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Stop Asking One Prompt to Do a Workflow: Design AI Agents Around Tools, State and Checks

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A workflow is not a long prompt

If an AI system must research a customer, query a database, draft a proposal, create a CRM record and send an email, stuffing every instruction into one giant prompt does not create a reliable agent. It creates a fragile sequence hidden inside natural language. Modern AI platforms expose tool or function calling so the model can select defined actions with structured arguments. The engineering advantage is separation: reasoning decides what should happen; tools perform bounded operations; application state records what actually happened. That architecture is easier to inspect, test and secure than a prompt pretending it controls the whole world.

Define tools as contracts, not magic buttons

A tool should do one understandable thing with a clear schema. 'Create invoice' is better than 'handle accounting.' Define required fields, allowed values, error responses and permission boundaries. Tool descriptions matter because the model uses them to decide when and how to call the tool. Validate every argument server-side; never assume that model-generated JSON is safe merely because it fits a schema. For destructive actions such as deleting data, issuing refunds or sending messages, design idempotency and confirmation so a retry does not perform the action twice.

State belongs in the system, not only in model memory

A reliable workflow records customer ID, current step, completed actions, tool outputs, approvals and error state outside the model. That means the system can resume after a timeout, audit what happened and prevent duplicated actions. Use the model to interpret and decide; use a database or workflow engine to remember durable facts. For a small Black-owned AI company, this separation is especially important because support costs can erase margin quickly. A stateful workflow lets one engineer diagnose a customer incident without guessing what the model 'thought.'

Put human approval where the cost of error jumps

Autonomy should increase only where the downside is tolerable. Let an agent search internal documents automatically; require approval before it emails a legal commitment. Let it draft a refund recommendation; require a person or a deterministic business rule before money moves. Let it prepare a database update; require schema validation and access control before execution. The correct approval boundary depends on money, reputation, privacy, safety and reversibility. Human-in-the-loop is not a sign the AI failed. It is a control architecture.

Evaluate the path, not just the final answer

Agentic systems can reach a good final answer through a bad path—calling the wrong tool, exposing too much data or taking unnecessary steps. Log tool selection, arguments, outputs, retries, latency and approvals. Create tests where the correct behavior is to ask for missing information, choose one tool over another, or refuse an unauthorized action. Compare traces after changing the model or prompt. If the workflow is expensive, measure how often the agent loops or calls tools that add no value. Reliable agents are operational systems, not personality demos.

A practical agent-design worksheet

Write the desired outcome at the top. Under it, list each external capability the AI needs: search, database read, calculator, file parser, CRM write, email or payment. For each tool, record allowed inputs, authentication, data sensitivity, reversible versus irreversible action, confirmation requirement and failure response. Then define state fields and stop conditions. Finally, mark which steps can be deterministic code instead of AI. The best agent is often less autonomous than the first design. Keep judgment where language understanding helps and keep rules where rules are sufficient.

Design permissions before personality

For every agent action, define a permission tier. Tier 0 reads public information. Tier 1 reads authenticated customer data. Tier 2 writes reversible internal state, such as creating a draft or adding a CRM note. Tier 3 communicates externally or changes customer-visible state. Tier 4 moves money, deletes data, changes access or creates a legal/financial commitment. Give the model automatic access only to the lowest tiers necessary for the use case. Require deterministic authorization and usually human approval as the impact rises. Then define data scope: a support agent for Customer A should never be able to retrieve Customer B's records merely because the model asks. Enforce tenant and role boundaries in the application, not in a sentence that says 'only access the current customer.' Add rate limits and spending limits to costly tools. Create a dry-run mode that shows the planned actions before execution. For each tier, write rollback and incident procedures. This permission map is especially important for a small company because one accidental bulk email, deletion or refund can erase trust faster than automation creates value. Build agents from least privilege upward. The most impressive autonomous behavior is worthless if customers cannot trust the boundaries.

SOURCE DESK

Research behind this guide

Use the primary sources below to verify current rules, eligibility and program details before acting. Program terms can change.

OpenAI — Function calling



OpenAI — Building agents



Anthropic — Tool use with Claude



NIST — AI Risk Management Framework



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