

# The AI Labor Playbook: How to Build, Lead, and Scale Generative AI and AI Agents in Your Organization

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## 1. Introduction

**AI isn't just a tool—it's a new kind of labor.**

As organizations integrate AI labor into their workflows, the most important strategic shift is not technical—it's conceptual. The core of the new mindset is simple: **AI is labor, not software**. Leaders must stop thinking of AI as a tool to be embedded and start treating it as a **workforce to be led, developed, and scaled**. This means moving from procurement thinking (“Which AI product should we buy?”) to labor strategy thinking (“How can we unlock scalable cognitive AI labor capacity, and who in our organization is empowered to lead it?”). It requires understanding that every architectural, training, and procurement decision shapes the internal AI labor market—and either expands or constrains what the organization can do with it.

Prompts are tasks. Chat is the interface to assign tasks to the AI labor market. AI models are programmable workers—ones that need oversight, guidance, and leadership. As with human labor, your return on investment depends on who can access it, how well they are trained to lead it, and how efficiently it is deployed across systems. AI labor is abundant, fast, scalable, and powerful—but only if your organization has the right strategy for unlocking and managing it.

ChatGPT and its competitors aren't just tools—they're AI workers, deployed through what we call *labor-to-token exchanges*, where *prompts* act as instructions describing the work to be done and *tokens* are how the work is measured and priced. The efficiency and agility of these exchanges are now critical to organizational performance. Simple architectural decisions—like paying for chat in every single software tool—can quietly create massive inefficiencies in your AI labor market, limiting which tasks AI can perform, how fast it can act within an organization's systems, and how affordably it scales.

**Despite what you may think, AI labor doesn't manage itself.** Generative AI can produce ideas, write code, simulate markets—but only if the people inside your organization know how to identify the right opportunities, craft effective prompts, and supervise the results. This is why innovation won't come from paying for “AI” in every product. It comes from building an organization **where people are empowered and equipped to lead AI labor**.

One of the greatest barriers to effectively deploying AI labor is that almost no one grew up working this way. We were taught to write emails, manage spreadsheets, and maybe code—but not to collaborate with AI labor that can generate ideas, write software, simulate customers, or analyze datasets through conversation. The reality is that directing AI labor is a new kind of skill—one that blends communication, problem-solving, and system design. And most people, including high-performing professionals, simply haven't been trained to do it well. [Training people how to work with AI labor is essential to success.](#)

Because AI labor is now so cheap, fast, and plentiful, the greatest returns come not from centralizing it in specialized teams, but from **distributing it widely across the organization**—putting it in the hands of every single person. Its low cost, speed, and flexibility make it well-suited to support everyday decision-making, exploration, and creative work at every level, not just in technical or executive functions. But to capitalize on this potential, organizations must train, empower, and inspire their workforce to recognize where AI labor can augment their roles, and how to lead it effectively. This requires a combination of training and mindset shifting. Everyone needs to understand that they now have access to a new kind of supporting collaborator, and that learning how and when to engage this supporting labor is becoming a core part of modern work.

This paper explores the key characteristics of this new AI labor—its flexibility, speed, programmability, and reliance on human guidance—and how these characteristics impact two core strategic objectives for leaders.

1. First, how to **maximize access to the AI labor market**, ensuring the organization can source the most capable models at the best cost and scale them efficiently.
2. Second, how to **deploy AI labor across the organization**, which requires empowering and inspiring every employee to lead AI labor in support of their goals.

These are not just technical challenges—these are strategic choices that shape how work gets done, who gets to innovate, and how quickly an organization can adapt. This paper offers a framework for reasoning about AI labor, discusses a system for valuing its work through labor-to-token exchanges, and provides practical guidance for aligning systems, people, and strategy around this model of using AI labor to support human work.

## 2. The Evolution of AI Labor

The rapid advancement of generative AI has opened a new frontier in how we conceptualize and deploy labor. At its core, generative AI allows organizations to convert traditionally human-centric tasks—software engineering, strategic ideation, consulting analysis, customer simulation, and more—into *token exchanges*, in which the labor is executed by AI through language-based instructions, known as prompts. For example, an executive may prompt ChatGPT to “generate three innovative marketing campaigns” and get ideas in seconds -- a task that might have required days or weeks if it relied on hiring an outside marketing firm. A software engineer may rely on Claude to “write technical documentation or unit tests” for newly written code, which might have taken the developer hours.

Every time a user types in one of these prompts, such as “analyze the potential impact of this change in PTO policy on our overall budget,” they are “trading” tokens for AI labor. This shift represents not just an automation of tasks, but a transformation of labor itself into a more fluid, scalable, and programmable form. These AI-powered exchanges are fundamentally changing the speed, cost, and structure of work, offering organizations new levers for capacity expansion, innovation, and strategic agility. A key difference with the computing of the past is that the AI labor can be deployed on cognitive tasks, like “how might we show better appreciation of our grants administrators to improve morale and acknowledge the vital work they do,” that could previously not be done by a computer.

Importantly, unlike past computing paradigms where humans had to write code to control machines, tokens allow people to direct AI labor through natural language. This means work can be delegated to AI by anyone—not just developers or technical specialists—using instructions that resemble everyday communication. Natural language is automatically translated into “tokens”, which are the inputs to these AI models. In effect, **labor has become programmable in natural language**, opening the door for a much broader segment of the workforce to lead, create, and automate through AI.

This framing allows us to reimagine many traditional labor tasks, such as creating a strategy document, as interactions with an intelligent AI labor through prompts. Instead of writing the first draft of a blog post, a marketing associate may now prompt an AI to generate three versions of it, then edit and finalize. Instead of spending hours writing integration code for a 3rd party’s computer system, a developer may describe the problem in natural language and receive working code within seconds. Rather than convening a physical focus group, a researcher might simulate different buyer personas and query their preferences through prompt-driven dialogue.

Consider the following examples of current AI labor usage:

- **Software Engineering:** Writing boilerplate code, generating unit tests, scaffolding REST APIs, converting between languages (e.g., Python to TypeScript), or refactoring legacy code can all be prompted and completed via token exchanges.
- **Strategic Ideation:** A leadership team might prompt an AI to brainstorm five competitive responses to a new market entrant, or simulate a board meeting debate between different strategic viewpoints.
- **Consulting & Analysis:** A manager might upload a business case, ask for a SWOT analysis, and then request a reformatted PowerPoint summary tailored to different stakeholders—marketing, operations, finance.
- **Customer Insight & Persona Simulation:** Marketing teams can simulate a cohort of Gen Z consumers reacting to a product pitch or explore how a skeptical enterprise buyer might raise objections.
- **Training & Onboarding:** Instead of static training modules, new employees can interact with AI-driven tutors that simulate real customer calls, compliance reviews, or technical troubleshooting scenarios.
- **Academic Work:** A researcher may prompt AI to summarize a dense article, translate findings into layman’s terms, or identify contradictory evidence from a broader corpus.

- **Policy & Governance:** A university committee may explore the implications of a proposed policy by asking the AI to simulate reactions from faculty, students, and administrators with varied interests and values.
- **Operations Support:** AI can generate internal process documentation, write or debug scripts for automation tools, and assist in triaging support tickets based on urgency and complexity.

### 3. What is a Labor to Token Exchange?

A **labor to token exchange** refers to the process of converting a task traditionally performed by a human into a tokenized interaction with a generative AI system. In this context, “tokens” refer to the units of input and output language processed by a large language model (LLM), such as OpenAI’s GPT-4o model. When a human issues a prompt to an AI system and receives a useful result—whether it’s a block of code, a marketing slogan, a simulated customer persona, or a detailed report—this constitutes an exchange of labor for tokens. Each token has a cost associated with it. The labor has been externalized and executed through language and computation.

**But what exactly are tokens?** In the context of generative AI, *token counts* are the measurement of work. Each token represents a small chunk of language—words or word fragments—that are used every time a large language model (LLM), such as ChatGPT, processes input (e.g., reading the instructions in your prompt), or generates output, like writing a set of personalized interview questions for a job candidate. When you type a prompt into a system like ChatGPT, your words are converted into tokens to express your request; when the AI responds with an answer, it outputs tokens to generate that response and those tokens can be translated back into human language.

Your usage of the model is priced in tokens -- how many tokens were put into the model to process your request and how many tokens you got out of the model in response. Each labor-to-token exchange has a cost, measured in these tokens, and that cost reflects the scope and complexity of the task being performed. If you provide a long policy document to analyze, you are adding tokens to the input – more work for the AI labor. If you ask the model to write a very long report, you are adding tokens to the output, which is increasing the amount of work the AI labor does. The token is not just a technical unit—it is the economic unit of AI labor, shaping how work is priced, scaled, and accessed.

These token exchanges represent labor not just in terms of computation, but cognition—tasks that require synthesis, judgment, and iteration. In many cases, these exchanges now approximate or even exceed human performance in speed and breadth, especially for well-structured tasks that cross-domains and transcend the expertise of any single human.

Yet, tokenized labor is not a uniform substitute for traditional human effort. The value and fidelity of AI labor can vary widely by task. For example, a marketer may prompt ChatGPT to “simulate customer sentiment about their product” and ChatGPT’s response may outperform a traditional focus group in aggregate insight but may lack the nuance or real-world friction points that would

be uncovered through in-person discussion. The fidelity of the exchange depends heavily on the skill of the human typing the prompt, the information provided in the prompt, and the oversight structure used to supervise AI outputs.

Hiring a bunch of people doesn't solve a problem. Human labor has to be organized. In the same way, AI labor has to be organized and managed as well. The exchange of tokens for AI labor is not frictionless. Like managing people, managing AI labor involves oversight, calibration, and refinement. Prompting well is a skill; verifying output is a necessity. The cost of human labor involved in supervising these exchanges—spot-checking for hallucinations, tuning workflows of prompts / agents, and stitching together multiple partial outputs—must be considered in evaluating the value of the exchange. The decisions that IT makes can have a dramatic effect on the way that AI labor can be organized and deployed, as we discuss later.

Crucially, humans remain at the heart of this transformation—not only as supervisors of AI labor and orchestrators of token exchanges, but as the spark that drives their most meaningful outcomes. It is the human workforce that provides the creativity, curiosity, ethical reasoning, and empathy that AI cannot replicate. **Human workers are not being replaced—they are being repositioned to lead AI labor. Their engagement, morale, and sense of purpose are essential to the success of this shift.** For tokenized AI labor to generate real value, organizations must empower individuals to use these tools to amplify their own thinking, deepen their insight, and enhance the enjoyment and meaningfulness of their work. A culture that supports exploration, continuous adaptation, and worker agency will unlock far greater value than one that treats token exchanges as mere cost-cutting substitutions.

Ultimately, a labor to token exchange is not a one-to-one substitution. It is a reconfiguration of the labor process, where humans increasingly become orchestrators, supervisors, and integrators of computational AI labor delivered through language. Recognizing this shift—and learning to optimize for it—is central to modern organizational strategy.

To succeed, leaders need to reason about when and how to convert traditional labor into token exchanges, how to quantify the oversight and integration costs, and how to identify the highest-leverage opportunities for value creation. We argue that leaders must not only adopt generative AI tools—they **must teach their organizations to think differently about labor itself**. The institutions that successfully master labor-to-token conversion will be positioned to lead in an era defined by agility, augmented intelligence, and scalable innovation.

From people to IT infrastructure to valuation models, the message is clear: this transformation is not about machines doing more work. It's about **humans scaling and doing more meaningful work—with the help of machines that work more like humans think**.

## 4. From Automation to Amplification: Rethinking the Organizational Mission

AI labor doesn't replace the need for human insight—it **requires it**. Every token exchange must be guided, supervised, and inspired by people who understand the goals, context, and nuances of the work. Viewing AI labor purely as a path to eliminate human labor misses the far greater opportunity: using it to expand organizational capacity, creativity, and capability. Generative AI isn't a substitute for human thinking—it's an amplifier. Without human leadership to direct it toward meaningful tasks, AI labor risks becoming underused, misapplied, or misaligned with strategic goals. The real transformation comes when humans remain at the center—not as cogs to be replaced, but as leaders who orchestrate new forms of work and unlock entirely new value.

Too often, new technologies are introduced with a narrow focus on cost-cutting—streamlining operations, eliminating roles, or reducing headcount. But labor-to-token exchanges open a very different kind of opportunity. The most important strategic shift is recognizing that this transformation is **not about doing the same things with fewer people**. It's about **doing more, doing new things, and unlocking latent capacity for innovation** across the organization. The historical lesson from every major technological disruption—from electricity to the Internet—is clear: the greatest returns go to those who focus on *growth, not austerity*.

Generative AI enables organizations to convert previously unscalable labor into programmable **on-demand cognitive capacity**—unlocking entirely new possibilities for growth, differentiation, and speed. This is not just about doing the same work faster; it's about doing better work, bolder work, and work that wasn't possible before. AI labor can help teams rapidly ideate new product concepts, simulate customer sentiment, explore edge cases, and test alternative approaches—all before any investment is made. It can optimize internal processes, refine messaging, and personalize strategies across markets. It can even help create entirely unique offerings with no current competitors, or deliver higher-margin products to market faster—with the same number of people and in the same amount of time. In this way, labor-to-token exchanges act not as a cost center, but as a creative force multiplier. They give every team the capacity to explore more options, make smarter decisions, and pursue innovation with greater confidence and speed. **If your primary goal is to reduce your human workforce, you'll likely end up doing the same—or less—while your competitors expand capacity, move faster, and outcompete you.**

That's why **elevating, educating, and inspiring the workforce** must be at the core of the mission. Token exchanges don't originate in strategy decks or AI platforms—they begin with a person seeing a possibility and using AI labor to explore it. Humans remain essential in identifying meaningful exchanges, supervising outputs, and shaping the goals AI is tasked with pursuing. Without widespread understanding and inspiration, no system will deliver transformation. Organizations that focus too heavily on technology—buying per-user licenses for chat platforms, prepaying for tokens, or embedding AI into tools without a human strategy—often end up with soaring AI subscription costs, idle capacity, and very little innovation to show for it -- “we paid for all of these licenses of this generative AI chat platform, why is no one using them?”

Equally important is the efficiency and agility of the internal AI labor market itself. Just like organizations need to be able to find, hire, and compensate the brightest human talent, organizations need to be able to find, hire, and pay for AI labor, which comes in the form of tokens and models. To scale this new form of labor, organizations need the right computing architectural foundations—modular systems that separate the human interface, reasoning model, and application programming interfaces (APIs) that the models use to talk to their computer systems.

Without the right structure in place, you can't hire and deploy the best AI labor cheaply and effectively. With the wrong architecture, you end up paying more for less capable AI labor. Even worse, with the wrong architecture, you will be locked out of hiring the top AI talent or limited in what tasks you can get that talent to perform within your organization.

## 4.1 Token to Computation Exchange

**Many leaders have a fundamental misconception about the accuracy and capability of today's AI models—especially when it comes to analytical tasks.** While it's true that large language models can occasionally make mistakes in direct computation or exhibit reasoning flaws, this leads many to underestimate their real power: these models are exceptionally good at **translating human goals and intentions into computation.** Through *labor-to-token exchanges*, AI performs the critical work of transforming natural language instructions into scripts, queries, and workflows that execute precise, scalable, and verifiable tasks in downstream computer systems. Just as you might hire a database administrator to translate a business question into a SQL query, run it, and deliver a report, you can now use a labor-to-token exchange to have AI labor perform that same translation—often in seconds, and across a wider range of systems.

In this exchange, tokens become the *blueprints* for computation. A user's prompt—such as “analyze this Excel file for anomalies in monthly sales trends” or “generate the SQL needed to identify customers who churned after a price increase”—results in tokens that represent **code, queries, and scripts.** These are not just suggestions—they are executable instructions. Through tools like ChatGPT's Advanced Data Analysis or integrated AI agents within enterprise systems, these tokens are passed seamlessly into your computer systems where they are run, and the results returned. The result is the completion of a complex computational task that would traditionally require significant human labor.

This shift is critical because while generative models still face limitations in raw mathematical reasoning, reliability, and scale, the computational systems they can *invoke* do not. A model might struggle to perform precise long-form arithmetic or filter millions of rows of data, but it can write a SQL query that does so with perfect precision. It can generate a Python script that computes advanced statistics, builds a model, or generates a visualization over gigabytes of tabular data—outsourcing the mathematical rigor to systems purpose-built for it. In this way, the generative model becomes not the calculator, but the programmer of the calculator.

This ability for AI Labor to complete computational tasks has another important implication. In many organizations, the software that people use to do their work introduces significant friction into getting real work done. Enterprise systems often operate in silos, forcing humans to mentally bridge gaps between platforms that don't share data, logic, or context. Workflows that cross systems—like updating a forecast based on new customer data—require people to extract information manually, interpret it across tools, and re-enter it elsewhere, increasing both effort and error. Worse, these systems are rarely tailored to the way a specific business actually operate. They're built for the “average user,” not for your team, your strategy, or your edge. Their interfaces are frequently confusing, change between software versions, and require constant user retraining and adaptation. The computing systems add significant cost and can impact human morale because they force people to adapt to the computer's way of doing things.

In contrast, **AI labor lets people interact with computers in their own language**, without needing to navigate rigid UIs or constantly re-learn someone else's interface design. The result is a system that **adapts to the human blueprint for the computation**, not the other way around. The AI labor can translate the human goals into computation, not force humans to adapt their work to the computer systems. This frees the humans to focus on the work, not the brittle computer systems, and can boost enjoyment of the work.

This pattern opens up a powerful mode of operation: AI labor serves as the **natural language interface to structured, scalable computation** to allow greater use of expert computing across an organization. It reduces the human burden of moving between reasoning and action, interpretation and execution. For example:

- A sales leader might ask: “Who are our top 10 prospects in Nashville likely to close in the next 60 days?” The AI generates the query, executes it, and returns the list.
- The leader then continues: “Craft a custom engagement plan for each, using our CRM notes and recent interactions, and deliver it to my Office 365 inbox tomorrow.” The AI assembles the strategy, formats it, and automates the delivery—no human intermediary needed.

This end-to-end orchestration—tokens turning into actionable computation, computation returning results that are repackaged and routed through enterprise tools—dramatically reduces the overhead of human coordination. No more copying and pasting data between chat, spreadsheets, CRM systems, and email platforms. Instead, labor becomes a conversational request, tokenized AI labor becomes a programmable bridge, and the AI labor does its work in the systems already in use.

By embracing token to computation exchanges, organizations gain a path to escape the manual glue work that clogs traditional workflows: formatting reports, transferring insights between systems, coordinating between roles. These exchanges represent **pure leverage**—small, natural language inputs yielding high-impact, cross-system actions with precision and scale.



The power of token-to-computation exchanges lies in their ability to generate high leverage from minimal input. A single well-phrased prompt can now initiate complex chains of logic, perform multi-step analyses, and deliver results that would traditionally require coordination across multiple roles or teams. Once a prompt generates the correct computation—whether it’s a SQL query, Python script, or automation pipeline—that logic can be reused reliably, offering a level of repeatability and precision that far exceeds typical generative outputs, which often vary from run to run without strict constraints.

Critically, the real value isn’t just in the analysis—it’s in the integration. When token exchanges produce outputs that flow directly into computer systems—updating dashboards, sending alerts, triggering actions—human bottlenecks are removed. The exchange moves beyond insight and into execution. This architecture significantly reduces the “glue work” that consumes so much organizational capacity: copying and pasting between tools, reformatting data, or manually coordinating between sales, operations, and finance. In the token-to-computation model, planning and doing collapse into a single step.

## 4.2 Enterprise Chat: The Organization’s AI Labor Market Interface

As generative AI becomes deeply embedded in organizational workflows, enterprise chat platforms, such as ChatGPT, Claude, or [Vanderbilt’s open source Amplify](#), are rapidly emerging as the central interface through which labor is converted into token exchanges. Chat is where you hire the AI labor. Chat interfaces represent a **marketplace for AI labor**, where workers can hire AI labor and express the task using natural language rather than navigating a fragmented landscape of software applications.

In this new paradigm, enterprise chat is the **human interface to an AI labor engine**. This is why an enterprise chat interface matters far more than most leaders realize. It’s not just a convenient user interface—it’s an AI labor market. It is critical that you have an efficient and highly flexible interface to the AI labor market. Organizations and individuals move faster than software interfaces can adapt. New ideas, clarifications, urgent changes, and exploratory thinking happen in real time, and they almost never fit neatly into a rigid Graphical User Interface (GUI). If you can’t express the task through the interface, you can’t hire AI Labor to help with it. When you need to pivot strategy, troubleshoot an unexpected issue, or refine a complex analysis, the fastest way to communicate your needs to AI labor is still natural language.

**The interface to the AI labor market must be as fluid as the thought itself.** Would you really hire a human analyst or assistant, and then limit yourself to assigning tasks by pushing buttons—never speaking, never clarifying, never collaborating in conversation? Of course not. Chat is how you lead AI labor the way you would lead human labor: through goals, feedback, and fluent communication. When done right, it doesn’t just make AI easier to use—it makes it *possible* to integrate into how real work gets done. However, some AI tools try to disempower the humans, force them to press buttons, and remove their ability to talk to the AI labor.

Many organizations are unintentionally locking themselves into limited, high-cost AI labor markets—not through deliberate strategy, but through a series of technical decisions made for convenience, familiarity, or existing vendor relationships. Leaders often fail to realize that these choices—such as defaulting to a single AI provider or embedding AI into siloed applications—don't just affect IT architecture; they fundamentally shape who the organization can hire as AI labor, how much it costs, what it can do, and how fast it can evolve.

Many AI-enabled platforms now offer their own isolated interfaces, promoting “chat with your data” or “chat with our system” experiences confined to their proprietary environments. Others push organizations toward full dependency on a single reasoning engine or agent framework, marketed as the “standard for enterprise AI” or “your built-in sales intelligence.” This creates a fragile and fragmented ecosystem where AI labor is tied to specific vendors, rather than treated as a modular, composable capability of the organization. In this siloed model, your tools—not your strategy—end up determining what AI labor you can hire, at what rate, and under what constraints.

The consequence is threefold:

1. **Reduced marketplace competitiveness** – Organizations end up paying for many isolated AI Labor marketplaces rather than consolidating buying power and taking advantage of market competition.
2. **Reduced AI labor quality** – Access is limited to the reasoning, pricing, and capabilities of one vendor's model, even as others may outperform it or provide much better pricing.
3. **Reduced Applicability** – Vendor silos limit what you can ask AI to do, reducing your strategic labor deployment options.
4. **Reduced agility** – As new models and agent tools emerge, organizations that are locked into vendor-specific ecosystems cannot pivot quickly to adopt better or more affordable, effective, or capable options.

These lock-ins are often driven, not by necessity, but by organizational inertia. IT leaders may extend existing contracts to include AI out of convenience. Functional teams may adopt branded tools based on familiarity or marketing, with little scrutiny of comparative model performance or integration cost. IT's architectural or procurement choices end up determining what AI talent you can hire, whether or not you hire at competitive rates, and all kinds of limitations on the labor contract -- including the privacy of the work.

A second, equally limiting form of AI labor marketplace risk comes from the assumption that every tool should come with its own AI—that the path to adoption is letting each system be “smart” on its own terms. Teams grow accustomed to a particular workflow tool, project tracker, or document platform and naturally welcome the embedded AI that appears inside it. But this tool-centric approach fragments the organization's access to AI labor, creating dozens of isolated, inconsistent labor markets—each with its own capabilities, costs, and constraints. It becomes nearly impossible to assign AI labor to tasks that transcend individual tools—like generating a unified customer narrative across sales, support, and marketing systems, or orchestrating a multi-system policy rollout. When every tool has “its AI,” the organization loses

the ability to direct AI labor at the cross-functional, cross-system problems where it could have the greatest impact. True agility requires decoupling the interface to AI labor from individual software platforms—enabling AI labor to follow goals and workflows, not just menus and toolbars.

There's a fundamental misunderstanding of AI labor: decision-makers believe they must "pay for AI labor within a vendor's tool" rather than "pay AI to work with the organization's tools." Agent frameworks, open APIs, and orchestration tools can replicate vendor AI offerings and allow AI labor to work across vendor systems without paying the system vendors for their AI and being locked into a silo. You don't have to pay for AI in a tool. You want to pay for AI to do work *across* your tools through their APIs. An open model leads to a much more competitive AI labor market and is far easier to achieve than you may be led to believe.

To remain competitive, an organization must AI not as a product choice, but as strategic labor infrastructure. It must actively work to decouple four critical layers to obtain access to the most flexible, talented, and competitively priced AI labor market:

1. **The AI Labor Market Interface: Enterprise Chat** - This is the conversational interface through which humans access and assign tasks to AI labor. It must be flexible, intuitive, and universally available—because if your people can't express their intent, they can't hire AI labor to help. **Examples:** Enterprise chat platforms (e.g., ChatGPT, Claude), open source chat platforms (e.g., Vanderbilt's Amplify GenAI), custom in-house chat UIs, etc.
2. **The AI Labor & Reasoning Engine: The Model / Agent** - This is the "brain" of AI labor—where human intent is translated into structured actions. It interprets goals, plans next steps, and coordinates tasks across systems and prompts. **Examples:** LLMs (GPT-4o, GPT o3, Sonnet v2, Llama 4),
3. **The AI Labor's Interface to Your Systems: The API Integration** - This layer enables AI labor to take meaningful action inside your computing systems—whether by running computation, updating systems, or automating workflows. It determines how well AI labor can translate reasoning into results across your enterprise stack. **Examples:** Python code execution sandboxes for AI labor, OpenAI Code Interpreter (ADA), AWS Lambda, Zapier, Power Automate, [Vanderbilt's Amplify GenAI's AI](#) operations, [Model Context Protocol](#) (MCP).
4. **The Supervisory Interface to AI Labor: Oversight and Optimization** - This is where human leaders and systems evaluate, tune, and improve how AI labor is used. It governs the quality, safety, and cost-effectiveness of labor-to-token exchanges. **Examples:** Token usage dashboards, AI Agent API call tracking, identity and access controls for AI labor, governance protocols.

### 4.3 Strategic Implications of the IT Architecture on the AI Labor Market

If an organization can't hire the AI labor it needs—because it lacks access to the right model, the ability to convert tokens into action across its systems, or the flexibility to choose the most cost-effective provider—it is at a **fundamental strategic AI labor disadvantage**. The efficiency

and value of tokenized labor is not just a function of model quality or price per token. It is shaped by the organization's architecture and governance around the labor-to-token stack.

For example, while token prices for major foundation models have dropped dramatically over the past 12 months, many organizations are still locked into “per user, per month” pricing models for bundled AI features inside enterprise apps. These models essentially require organizations to pay per-user for up-front token allocations that expire, regardless of actual usage—resulting in wasted spend, siloed functionality, and constrained access to AI labor. These models increase the perception that AI labor is expensive. These procurement and architecture decisions carry **five major implications** for how effectively an organization can deploy AI labor:

- **1. Ability to procure the top talent (best model)**

When organizations lock themselves into a single model or platform, they lose access to alternative models that may offer better reasoning, accuracy, or creativity for specific tasks. This is the equivalent of choosing a single hiring agency and refusing to consider better-qualified candidates elsewhere. Better models are released continuously, and the top vendor is constantly changing.

- **2. Ability to get the best competitive pricing**

Per-seat pricing decouples cost from value. Organizations may end up paying more for embedded models with less capability, while competitors using open, model-agnostic architectures access superior AI labor at a fraction of the cost. Seat-based pricing prevents organizations from benefiting from cost competition at the token level.

- **3. Obscured costs and poor visibility into AI labor economics**

Bundled pricing hides the true cost of labor-to-token exchanges. Without clear usage data, leaders can't evaluate which tasks are delivering value, which teams are using AI effectively, or how to optimize labor deployment. They assume that helping people write emails faster costs \$15-30/mo per person, rather than realizing it is likely only \$0.00001 or less per user if measured and paid for based on token usage costs.

- **4. Inability to deploy labor on cross-functional problems**

When each tool has its own embedded AI, it becomes nearly impossible to assign AI labor to workflows that span multiple systems. This severely limits the organization's ability to solve the high-value, cross-functional problems that often drive innovation and impact. The cost to use AI or an integration platform to perform orchestration across tools is cheap and falling rapidly due to the ability of AI labor to directly turn tokens into computation.

- **5. High cost of distributing AI labor across the workforce**

Up-front per-user licensing means the organization pays full price even when employees are untrained, hesitant, or only lightly using the AI. This creates enormous sunk costs and reduces the ROI of deployment. A usage-based model supports more equitable and scalable access—allowing employees to learn and ramp up at their own pace while only paying for what's actually used.

At Vanderbilt, we have scaled to have ~7,000 of approximately 17,000 faculty, staff, and student users of our enterprise chat platform. On average, 60% of users spend less than \$1 per month

in token costs. Our total cost per user to provide unlimited access to a vendor-independent AI labor pool hovers around \$2-3/mo, including the computing resources to support the AI labor work. AI labor is enormously capable and small allocations of tokens can bring enormous value to supporting a human. Not everyone needs to tap into the AI labor pool every month and we only pay for when they do.

Ultimately, an organization's procurement model, architecture, and training strategy directly determine its ability to access, afford, and scale AI labor effectively. Misaligned decisions in any of these areas create structural inefficiencies that competitors with open, modular approaches can rapidly exploit.

Organizations that design their AI ecosystems with modularity in mind—decoupling the four layers discussed previously—will maintain maximum agility in the procuring and applying AI labor. These organizations will be able to mix and match models, agent frameworks, and backend systems to align with the best available cost, performance, and capability at any given time. This enables them to continuously optimize for quality, speed, and price—essential attributes in a rapidly evolving AI marketplace.

In contrast, organizations that rely on bundled solutions—where reasoning is locked to a single vendor, where execution happens only within proprietary systems, or where integrations are gated by platform constraints—will find themselves at a strategic disadvantage. They will pay more for less capable AI labor, adapt more slowly to new AI labor innovations, and struggle to capture value from applying AI labor across their own data and workflows. What appears to be short-term convenience often results in long-term rigidity, inefficiency, and missed opportunity.

Just as infrastructure economics were reshaped by the move from fixed hardware to elastic, usage-based cloud services, labor economics are now being redefined by tokenized, on-demand cognitive labor. But the implications of this shift are even more profound. While cloud computing transformed *how and where* we run code and store data, AI labor transforms *what* work gets done, who can do it, and how fast new ideas move from thought to action. The tasks being exchanged—strategic planning, customer insight, product ideation, decision analysis—are not technical minutiae; they are core drivers of innovation and growth. The cognitive layer of work is now programmable. And because these exchanges shape the very thinking and creativity of an organization, the flexibility and efficiency of that exchange infrastructure is more important than any underlying compute ever was.

Today's leaders must design AI labor markets that are resilient, modular, and adaptable to innovation at every layer—model, agent, interface, and system integration. The goal is not just to “add AI” to your tech stack, but to build a durable, future-ready foundation for human-machine collaboration—where your best people can lead AI labor as easily as they might lead a team, and where strategy can be enacted at the speed of language.

## 5. Valuing AI Labor through Labor-to-Token Exchanges

To strategically deploy tokenized AI labor, organizations must understand where and how value is created, and what costs and risks are involved. Not all AI labor token expenditures are equal—some tasks lend themselves naturally to AI labor with little oversight, while others require high-touch human supervision or don't benefit significantly from AI labor at all. The key is to evaluate the efficiency, oversight burden, strategic leverage, and integration cost of each exchange in context.

We propose a simplified valuation model where each labor-to-token exchange is assessed using the following variables:

- **V** = *Value of the Exchange Output* – how valuable is the output in driving decisions, action, or outcomes?
- **Ch** = *Human Oversight Cost* – how much human time and expertise is required to supervise, verify, or correct the AI?
- **Ct** = *Token + Model Cost* – how expensive is the exchange itself (tokens, API calls, per-seat vendor cost)?
- **Ca** = *Assembly & Integration Cost* – how much human or automation effort is required to move or stitch the output into usable systems or workflows?
- **R** = *Risk Discount* – represents confidence in accuracy, completeness, explainability, and impact of failure (ranges from 0 to 1).

We can express a simple valuation ratio for a given token exchange as:

$$\text{Exchange ROI} = \frac{V * R}{Ch + Ca + Ct}$$

Where:

- **High ROI** exchanges for AI labor are high-value, low-risk, and require minimal human oversight or integration.
- **Low ROI** exchanges for AI labor tend to be noisy, fragile, or costly to supervise and operationalize.

### 5.1 Strategic Implications of the Model

This formula enables leaders to evaluate **which exchanges should be prioritized**, automated, or avoided. Some guiding principles:

- **Low-risk, low-precision tasks**—such as brainstorming, summarization, or outline generation—often deliver exceptionally high ROI. Even when the outputs are imperfect, they save time, reduce cognitive load, and spark creative momentum with virtually no downside.

- **High-stakes decision support**, including tasks like simulating strategy options for executives or generating legal briefs, offers enormous potential value—provided the exchanges are well-structured used to give multiple perspectives on an issue rather than “an answer.” These exchanges can amplify the insight and effectiveness of your most expensive and influential roles by allowing them to broaden their perspective and insight.
- **Multi-step tasks that exceed the model’s output window**, such as generating long reports or coordinating complex analyses, can incur high assembly and oversight costs (Ca)—especially if humans must manually stitch together fragmented outputs. These scenarios demand careful prompt design or the use of agents to orchestrate the exchange more efficiently. Newer agentic tools can help reduce or eliminate these costs.
- **Token exchanges that trigger computation**, such as generating SQL queries, Python scripts, or automated analysis pipelines, can deliver repeatable and highly accurate results—even when the model’s internal reasoning has limitations. By shifting AI reasoning to computing systems, these token-to-computation exchanges improve precision, repeatability, testing, and significantly reduce human oversight (Ch) while delivering high value.
- **Integrated exchanges that act directly within business systems** (via APIs, RPA, or agents) deliver high realized value by minimizing friction. When a token exchange can automatically update a CRM, send a report, or launch a workflow, it eliminates the manual “glue work” that often delays action and erodes efficiency.

## 5.2 The Leverage Gradient Principle

One of the most important but overlooked patterns in labor-to-token exchanges is what we call the **Leverage Gradient Principle**: *the ROI of an AI labor exchange often parallels the salary of the human role performing or benefiting from the task*. In other words, using AI labor to support a senior executive, strategist, or domain expert tends to generate far greater value than using it for low-leverage administrative tasks—not because the AI is doing more work, but because the downstream impact of that work can be more consequential and the human time has a higher salary value. A prompt that helps a CEO make a better strategic decision or enables a top researcher to explore a novel hypothesis may be worth thousands of times more than one that drafts a meeting recap. A prompt that helps a CIO save an hour is worth more in salary than a prompt that helps an intern. This principle underscores why access, training, and thoughtful deployment of AI labor across high-leverage roles is critical—not just for efficiency, but for unlocking the true strategic value of token exchanges.

## 5.2 Organizational AI Labor Use Maturity Matters

Importantly, these variables are not fixed—they are capabilities to be improved. Organizations can:

- Lower **Ch** by training users in [prompt engineering](#) and [techniques for problems into forms that AI labor can solve more accurately](#).
- Lower **Ca** by building internal AI agents, APIs, and orchestration tools.

- Lower **Ct** by not getting locked into a single vendor for models, “chat within one tool,” orchestration, etc. and possibly focusing on open platforms
- Increase **R** by using higher quality models, maximizing the information provided to the model, and adding governance checkpoints.
- Increase **V** by identifying higher-leverage use cases where AI enhances strategic decisions, customer experience, or creativity.

In this light, the labor-to-token economy rewards **strategic design and investment**. The value is not in using AI labor—it is in **using AI labor well to support humans**, with intentional infrastructure, workforce skills, and feedback loops that continuously improve the exchange and help humans identify ways to innovate within their role using AI labor.

## 6. Elevating Everyone to Lead: Autonomy, Innovation, and the Human-Centered Future of Work

At the heart of the AI labor transformation is a simple but profound truth: **organizations thrive when people are trusted to lead**. Not just those with formal titles, but every employee who sees a better way to solve a problem, serve a customer, or imagine a new possibility. In this light, the most strategic use of generative AI is not to replace workers, but to elevate them—giving each person their own cognitive leverage through AI labor, their own innovation sandbox, and their own opportunity to lead AI. This philosophy closely aligns with the Toyota Way, which emphasizes respect for people and continuous improvement—trusting employees at every level to identify opportunities, contribute solutions, and take initiative. Nearly every employee can name a task they’d be thrilled to delegate to AI labor—and many have bold ideas they’d love to explore if they had the support to do so. **When AI labor is used to empower, not replace, it becomes a catalyst for creativity, autonomy, and organizational excellence.**

In most high-performing organizations, every team feels the strain of being under-resourced. The backlog grows faster than the headcount, and internal investment is often a zero-sum negotiation. But labor-to-token exchanges introduce a new paradigm: scalable, on-demand cognitive capacity, powered not by hiring more people, but by augmenting the workforce with AI labor. It becomes far easier—and faster—to give teams the support they need by supplementing them with AI labor while human roles catch up. A marketing analyst no longer has to wait weeks for engineering to build a dashboard. A team lead doesn’t need to wait a month for another team to do the SEO on their marketing website. **With access to AI labor, individuals can prototype, analyze, and act—faster, more creatively, and with greater autonomy.** This shift doesn’t just relieve pressure—it unlocks new potential across the entire organization.

But while AI labor can dramatically expand organizational capacity, it does not eliminate the need to grow and develop people. There is a natural ceiling to how much value AI labor can generate—one defined by the human capacity to lead it, the quality of the interfaces used to access it, and the amount of cognitive oversight it requires. If individuals are overwhelmed, poorly trained, or working with fragmented systems, their ability to effectively supervise and



deploy AI labor diminishes. Just as you wouldn't scale a human workforce without investing in management, training, and support, the same holds true for AI. **The limiting factor in most organizations is no longer what the AI can do—it's what the humans can do with it.** Growth still depends on people: their creativity, judgment, and readiness to guide and integrate AI into meaningful workflows.

The key is to maximize autonomy while minimizing risk—to give individuals the power to act without introducing AI labor chaos. When people are equipped to delegate low-value, repetitive, or execution-heavy tasks to AI labor and use it to support creative exploration, they gain the bandwidth to focus on the work that demands human strengths: strategic judgment, empathy, creativity, and nuanced decision-making. The key value isn't that they are "more efficient", it is that they have more time to be creative, empathetic humans that do better work. This doesn't just improve outcomes—it unlocks growth potential across the organization without waiting for formal headcount growth or cross-functional support.

Token exchanges allow individuals to close the gap between intent and execution, reducing the friction that usually slows progress. Instead of asking for more budget or waiting on another team, people can test ideas, iterate, and deliver—faster and with greater confidence. Autonomy fuels momentum, and when paired with the right training and oversight mechanisms, it becomes the foundation for both individual motivation and organizational velocity.

This shift requires more than tools. It requires **cultural permission**. Employees must be encouraged to experiment, trusted to supervise their own token exchanges for AI labor, and supported with the skills and safety nets to innovate without fear. The role of leadership is to provide not just AI labor access, but AI labor agency—clear pathways for individuals to use AI labor to turn initiative into impact.

In this future, the organization is no longer a hierarchy of task assigners and doers. It becomes a network of empowered solvers, each equipped with on-demand cognitive collaborators and the freedom to lead. The labor-to-token economy is not just about efficiency. It's about unleashing the full potential of the workforce—and turning every employee into a force multiplier for the organization's growth, resilience, and innovation.

## **6.1 Why This Is So Hard: Overcoming Overload, Fear, and Misunderstanding**

For all its promise, the transition to use AI labor is profoundly challenging for most organizations—not because the technology is immature, but because the humans at the center of the change are already overwhelmed. Many employees are operating at or beyond capacity. They're juggling constant demands, learning new tools under pressure, and working within systems that reward risk avoidance over experimentation. The idea of adding "learn AI" to their plate can feel not like an opportunity, but like another burden.

This creates a paradox: the very people who would find joy in using AI labor—those bogged down by repetitive tasks, chronic under-resourcing, and creativity-stifling workflows—are often

the least able to explore or adopt it. The leaders that might produce the highest ROI with it are consumed by multiple major active crises and don't have the time to stop and experiment. When framed as just another tool, as a precursor to job elimination, as an amorphous strategic imperative that no one understands ("use AI or your competitors will"), AI becomes a source of anxiety rather than empowerment. Even worse is organizations with leaders that fundamentally misunderstand how AI labor works and only empower the technical portions of an organization to use it.

Focusing AI efforts solely on "technical users" is a costly mistake. When access to AI labor is gated behind programming skills, API familiarity, or specialized tooling, the majority of the organization is left out of the transformation. **Everyone should have access to the AI labor market**, not just engineers or data scientists. And the simplest, most inclusive gateway to that market is natural language—chat. Chat isn't a gimmick or a user-friendly layer added on top; it is the infrastructure that allows every individual to think, ask, iterate, and act without needing a background in code. If leadership wants a truly agile and innovative organization, they must democratize AI labor through interfaces that empower everyone to lead, not just those trained to program.

Many organizations compound this fear by focusing early communications on cost savings and efficiency gains, unintentionally reinforcing the narrative that AI is about replacing people. But for labor-to-token exchanges to succeed, they must be framed—and experienced—as a way to restore creativity, autonomy, and purpose to human work by giving them additional resources to explore and innovate.

To overcome these barriers, organizations must take several steps:

- **Create visible champions:** Elevate early adopters who are using AI labor not just to move faster, but to **do better work**—more creative, insightful, and strategic. Highlight teachers who design more engaging lessons, analysts who uncover deeper insights, or marketers who experiment with bold new campaigns. Encourage these champions to speak not only about what they did, but how it felt to have AI labor supporting them. People follow peers they trust—not just IT teams or AI specialists—so make these human stories visible.
- **Build learning into the work itself:** Avoid abstract, one-size-fits-all "AI" training. Instead, meet people where they are: show simple, relevant examples tied to their actual work, and invite them to try them out on real tasks and share what happened. Make experimentation part of the daily workflow so employees discover value *while doing their job*, not in a classroom or isolated sandbox. [Of course, we recommend our training to help shift mental models on using AI effectively.](#)
- **Normalize exploration, not perfection:** Make it clear that using AI labor is a creative process, not a transactional one. Getting something wrong, refining the prompt, and trying again are expected and necessary steps. Shift the narrative from "using AI labor correctly" to "exploring what's possible." Give people explicit permission—and encouragement—to test, iterate, and report back on both wins and misses. This builds a culture of curiosity and shared learning.

- **Emphasize conversation, patience, and persistence:** Working with AI labor is less like pressing a button and more like leading a junior team member. It often takes a few tries to reach clarity or quality—because the AI doesn't know your priorities, your audience, or your context unless you teach it. Encourage teams to treat AI labor as a collaborator that learns through dialogue. The most powerful results often come not from the first prompt, but from the fourth or fifth exchange in a conversation.
- **Assure human primacy in decision-making:** Reinforce that AI labor is here to support, not replace the workforce. It is a tool for extending human capacity—not displacing human creativity, empathy, or ethical judgment. The end goal is not fewer people, but more empowered, fulfilled, and strategically valuable people—a workforce that's better equipped to lead and innovate with AI as their partner.

This transformation is not only a training problem. It's a **trust and time problem**. People need space to learn, permission to play, and support from leadership that reinforces: *you are not being replaced—you are being elevated*.

## 6.2 Learning to Lead AI Labor: Why Prompting Is the New Literacy

Whether we call it prompt engineering, AI collaboration, or simply leading AI labor, the underlying need is the same: people must develop new mental models for how to think, converse, and solve problems with AI labor. It's not just about knowing the right words to say—it's about learning how to decompose a problem, provide the right context, iterate effectively, and steer the model toward outcomes that are useful, accurate, and aligned. Small differences in how a problem is framed, how information is sequenced, or which constraints are given can radically change how well the AI labor performs.

People also need to see concrete examples of what AI labor can and cannot do. They need to understand its current limitations, where oversight is critical, and where it can be fully trusted to execute. And just as importantly, they need to internalize that this labor is not static—it is programmable. Through structured conversations and iterative refinement, AI can not only answer questions but build entire software applications, simulate decision-making processes, and orchestrate work across systems.

This is not just a technical skill; it's a foundational capability for the future of work. Teaching people how to collaborate with AI labor—how to think through a task in language that machines can follow and evolve—is what turns a tool into a force multiplier. It is, in many ways, the new digital literacy, and organizations that invest in it will unlock a level of scale, creativity, and agility that others simply can't match.

Just as we teach traditional programming through layers of abstraction—from variables and conditionals to loops, functions, and design patterns—we now need to teach people how to program AI labor using conversational abstractions. These include ways of structuring tasks, guiding iterations, and simulating context through patterns like flipped interactions, personas, and structured outputs. While the syntax is natural language, the underlying thinking is no less rigorous. These abstractions help people move from issuing one-off commands to engineering

reusable, adaptive conversations with AI labor that behave more like intelligent workflows than search engines. Teaching these mental models is essential for helping users think modularly, adaptively, and at scale—unlocking the full creative and computational potential of AI labor.

Equally important is teaching people how to decompose problems in ways that align with the capabilities AI labor to make it more effective. The structure of a prompt matters—but so does the structure of the problem it's trying to solve. Breaking down complex tasks into smaller, sequenced steps allows users to apply patterns like chain-of-thought reasoning, scaffolding, and iterative prompting to improve clarity, accuracy, and control. Well-decomposed problems create natural checkpoints where outputs can be verified, making it easier to minimize hallucinations and reduce error propagation. Sometimes this means structuring multi-step prompts; other times, it's as simple as teaching people to recognize when they haven't provided enough information for the model to reason accurately—situations where hallucination is likely unless they include additional context, documents, or discussion.

## 7. The LEADER Framework for AI Labor Strategy

To help you remember and navigate this shift in approach, we have created the LEADER Framework. The **LEADER Framework** provides a simple strategic blueprint for organizations navigating the shift to AI-powered labor. As generative AI transforms from a set of tools into a scalable, programmable workforce, leaders must rethink how labor is sourced, supervised, and scaled. This framework helps executives and team leaders align infrastructure, culture, and capability around six key principles—from treating AI as labor rather than software, to empowering every employee to lead it, to designing systems that support cross-functional AI collaboration.

- **L — Labor, Not Software**  
Treat AI as labor you can hire, guide, and scale—not just software you deploy.  
Every prompt is a task. Every token is a unit of work.  
Shift from tool-buying to labor-orchestration strategy.
- **E — Empower the Workforce with AI Labor**  
AI labor is only as valuable as the humans who lead it.  
Equip everyone—not just technical teams—to delegate, explore, and create with AI labor.  
Democratize access and promote a culture of experimentation.
- **A — AI Labor Amplification Must Be Taught**  
Leading AI labor and amplifying your work with it requires new mental models.  
Teach [prompt engineering](#), [AI Agent basics](#), and problem decomposition for AI.  
Upskilling in these abstractions is the new digital literacy.
- **D — Decouple & Maximize the AI Labor Market**  
Build [open, modular systems](#) to avoid AI labor vendor lock-in.  
Ensure access to the highest-quality, most cost-effective AI labor.  
Continuously optimize your internal AI labor marketplace.

- **E — Enterprise Chat Is the AI Labor Market Interface**  
Chat is not just a UI—it’s your interface to the AI labor market.  
It must be flexible, intuitive, and accessible to all.  
If your people can’t express intent through chat, they can’t hire AI labor.
- **R — Reach Across Systems and Functions with AI Labor**  
AI labor [should work across tools, workflows, and departments](#).  
Design for cross-functional, cross-system orchestration.  
The highest-value exchanges happen between silos, not within them.

Perhaps most importantly, leaders must resist the temptation to treat AI labor as a pure cost-saving measure. The real advantage comes from **expanding capacity, enabling innovation, and unlocking new forms of productivity**—not from replacing people.

## 8. Conclusion: A Strategic Test for the AI Labor Era

As AI labor becomes a core part of how work gets done, leaders must shift from evaluating technology based on features to evaluating it based on its impact on the organization’s AI labor strategy. Every platform, policy, and process must be viewed through the lens of how it shapes your internal AI labor market—its flexibility, its reach, its cost, and its ability to empower people to lead. To guide this evaluation, use the following questions as a strategic litmus test:

- **Does this expand, improve, or lower the cost of our internal AI labor market?**
- **Does it enable more people to hire and lead AI labor directly?**
- **Does it improve cross-system and cross-functional access for AI labor?**
- **Does it make AI labor easier to supervise, integrate, and audit so that we can increase human autonomy to hire AI labor?**
- **Does it preserve our ability to choose the best models, interfaces, or workflows tomorrow—not just today?**
- **Does it empower people to build, iterate, and innovate with AI labor—so that our people can scale our capabilities through AI labor?**

If the answer to these questions is “yes,” then you’re building the infrastructure, culture, and capability for long-term competitive advantage. If not, you may be introducing unnecessary friction, reinforcing silos, or constraining your ability to evolve—regardless of how cutting-edge the solution appears. In the age of AI labor, strategic advantage belongs to the organizations that can think, scale, and adapt faster—because they’ve built the systems where people and AI learn and lead together.

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