

When a decision feels complicated, it is tempting to ask AI for a faster answer: “What’s the best strategy?” or “Which option should we choose?” But if the question is built on shaky assumptions, a quick answer can simply make a bad premise sound convincing.

First principles mode takes a different route. Instead of starting with familiar playbooks or asking what companies usually do, it breaks a problem into its basic facts, constraints, and objectives. Then it rebuilds an approach from the ground up.

In a multi-model AI workflow, first principles [multiai.pro](#) mode can mean bringing several AI models into one shared thread, giving them the same problem and context, and asking them to reason through it in a structured way. The models can work in parallel, challenge one another’s assumptions, or proceed sequentially through defined stages.

The goal isn’t to make AI sound more rigorous. It’s to make the decision itself more rigorous: separate facts assumptions, reframe the problem, and rebuild approach based on what is actually true.

What Does “First Principles” Mean?

A first-principles approach starts with the most fundamental elements of a problem: what you know, what you want, and what limits your options. Rather than treating convention as evidence, it asks what can be established and what follows from it.

For example, a team might say, “We need a large launch campaign because that’s how products like ours enter the market.” First principles reasoning asks:

- What outcome does the launch need to produce?
- Which audience needs to take action?
- What evidence supports the belief that a large campaign is necessary?
- What budget, time, or channel constraints apply?
- Could a smaller test produce the same learning at lower cost?

The familiar playbook may still turn out to be right. The difference is that the team has tested the reasoning instead of assuming that convention settles the question.

First Principles Mode in Multi-Model AI Chat

Multi-model AI chat lets people work with more than one AI model in a shared thread. Everyone—people and models—can reference the same question, background, and prior responses. That shared context matters: without it, you may spend more time reconciling different inputs than evaluating the decision.

First principles mode adds a method to that collaboration. Instead of asking several models for independent opinions and picking the most confident answer, you give them a structured task. They can identify the underlying facts, expose assumptions, test the logic, and propose options that fit the constraints.

Models can contribute different strengths: one may be useful for analysis, another for generating alternatives, and another for reviewing the argument. But multiple models do not automatically mean better judgment. They can repeat the same conventional wisdom, overlook the same missing information, or agree with a flawed premise. A structured process helps turn variety into useful scrutiny.

The Basic First Principles Workflow

1. **State the decision.** Make the question specific enough to answer. “Should we acquire Skybridge for \$42 million?” is clearer than “What should we do about growth?”
2. **Separate facts from assumptions.** Record what is known, what is believed, and what still needs verification.
3. **Define the objective and constraints.** Identify what success means, along with limits such as price, timing, risk tolerance, and available resources.
4. **Reframe the problem.** Ask whether the initial question captures the real decision. Is the issue whether to buy the company—or whether the deal creates enough value at a particular price?
5. **Build options from the fundamentals.** Consider alternatives, including doing nothing, negotiating different terms, or pursuing a smaller test.
6. **Compare the options and identify open questions.** Make the reasoning visible, note uncertainties, and decide what evidence would change the recommendation.

This process is especially useful when a decision is expensive, hard to reverse, or influenced by strong opinions. It does not eliminate uncertainty; it makes uncertainty easier to see and manage.

The \$42M Acquisition Example: Skybridge

Consider a hypothetical acquisition discussion in which a company is evaluating Skybridge at a purchase price of \$42 million. The price is a starting point for analysis—not proof that the deal is either attractive or overpriced. The answer depends on what the buyer receives, what risks come with it, and what alternatives exist.

A conventional approach might begin with a market multiple or a comparable transaction. Those can be useful inputs, but first principles reasoning asks what has to be true for this specific deal to make sense.

Category Questions to ask about Skybridge Facts to verify What are the company’s actual revenue, margins, customer retention, liabilities, and contractual obligations? Assumptions to test Will customers stay after the acquisition? Can the buyer realize expected cost savings or growth? How much integration effort will be required? Objective What strategic or financial outcome must the acquisition deliver, and over what time horizon? Constraints How much capital can the buyer commit? What risks, financing limits, or timing requirements matter? Alternatives Could the buyer partner with Skybridge, negotiate a lower price, structure contingent payments, build internally, or walk away?

Now the question can be reframed. Rather than asking, “Is \$42 million a reasonable price?” the buyer can ask, “Under which verified conditions would paying \$42 million create more value than the best available alternative?”

That reframing changes the work. The team might model several scenarios, distinguish confirmed revenue from projected growth, examine customer concentration, and estimate integration costs. It could also identify deal terms that reduce exposure if a key assumption proves wrong. For instance, an earn-out might link part of the consideration to future performance—if it is practical, enforceable, and aligned with both parties.

AI models can help organize this analysis, surface missing questions, and challenge the logic. They cannot establish that a financial figure is accurate just by repeating it. The buyer still needs reliable evidence, expert review where appropriate, and accountable human judgment. First principles mode helps make those boundaries explicit.

Parallel vs. Sequential Workflows

There are two common ways to organize multi-model work. In a parallel workflow, several models analyze the same prompt at the same time. In a sequential workflow, the output from one stage informs the next.

Use parallel workflows to widen the search

Parallel work is useful when you want independent perspectives before settling on a direction. For example, separate models could identify acquisition risks, propose deal alternatives, or list assumptions that need diligence. Because each begins from the shared context, you can compare where their reasoning converges or diverges.

Parallel workflows are a good fit for:

- Generating a broad set of options.
- Finding overlooked risks or questions.
- Testing whether a recommendation depends on one model's interpretation.
- Getting an initial landscape before deeper analysis.

Use sequential workflows to build a chain of reasoning

Sequential work is useful when later steps depend on earlier outputs. One model might first classify claims as facts, assumptions, or unknowns. A second can use that inventory to identify decision criteria. A third can compare options against those criteria, and a final reviewer can look for gaps or unsupported conclusions.

A sequential workflow is a better fit when the task has clear stages, such as preparing a diligence memo, reviewing a campaign brief, or building a recommendation that must be traceable from evidence to conclusion.

Workflow Best for Watch out for Parallel Exploration, alternatives, independent critiques Models may produce overlapping answers or repeat the same assumptions. Sequential Structured analysis, staged research, review and synthesis An early error can carry through later stages unless it is checked.

For consequential decisions, a hybrid often works well: start in parallel to generate independent views, then proceed sequentially to test the strongest options against verified facts and explicit criteria.

Orchestration Modes for Structured Work

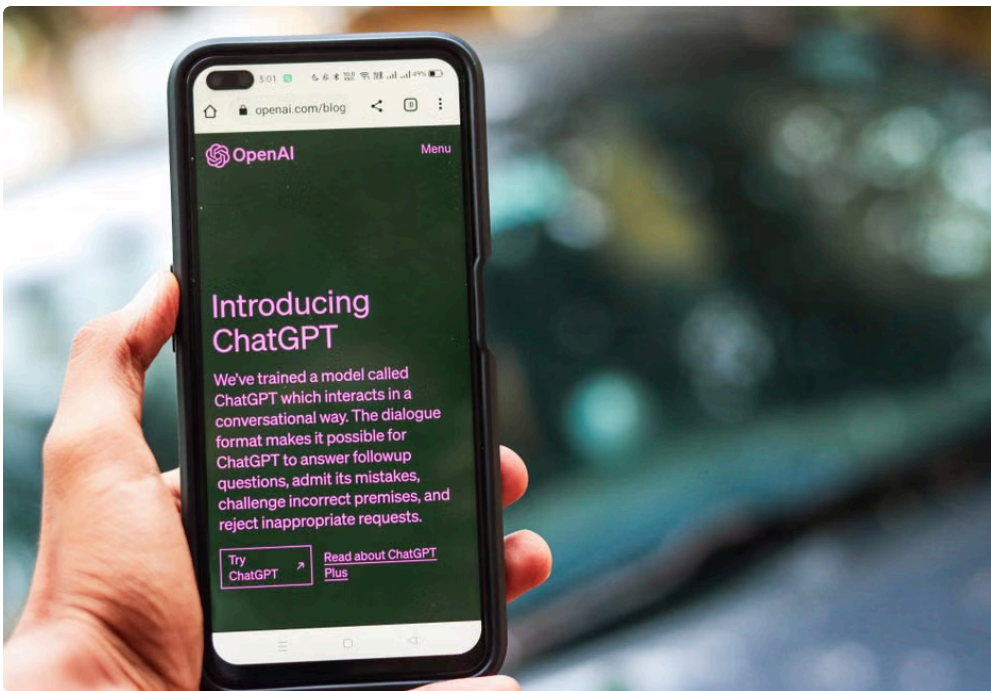
Orchestration is the process of deciding how models contribute, in what order, and under what instructions. For structured work, it helps to assign each stage a specific job instead of asking every model to “analyze everything.”

Decompose

Break the request into smaller questions. In the Skybridge example, those might include price, strategic fit, financial quality, integration risk, and alternatives.

Assign roles

Give each model a clear task, such as “identify unsupported assumptions” or “propose the strongest case against the acquisition.” Roles should encourage different kinds of analysis, not invite models to pretend to have expertise or access they do not have.



Sequence and review

Set the order of work. A fact-and-assumption inventory should usually come before a confident recommendation. Include a review step that checks whether the conclusion follows from the evidence and whether unresolved questions are clearly labeled.

Synthesize

Bring the outputs together in the shared thread. The synthesis should preserve important disagreements and explain which evidence, criteria, or judgment led to the final view. It should not flatten every response into a single answer just for the sake of consensus.



Disagreement Is a Signal, Not a Failure

When models disagree, it can be tempting to ask for another round until they converge. But disagreement may be the most valuable result of the process. It can reveal that the problem is underspecified, that evidence is missing, or that different models are optimizing for different goals.

Suppose one model views the \$42 million Skybridge price as defensible if projected growth is achieved, while another objects that the case relies too heavily on customer retention. That gap points to a concrete diligence question: what evidence supports retention after a change of ownership? The productive response is not automatically to average the opinions. It is to find out what drives the difference.

Use disagreement to ask:

- Are the models using the same facts and assumptions?
- Are they interpreting the objective or constraints differently?
- Does one argument depend on evidence that has not been verified?
- What information would help resolve the difference?

Agreement is not proof, either. Several models may echo a conventional answer because they share similar patterns in their training data. Treat convergence as a reason to inspect the reasoning, not as a substitute for verification.

When Should You Use First Principles Mode?

Use it when the stakes justify the extra structure: strategic choices, acquisitions, pricing decisions, product direction, resource allocation, and other situations where hidden assumptions can be costly. It is also useful when smart people disagree, when a familiar playbook feels unsatisfying, or when the problem has been framed so broadly that advice is vague.

It may be unnecessary for low-stakes tasks with clear instructions, such as reformatting a note or summarizing a straightforward document. First principles mode is not a requirement to overanalyze. It is a way to add rigor where it can change the quality of a decision.

A Practical Prompt to Get Started

Try this prompt in a multi-model shared thread:

"Help me analyze this decision from first principles. First, restate the decision and separate verified facts, assumptions, and unknowns. Then identify the objective and constraints. Reframe the problem if the original question is too narrow. Generate viable options, including doing nothing. For each option, show the reasoning, key risks, and evidence needed. Do not force consensus: explain meaningful disagreements between models and what could resolve them. End with a provisional recommendation and clearly state what would change it."

For a Skybridge analysis, add the \$42 million price as an input and label all other deal details that have not been verified. That keeps the discussion grounded without letting a single number anchor the conclusion.

Build the Answer, Don't Borrow It

First principles mode is a disciplined way to move from a vague question to a decision you can explain. Multi-model AI chat can help by putting multiple perspectives in one shared thread, while parallel and sequential workflows give those perspectives a useful structure.

The essential habits are simple: separate facts from assumptions, reframe the problem when needed, and rebuild approach from the objective, constraints, and evidence. When models disagree, investigate the source of the difference. The result may not be certainty—but it can be a clearer, more defensible decision.