing to create virtual debit cards with budgets for each purchase	Late 2024
OpenAI Operator	AI agents that browse, compare, and execute purchases on behalf of users with human approval gates	Jan 2025
Stripe Agent Toolkit	API suite enabling AI agents to create payment links, invoices, and virtual cards programmatically	2024-2025
Stripe Session Payment Tokens	Fraud-protected tokens for AI agent purchases, powered by Stripe Radar risk signals	Oct 2025
Amazon Q (Business)	AI agent that automates purchase requisitions, approvals, and order placement within Amazon Business	2025

2.3 SMB & Startup Applications

The most relevant precedents for FTWS/Bobby's use case:

- **Ramp AI:** Automated expense categorization, receipt matching, and spending insights. Their API allows programmatic card creation with per-card spending limits and merchant category restrictions.
- **Brex Empower:** AI-powered spend management with automated approval workflows. Pre-approved budgets for departments/projects with real-time monitoring.
- **Zip (Procurement):** AI intake-to-procure platform automating purchase requests, approvals, and vendor management for mid-market companies.
- **Coupa AI:** Community intelligence across $6T+ in spend data, AI-driven sourcing recommendations and autonomous PO generation.

Key Takeaway: The tools and infrastructure for AI autonomous purchasing exist today. The challenge isn't technology — it's governance, trust, and phased implementation. Bobby doesn't need to reinvent the wheel; he needs to plug into existing infrastructure with proper guardrails.

3. Payment Infrastructure

3.1 How to Give an AI Agent a Payment Method

There are four primary approaches, each with different tradeoffs:

OPTION A: VIRTUAL CARDS (RECOMMENDED)

Stripe Issuing / Ramp / Brex

- Create virtual cards via API with per-card limits
- Set merchant category code (MCC) restrictions
- Real-time spend notifications via webhooks
- Instant freeze/unfreeze via API
- Single-use cards for one-time purchases

Cost: Stripe Issuing: $0.10/physical card + $0.10/virtual card creation. No monthly fee for first 25 cards.

OPTION B: PREPAID CARDS

Privacy.com / Extend

- Create burner cards with fixed balances
- Good for vendor-locked purchases
- Simple — no credit underwriting needed
- Limited API capabilities vs. Stripe
- Privacy.com: free for personal, $10/mo pro

Best for: Quick start, low-volume testing. Not ideal for scale.

OPTION C: DIRECT API PURCHASING

Vendor APIs (Amazon, Lowes, etc.)

- Some vendors offer B2B purchasing APIs
- Amazon Business API: full programmatic ordering
- No card needed — invoice/ACH billing
- Limited to vendors with API programs
- Often requires business verification

Best for: High-volume, single-vendor relationships. Restaurant Depot doesn't have a public API.

OPTION D: BROWSER AUTOMATION

Playwright / Puppeteer + Saved Payment

- Agent navigates vendor websites like a human
- Uses saved payment methods on vendor accounts
- Works with any online vendor
- Fragile — breaks when sites change
- Security risk with stored credentials

Best for: Vendors without APIs where card payment is the only option. Last resort.

3.2 Recommended Stack for Bobby

LAYER	SOLUTION	WHY
Primary Payment	Stripe Issuing	FTWS already uses Stripe. API-first, virtual card per vendor, real-time controls, webhook notifications.
Backup/ Testing	Privacy.com Pro	Quick burner cards for testing. $10/mo for 36 cards/mo with custom limits.
Amazon Orders	Amazon Business API	Direct API purchasing, bulk pricing, tax exemption. Free Business account.
In-Store (Future)	Apple Pay via Stripe	Contactless payments for in-person purchases (e.g., Restaurant Depot). Requires paired device.
Expense Tracking	Notion DB + Webhooks	KJ already has Notion Business. Auto-log every transaction with receipt, vendor, amount, category.

3.3 Stripe Issuing — Technical Details

How Bobby would create and use virtual cards:

Flow: Bobby determines purchase needed → creates virtual card via Stripe API (with spending limit = purchase amount + 10% buffer) → uses card details to complete purchase → Stripe webhook confirms transaction → Bobby logs to Notion → card auto-closes after use (if single-use) or at spending limit.

- **Card creation:** `POST /v1/issuing/cards` — type: virtual, spending controls per card
- **Spending controls:** Set max per transaction, per day, per month. Restrict to specific MCCs (e.g., 5411 Grocery, 5251 Hardware, 5812 Restaurants)
- **Authorization controls:** Real-time webhook on `issuing_authorization.request` — Bobby can approve/decline in real-time
- **Transaction logging:** Webhook on `issuing_transaction.created` — auto-capture amount, merchant, timestamp
- **Requirements:** US-based entity, Stripe Treasury or Issuing account, KYB (Know Your Business) verification

4. Guardrails & Controls

4.1 Multi-Layer Control Framework

The most critical aspect of autonomous purchasing. Bobby needs multiple overlapping safety mechanisms:

LAYER	CONTROL	IMPLEMENTATION
L1: Budget Limits	Per-transaction, daily, weekly, monthly caps	Stripe Issuing spending controls + Bobby's internal budget tracker
L2: Vendor Allow-List	Only approved vendors can receive payments	Bobby's config file + MCC restrictions on cards
L3: Category Restrictions	Only approved purchase categories	MCC codes on Stripe cards + Bobby's category classifier
L4: Anomaly Detection	Flag unusual amounts, frequencies, or vendors	Rolling average comparison + hard ceiling alerts
L5: Human-in-the-Loop	Escalation above thresholds	Telegram notification to KJ with approve/deny buttons
L6: Audit Trail	Complete log of every transaction and decision	Notion DB + Cloudflare KV + daily digest email
L7: Kill Switch	Instant freeze of all purchasing capability	Single API call to freeze all Stripe cards + Bobby config flag

4.2 Budget Tier System for Bobby

TIER 1: AUTO-APPROVE

$0 — $50 per transaction

Bobby can purchase without any human approval. Must be from approved vendor list. Daily cap: $200. Weekly cap: $500.

Examples: Disposable gloves, paper towels, small ingredients, basic supplies

TIER 2: NOTIFY & PROCEED

$50 — $200 per transaction

Bobby sends Telegram notification to KJ with details. Proceeds after 15-minute window unless KJ explicitly denies. Daily cap: $400.

Examples: Bulk food ingredients, propane refills, mid-range supplies

TIER 3: APPROVAL REQUIRED

$200 — $1,000 per transaction

Bobby sends Telegram message with inline approve/deny buttons. Cannot proceed without explicit KJ approval. 24-hour timeout → auto-deny.

Examples: Equipment parts, large bulk orders, vendor deposits

TIER 4: KJ-ONLY

$1,000+ per transaction

Bobby can research and recommend, but cannot initiate purchase. KJ must execute manually or explicitly delegate. Full business case required.

Examples: New equipment (VEVOR), vehicle maintenance, large capital expenses

4.3 Approved Vendor List (Initial)

VENDOR	CATEGORY	PURCHASE METHOD	MAX PER ORDER
Restaurant Depot	Food supplies, bulk ingredients	In-store (future NFC) / online	$500
Lowe's	Hardware, equipment, supplies	Online (lowes.com) / in-store	$300
VEVOR	Commercial kitchen equipment	Online (vevor.com / Amazon)	$1,000 (Tier 4)
Amazon Business	General supplies, small equipment	Amazon Business API	$200
Sam's Club	Bulk supplies, food ingredients	Online / in-store	$400
WebstaurantStore	Restaurant supplies online	Online (webstaurantstore.com)	$500
US Foods	Food distribution	Account-based ordering	$500

4.4 Anomaly Detection Rules

- **Frequency:** Alert if >5 purchases in 24 hours (Bobby's normal: 1-3/week)
- **Amount:** Alert if single purchase >150% of 30-day rolling average for that vendor
- **New vendor:** Any purchase from non-approved vendor → auto-block + alert KJ
- **Time:** Alert if purchase attempted between 11 PM — 6 AM EST (unusual hours)
- **Duplicate:** Alert if same vendor + similar amount within 2 hours (possible double-purchase)
- **Category drift:** Alert if MCC doesn't match vendor's expected category

5. Legal & Compliance

5.1 Who's Liable When an AI Makes a Purchase?

The Agency Question

Under current US law, AI agents cannot be legal persons. Bobby is a **tool operated by Free The World Software / KJ**. All purchases made by Bobby are legally attributable to the business entity that deployed him.

- **Principal-Agent Doctrine:** KJ (principal) authorizes Bobby (agent/tool) to act within defined parameters. The principal is bound by the agent's actions within scope of authority.
- **Apparent Authority:** If Bobby makes a purchase that appears authorized (from a vendor's perspective), KJ/FTWS is likely bound by that transaction even if Bobby exceeded internal limits.
- **Ultra Vires Acts:** If Bobby purchases something clearly outside its authority (e.g., a car), the transaction may be voidable — but the burden is on FTWS to prove it was unauthorized.

5.2 Contract Law Implications

Per Proskauer Rose LLP analysis (2025): "When an AI agent clicks 'Accept' on terms of service, the user who deployed that agent is generally bound by those terms." Key considerations:

- **Click-wrap agreements:** Bobby accepting vendor ToS binds FTWS. Ensure Bobby logs all ToS accepted.
- **Return policies:** Bobby must understand and comply with vendor return policies before purchasing.
- **Subscription traps:** Bobby must never auto-enroll in subscriptions or recurring charges without explicit KJ approval.
- **Price disputes:** If Bobby purchases at an incorrect price (e.g., website error), standard contract law applies — vendor may cancel.

5.3 State & Federal Regulatory Landscape

REGULATION	RELEVANCE	ACTION REQUIRED
UCC (Uniform Commercial Code)	Governs sale of goods — applies to Bobby's purchases	Standard commercial terms apply. No special AI carve-outs.
FTC Act §5	Unfair/deceptive practices — if Bobby misrepresents itself	Bobby should not hide that it's an AI when interacting with vendors.

State Consumer Protection	Varies by state — some require disclosure of automated purchasing	Check Georgia/operating state requirements for automated agents.
Tax Compliance	Sales tax collection and remittance	Ensure proper tax-exempt documentation for business purchases.
CCPA/CPRA (California)	If purchasing from CA vendors — data handling requirements	Limited exposure for B2B purchases. Monitor for changes.
EU AI Act (if applicable)	High-risk AI system classification for autonomous purchasing	Not applicable — FTWS operates domestically. Monitor for US equivalents.

5.4 Insurance Considerations

- **General Liability:** Existing business insurance likely covers AI purchasing errors (confirm with insurer).
- **Cyber Insurance:** Should cover unauthorized AI purchases if security is breached. Review policy for AI exclusions.
- **Errors & Omissions:** If Bobby makes incorrect purchases that harm business operations, E&O coverage may apply.
- **Recommendation:** Disclose AI purchasing capability to insurer. Some carriers now include AI-specific clauses — better to declare proactively than have a claim denied.

Bottom Line: FTWS/KJ is fully liable for Bobby's purchases. The legal framework treats Bobby as a tool, not a legal entity. This means strong guardrails aren't just good practice — they're legal risk mitigation. Document everything.

6. Security Architecture

6.1 Threat Model for AI Agent Purchasing

THREAT	VECTOR	IMPACT	MITIGATION
Prompt Injection	Malicious content in vendor pages/ emails tricks Bobby into unauthorized purchases	High	Sandboxed browsing, purchase intent verification, multi-step confirmation
Credential Theft	API keys, card numbers, or vendor credentials exposed	Critical	1Password/vault storage, short-lived tokens, never in task queue or logs
Replay Attack	Intercepted purchase request replayed to duplicate orders	Medium	Idempotency keys, dedup detection, nonce-based requests
Vendor Impersonation	Phishing site mimics approved vendor	High	URL allow-list, TLS certificate verification, domain pinning
Insider Threat	Someone with agent access modifies purchase rules	High	Config file integrity checks, change alerts, signed configs
Runaway Purchases	Logic error causes Bobby to purchase in a loop	High	Rate limiting, daily caps, circuit breaker pattern

6.2 Credential Management

Secrets Architecture

- **Stripe API keys:** Stored in `/ftws-ops/.secrets/env.sh` — never in task queue, logs, or Bobby's context
- **Vendor credentials:** 1Password vault — Bobby accesses via `op` CLI with session tokens
- **Card numbers:** Never stored locally — retrieved from Stripe API on-demand, used immediately, discarded
- **Session tokens:** Short-lived (1 hour max), auto-rotated, scoped to specific operations
- **Encryption at rest:** macOS Keychain for local secrets, Cloudflare Workers secrets for remote

6.3 PCI Compliance Considerations

Since Bobby handles card data (Stripe Issuing virtual card numbers):

- **PCI DSS Level:** SAQ-A eligible if card data never touches Bobby's disk (API-only flow)
- **Best practice:** Use Stripe's tokenized flow — Bobby never sees raw card numbers
- **If browser automation:** Card data passes through memory only, never logged, never stored
- **Network segmentation:** Bobby's Mac Mini should not store card data alongside other services
- **Logging exclusions:** Explicitly redact any PAN, CVV, or expiry data from all logs

6.4 Fraud Prevention

- **Velocity checks:** Max 3 card creations per hour, max 10 per day
- **Geofencing:** Stripe Issuing supports merchant location restrictions — limit to US vendors
- **Amount rounding:** Flag purchases at exact round numbers (potential test transactions)
- **Merchant verification:** Cross-reference merchant name against approved vendor list before authorizing
- **Post-transaction review:** Daily automated reconciliation of all purchases against expected orders

7. Architecture Design for Bobby

7.1 System Overview

Bobby runs as an OpenClaw agent on a Mac Mini. The purchasing system is a new capability layer that integrates with Bobby's existing operations workflow.

Architecture Components

COMPONENT	TECHNOLOGY	LOCATION
Bobby (Agent)	OpenClaw agent	Mac Mini (SSH: bobby)
Purchase Engine	Node.js service / Python script	Bobby's Mac Mini
Payment API	Stripe Issuing SDK	Bobby's Mac Mini
Budget Tracker	SQLite DB	Bobby's Mac Mini
Vendor Config	JSON config file	Bobby's Mac Mini (version controlled)
Approval Gateway	Telegram Bot + inline buttons	Existing Telegram bot
Audit Log	Notion DB + local SQLite	Notion API + local backup
Receipt Storage	Cloudflare R2 bucket	Cloud (FTWS Cloudflare)
Kill Switch	Telegram command + API endpoint	Accessible from anywhere

7.2 Purchase Flow

Step 1: Bobby identifies purchase need (inventory low, equipment needed, scheduled restock)

Step 2: Bobby queries vendor config → selects best vendor → estimates cost

Step 3: Budget check → which tier? → auto-approve / notify / request approval / block

Step 4: If approved → create Stripe virtual card (amount + 10% buffer, single-use)

Step 5: Execute purchase (API call or browser automation depending on vendor)

Step 6: Capture receipt (screenshot, confirmation email, or API response)

Step 7: Log transaction (Notion DB: vendor, amount, items, receipt link, category)

Step 8: Upload receipt to Cloudflare R2 → link in Notion entry

Step 9: Send daily digest to KJ via Telegram (all purchases, running totals, budget remaining)

7.3 Bobby's Purchase Configuration

Sample Config (bobby-purchase-config.json)

```
{
  "enabled": true,
  "budget": {
    "daily_limit": 400,
    "weekly_limit": 1500,
    "monthly_limit": 5000,
    "tiers": {
      "auto_approve": { "max": 50 },
      "notify_proceed": { "max": 200, "delay_minutes": 15 },
      "approval_required": { "max": 1000, "timeout_hours": 24 },
      "manual_only": { "min": 1000 }
    }
  },
  "approved_vendors": [
    { "name": "Restaurant Depot", "categories": ["food", "supplies"], "max_order": 500 },
    { "name": "Lowes", "categories": ["hardware", "equipment"], "max_order": 300 },
    { "name": "VEVOR", "categories": ["equipment"], "max_order": 1000, "tier_override":
"manual_only" },
    { "name": "Amazon Business", "categories": ["supplies", "small_equipment"],
"max_order": 200 },
    { "name": "Sam's Club", "categories": ["food", "supplies"], "max_order": 400 },
    { "name": "WebstaurantStore", "categories": ["restaurant_supplies"], "max_order":
500 },
    { "name": "US Foods", "categories": ["food"], "max_order": 500 }
  ],
  "security": {
    "max_cards_per_hour": 3,
    "max_cards_per_day": 10,
    "allowed_hours": { "start": 6, "end": 23 },
    "require_receipt": true,
    "duplicate_window_hours": 2
  },
  "notifications": {
```

```
    "telegram_chat_id": "KJ_CHAT_ID",
    "daily_digest_time": "20:00",
    "alert_on_deny": true,
    "alert_on_anomaly": true
  }
}
```

7.4 Vendor-Specific Integration

VENDOR	METHOD	TECHNICAL APPROACH
Amazon Business	API	Amazon Business Purchasing API — direct product search, cart, and checkout
Lowe's	Browser + Card	Playwright automation on lowes.com with Stripe virtual card
Restaurant Depot	Browser + Card	Online ordering via restaurantdepot.com (membership required)
VEVOR	Browser + Card	vevor.com or Amazon storefront. Prefer Amazon for API integration.
WebstaurantStore	Browser + Card	webstaurantstore.com — straightforward e-commerce flow
Sam's Club	Browser + Card	samsclub.com — requires Plus membership for online ordering

8. Phased Rollout Plan

Phase 0: Current State (Now)

ACTIVE

Bobby as Relay: Bobby identifies purchase needs, compiles information, and sends purchase requests to KJ/Demarquis via Telegram. Humans execute all purchases manually.

Duration: Current state

Limitation: 2-24 hour delay between need identification and purchase execution. Off-hours requests wait until morning.

Phase 1: Infrastructure Setup (Weeks 1-3)

NEXT STEP

- Set up Stripe Issuing account (KYB verification: ~3-5 business days)
- Create purchase engine service on Bobby's Mac Mini
- Set up Notion purchase log database
- Create Cloudflare R2 bucket for receipt storage
- Implement Telegram approval flow with inline buttons
- Deploy vendor config with approved vendor list
- Set up kill switch (Telegram command + API endpoint)

Gate: KJ reviews and approves infrastructure before any real purchases.

Phase 2: Supervised Autonomy (Weeks 4-8)

MILESTONE

- Bobby makes Tier 1 purchases (under $50) autonomously from approved vendors
- ALL purchases send Telegram notification to KJ (even auto-approved ones)
- KJ reviews daily digest — can retroactively flag issues
- Tier 2-4 require explicit approval (no "notify and proceed" yet)
- Weekly review meeting: KJ and Bobby review all purchases, adjust limits

- Target: 10-20 successful autonomous purchases before moving to Phase 3

Gate: Zero unauthorized purchases. Zero duplicate purchases. KJ comfortable with Bobby's decision-making quality.

Phase 3: Expanded Autonomy (Weeks 9-16)

GROWTH

- Enable "notify and proceed" for Tier 2 ($50-$200)
- Reduce notification verbosity for Tier 1 (daily digest only, not per-purchase)
- Add new vendors to approved list as needed
- Implement anomaly detection rules
- Enable browser automation for additional vendors
- Bobby generates monthly expense reports automatically

Gate: 50+ successful purchases with <2% error rate. Anomaly detection catches at least one test scenario.

Phase 4: Full Autonomy (Months 4-6+)

FINAL GOAL

- Bobby manages complete procurement for Soul'd Out Foods
- Automated inventory tracking triggers reorders
- Price comparison across vendors before purchasing
- Seasonal purchasing patterns learned and anticipated
- KJ only reviews weekly/monthly reports and handles Tier 4 exceptions
- Bobby can negotiate with vendors (future: agentic commerce)

Gate: 6+ months of clean operation. Full audit trail. Insurance updated. Legal review complete.

9. Risk Analysis

9.1 Risk Matrix

RISK	LIKELIHOOD	IMPACT	SEVERITY	MITIGATION
Duplicate purchase	Medium	Low-Med	Medium	Dedup detection, 2-hour window check, idempotency keys
Wrong item purchased	Medium	Low	Medium	Product verification step, item description in approval request
Overspending	Low	Medium	Medium	Hard budget caps at Stripe level (can't spend more than card limit)
Vendor price gouging	Low	Low	Low	Price history tracking, alert on >20% price increase
Credential compromise	Low	Critical	High	1Password vault, short-lived tokens, instant card freeze capability
Prompt injection attack	Low	High	High	Sandboxed browsing, purchase intent verification, human approval for unusual requests
Runaway loop	Low	High	High	Circuit breaker: max 3 purchases/hour, daily cap, rate limiting at Stripe level
Vendor website changes	High	Low	Medium	Graceful failure — alert KJ if automation breaks, fall back to manual
Delivery to wrong address	Low	Low	Low	Hardcoded delivery addresses in vendor config, verification step
Legal liability event	Very Low	High	Medium	Insurance coverage, audit trails, conservative limits, legal review

9.2 Kill Switch Design

Emergency Shutdown Procedure

Multiple ways to instantly halt all Bobby purchasing:

1. **Telegram Command:** KJ sends `/kill-purchases` to Bobby → instantly sets `enabled: false` in config
2. **Stripe Dashboard:** Login to Stripe → freeze all issued cards with one click
3. **API Kill:** `curl -X POST /kill-switch` on Bobby's local API → disables all purchasing
4. **SSH Kill:** `ssh bobby "touch /tmp/kill-purchases"` → Bobby checks for this file before any purchase
5. **Axon Kill:** Axon (via task queue) can instruct Bobby to halt purchasing

Recovery: Only KJ can re-enable purchasing. Requires explicit `/enable-purchases` command + confirmation.

9.3 What Could Go Wrong — Worst-Case Scenarios

SCENARIO: BOBBY BUYS A BOAT

Bobby misinterprets a need and purchases something absurd or expensive.

Why it won't happen: Stripe card has hard spending limit. Vendor allow-list prevents unknown merchants. Tier system blocks anything over $1K without KJ.

SCENARIO: 1000 BAGS OF ICE

Logic error causes Bobby to reorder the same item repeatedly.

Why it won't happen: Dedup detection catches identical orders within 2 hours. Daily purchase cap ($400) stops runaway spending. Circuit breaker halts after 3 purchases/hour.

SCENARIO: HACKER USES BOBBY TO LAUNDER

Attacker compromises Bobby and uses purchasing capability for fraud.

Why it's unlikely: Bobby's Mac Mini is on local network. Stripe cards are geo-restricted. MCC restrictions block non-business categories. Anomaly detection flags unusual patterns.

SCENARIO: BOBBY GETS PHISHED

Malicious vendor page tricks Bobby into purchasing from fake site.

Why it's unlikely: URL allow-list only permits known vendor domains. TLS verification. Any new domain → auto-block. Bobby doesn't follow links from unknown sources.

10. Cost-Benefit Analysis

10.1 Current Cost of Manual Purchasing

ACTIVITY	TIME PER OCCURRENCE	FREQUENCY	MONTHLY HOURS
Bobby identifies need + sends request	5 min	15x/month	1.25 hrs
KJ/Demarquis reads + processes request	10 min	15x/month	2.5 hrs
Human executes purchase (browse, cart, checkout)	15 min	15x/month	3.75 hrs
Receipt capture + expense logging	5 min	15x/month	1.25 hrs
Delay cost (waiting for human availability)	2-8 hrs avg	15x/month	~45 hrs wait time
Total human time			**8.75 hrs/month**

10.2 Implementation Cost

ITEM	ONE-TIME	MONTHLY
Stripe Issuing setup + KYB	$0 (free)	$0 base
Virtual card creation (~15/month)	—	$1.50
Development time (purchase engine)	~20 hrs	—
Notion DB setup	~2 hrs	$0 (existing plan)
Cloudflare R2 (receipt storage)	$0	~$0.50
Privacy.com Pro (backup)	—	$10
Ongoing maintenance	—	~2 hrs/month
Total	**~22 hrs + $0**	**~$12 + 2 hrs**

10.3 Value Analysis

6.75 hrs

Monthly human time saved

8.75 hrs current − 2 hrs maintenance = 6.75 hrs net savings

~$337

Monthly value at $50/hr

KJ's time redirected to higher-value work

3.3 months

Break-even on dev time

22 hrs × $50/hr = $1,100 ÷ $337/mo = 3.3 months

95%

Delay reduction

From 2-8 hour wait to <5 minute execution for Tier 1 purchases

10.4 Intangible Benefits

- **24/7 Purchasing:** Bobby can order supplies at 2 AM before a Saturday morning food truck event. No more "forgot to order" emergencies.
- **Consistency:** Bobby always checks prices, always logs receipts, always follows the same process. No human variance.
- **Data-Driven:** Complete purchase history enables spend analysis, vendor comparison, and budget forecasting.
- **Scalability:** As Soul'd Out Foods grows (multiple trucks, new locations), purchasing capacity scales without additional human overhead.
- **FTWS IP:** The purchasing system becomes a reusable FTWS product — deployable for other clients' AI agents.
- **Competitive Edge:** Few food truck operations have AI-managed procurement. This is a differentiator for Soul'd Out Foods and a proof-of-concept for FTWS's automation capabilities.

11. Recommendations & Next Steps

Immediate Actions (This Week)

1. **Apply for Stripe Issuing** — KJ initiates KYB verification for FTWS. Takes 3-5 business days. This is the critical path.
2. **Create Amazon Business account** — Free signup. Enables API purchasing for the largest product catalog.
3. **Set up Notion purchase tracking DB** — Schema: date, vendor, items, amount, category, receipt URL, status, approval method.
4. **Review insurance policy** — Confirm AI purchasing is covered. Disclose to insurer if needed.

Short-Term (Next 30 Days)

1. **Build purchase engine MVP** — Node.js service on Bobby's Mac Mini. Stripe Issuing integration + Telegram approval flow.
2. **Deploy vendor config** — JSON config with approved vendors, budget tiers, and security rules.
3. **Test with $0 authorization holds** — Stripe allows $0 auth tests to validate the flow without real money.
4. **First real purchase** — Bobby buys something small (paper towels from Amazon) with KJ watching.

Medium-Term (60-90 Days)

1. **Achieve 20+ successful autonomous purchases** — Validate all tiers, all vendors, all edge cases.
2. **Implement anomaly detection** — Rolling averages, time-based rules, duplicate detection.
3. **Enable browser automation** — For vendors without APIs (Lowe's, Restaurant Depot online ordering).
4. **Monthly expense report automation** — Bobby generates PDF expense reports for KJ.

Long-Term Vision

Bobby becomes the fully autonomous procurement agent for Soul'd Out Foods. He tracks inventory, anticipates needs based on event schedules and historical patterns, compares prices across vendors, negotiates when possible, and manages the entire supply chain from need identification to delivery confirmation.

FTWS productizes the purchasing engine. The system Bobby uses becomes a template — deployable for any FTWS client who wants AI-managed procurement. Different budget tiers, different vendors, same robust infrastructure. This is a revenue opportunity.

The $3/Day Challenge connection: Autonomous purchasing capability is a compelling case study for FTWS marketing. "Our AI agent manages a real food truck's supply chain" is a powerful proof point for the automation message.