Zero Gravity Leadership

Leading in the Age of AI

"Zero gravity is such an alien environment—completely different from everything we've grown up with every single day of our lives."

Astronaut Peggy Whitson

When NASA began sending humans beyond Earth's atmosphere,it quickly discovered that excellence under terrestrial conditions did not automatically transfer to orbit.

On Earth, your deepest instincts serve you well. You know which way is down. You trust your balance. You rely on muscle memory built through repetition and experience. *But in zero gravity, those instincts betray you.*

Astronauts who relied on what "felt right" became disoriented. What seemed upright was not. What felt stable was drifting. In space, instinct is no longer authority. Orientation must be relearned, and confidence must be recalibrated.

NASA responded accordingly. It did not assume that high-performing pilots would simply adapt. It built a training system grounded in breaking false confidence through deconditioning, normalizing reversibility, and enabling in-mission learning to compensate for the inevitable limits of pre-flight preparation.

The situation NASA faced is not unlike the one facing organizations in the age of AI.

For decades, leaders have operated under relatively stable physics. Information was scarce and expensive to synthesize. Expertise accumulated slowly through experience. Roles and workflows were structured and linear. Strategy unfolded over long cycles. Human capability defined the upper bound of output

In that world, problem solving happened in known contexts. Learning exercises and decision-making were episodic. Planning preceded execution. Authority was grounded in tenure and accumulated expertise.

AI alters those conditions.

Information is now abundant and synthesized instantly. Tasks can be decomposed and run in parallel. Quality and cost curves can shift simultaneously. Experienced-based authority competes with probabilistic outputs generated in seconds.

These are not simply the capabilities of a new tool added to an existing toolkit. They are the markers of an entirely new operating environment—one that does not obey the same laws that preceded it.

And yet, most leadership models still assume the same physics.

The risk is subtle. Much of what has made leaders successful to this point remains relevant. Strategic clarity, decisiveness, accountability, ethical grounding—none of that disappears. But in an AI-shaped environment, those same strengths can become counterproductive if applied reflexively:

+ Decisiveness without experimentation can lead to premature scalingConfidence without questioning can become overtrust in flawed outputs

+ Planning without optionality can yield rigidity in a probabilistic system

+ Delegation without firsthand engagement can create blind spots in rapidly evolving workflows.

Towards a new Leadership Competency Model

Just as NASA did not send astronauts into orbit armed only with aviation expertise, organizations cannot assume that strong general leadership capability will automatically transfer into an AI future.

Leadership in this environment demands sensibility for an entirely new set of conditions. Humility to unlearn in order to learn, and then to learn in motion. Discipline to sense make continuously and dexterity to operate in fundamentally new ways.

The competencies that follow are those that leaders need to master so that their organizations not only endure in the zero gravity equivalent of AI, but thrive there.

The leadership
competencies
that matter most
in the Age of AI

01

FROM
CREATIVE
PROBLEM
SOLVING TO:
→ Radical
imagination

AI does not simply improve existing ways of working; it alters the underlying rules that govern how professions, businesses and markets operate. Leaders must act with radical imagination—detecting rules and conventions so entrenched they are largely invisible, exposing and challenge them, and filling the expanded spaces in their wake with previously inconceivable ideas.

Driverless cars are a well-known example of what's possible when leaders embrace radical imagination by harnessing new capabilities to challenge core assumptions. This is one example among others of automotive companies similarly reframing long-standing rules: **Applied Intuition**'s AI-driven simulation platforms allow developers to validate and refine advanced systems at massive virtual scale instead of depending primarily on costly and limited physical testing loops. Meanwhile, **BMW** uses machine learning to predict crash performance early in the design process, reducing reliance on late-stage physical prototypes and fundamentally altering safety engineering. And Tesla has transformed the car itself into a self-diagnosing and continuously evolving product that breaks with the convention that vehicle functionality is static post-sale.

Radical imagination is also a matter of scale. Leaders must be able to think in terms of exponential change rather than incremental improvement—the differences between 10% gains and 10× shifts in speed, precision, reach, or cost. Doing so requires a fundamentally different frame for opportunity and risk.

Consider **Universal Health Services**, where leaders reimagined post-discharge follow-up from a courtesy call into a scalable safety net: every patient gets reached, with clinicians reserved for exceptions. Working with Hippocratic AI, UHS deployed voice agents to contact patients at scale and escalate issues back to a live nurse when a human response is needed. In early deployments, UHS reports patient engagement scores around 9/10—showing how step changes in cost reductions and greater effectiveness can now move in tandem.[1]

Radical imagination is not only strategic or technical. It is also deeply human. As AI reshapes the nature of work, leaders must help people make sense not only of changing roles but new identities. Leaders will need to help their people grapple with what it means to be a programmer, researcher or manager and create new ways of contributing and growing when the bulk of one's time and talent is suddenly available to be directed in new ways.

Take for example **Devin AI**, which is an "AI software engineer" that can take a task, write and run code, test changes, and iterate until it reaches a working result. These capabilities force a massive shift in what human engineers do from producing every artifact to defining outcomes, steering work, reviewing decisions, and setting the standards for what "good" looks like. The 8–12× efficiency gains that result allow for a radical reimagining of what it can mean to be a software engineer in the future.[2]

Crucially, radical imagination does not mean reinventing the wheel. The strongest leaders are both imaginative about what needs to change and clear about what must be sustained. They understand the difference between what's durable and what's perishable, and have current strengths and interests front of mind in a rush toward the unknown.

1.
UHS launches AI agent to call patients after discharge
Link to uhs.com

2.
Devin, the AI software engineer
Link to devin.ai

Developing Radical imagination

Leaders who want to further develop Radical imagination can build the following practices:

Constrain surfacing

Challenging implicit assumptions and norms to expand solution spaces.

Futurecasting

Starting from a possible future and reasoning backward to understand what would need to be true to reach it.

Scale reframing

Shifting mindsets from incremental improvement to exponential possibility and risk.

What we've heard at SYP from pioneering leaders:

HOLDING VISION

"Companies run the risk of evolving incrementally into irrelevance without strategic imagination and investment."

INTELLECTUAL RIGOR

"I have people that are intellectually curious and people that are not. And that, to me, is a huge differentiator."

DIRECT EXPERIENCE

"Leaders are starting to really getting in there, and it sparks their imagination. When I really experience AI myself, and understand it, it enables me to connect the dots differently, and push the team differently to think outside of: 'This is the way we always do it'."

The evidence we're seeing:

280X

AI inference costs dropped roughly 280 times between November 2022 and October 2024, dramatically lowering the price of running AI models.

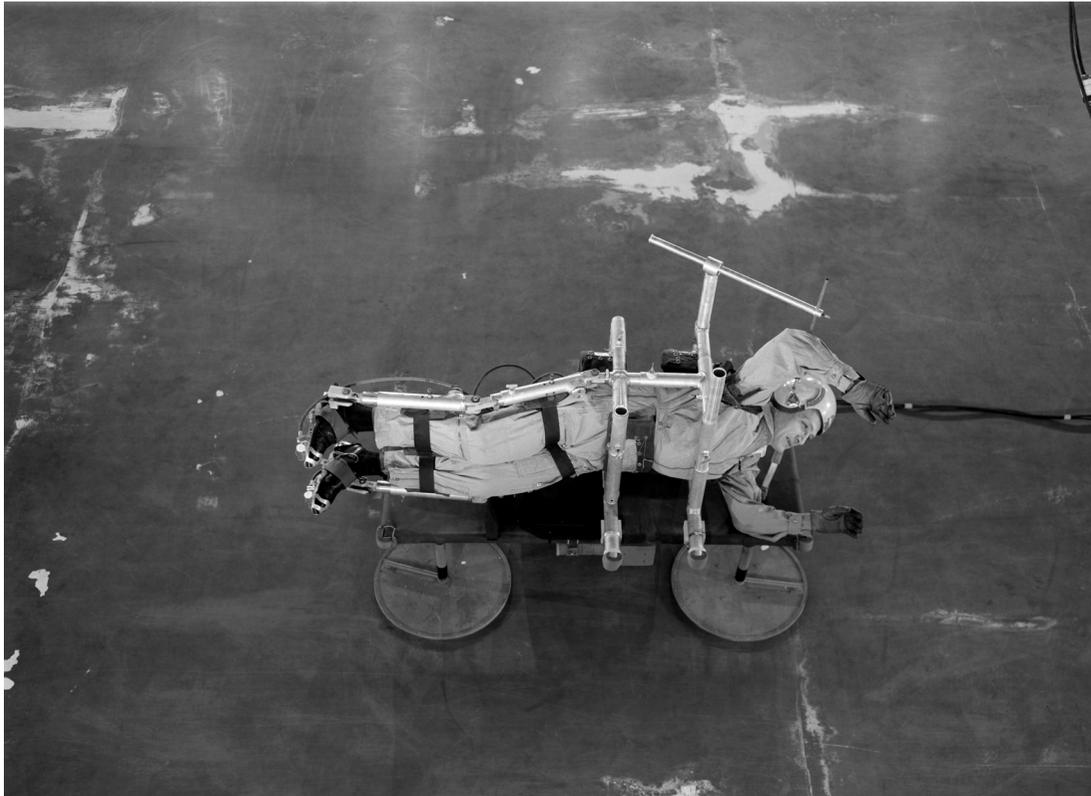Source: Stanford AI Index (via Nvidia AI Inference Economics)

71.7%

AI performance on the SWE-bench benchmark jumped from 4.4% in 2023 to 71.7% in 2024, showing how rapidly AI capabilities are improving within a single year.

Source: Stanford Artificial Intelligence Index Report 2025

02

FROM
PERIODIC
PILOTS
TO:

Continuous experimentation

In the age of AI, what technologies can do is not prescribed, but rather revealed through experience. Models evolve, capabilities shift, and interactions between humans and machines produce second- and third-order effects that cannot be fully anticipated. In this environment, leaders cannot rely solely on analysis, expertise, or precedent. The capacity to experiment becomes essential—both at the individual and enterprise levels.

In previous disruptions such as the emergence of the internet, non-technical leaders were encouraged to experiment with the technology as users. With AI leaders must experiment as hackers and creators, discovering through direct engagement the possibilities and potential pitfalls that inform their vision and the goals and guidance they establish for others.

GitHub is an example of a company putting this ethos into practice. GitHub is rolling out "Agent HQ," a mission-control hub where developers can run multiple AI coding agents in parallel on the same task and compare results—turning tool choice and workflow design into a fast, repeatable experiment instead of a long evaluation cycle.[3]

At the enterprise level, enabling experimentation becomes a leadership responsibility. Leaders make experimentation legitimate for others, signal what kinds of risk are acceptable, reward learning rather than just outcomes, and ensure that insight is integrated rather than fragmented or localized. Without this leadership, experimentation either stalls or proliferates without coherence.

Booking.com is an example of an enterprise that turned experimentation into its operating system. The company typically runs 1,000+ live tests at any moment, and has learned it's "wrong" about most reasonable hypotheses—so the goal is fast feedback and compounding learning, not perfect prediction. Leadership made the system both democratic and safe: anyone can launch an experiment without management permission, anyone can stop a test that's going sideways (their internal "nuclear button"), and experiments are broadcast internally so peers can pressure-test design and results—so learning compounds instead of hiding in pockets.[4]

This type of commitment to learning through testing becomes only more important in the context of AI since it is the primary means of managing the tension between speed and risk.

In AI-enabled environments, the temptation is either to rush forward on the basis of possibility or to hesitate in the absence of certainty. Experimentation enables leaders to avoid both extremes. They use experiments to move quickly and responsibly—gaining evidence, integrating insight, and adjusting direction as new information emerges.

3.
Introducing Agent HQ: Any agent, any way you work .
Link to Github

4.
At Booking.com, Innovation Means Constant Failure
Link to Cold Call podcast

Developing Continuous experimentation

Leaders who want to further develop Continuous experimentation can build the following practices:

Open-ended discovery

Exploring tools and technologies without predefined use cases to reveal novel capabilities.

Hypothesis-driven planning

Defining work in terms of unknowns to be tested rather than tasks to be completed.

Experimenta-tion engines

Enabling experimentation as an ongoing way of working.

Proof point scaling

Embedding solutions validated in testing into large scale workflows and systems.

What we've heard at SYP from pioneering leaders:

HANDS-ON EXPERIENCE

"Leaders are operating more like a startup exec: pretty hands-on. They're in these AI products themselves, not interacting with them from 30,000 feet."

CREATING SPACE FOR LEARNING

"Two years ago we would 'spend one hour learning a week.' Now I tell my people it's got to be about five hours a week that you spend learning minimum."

UPDATING BIASES/OPINIONS

"The best traders were good because if they thought something, but then got new information, they could reverse their opinions based on that new information."

The evidence we're seeing:

2X+

A total of 149 foundation models were released in 2023, more than double the number in 2022, and 65.7% were open-source, highlighting the rapid expansion and openness of the AI ecosystem.

Source: Stanford Artificial Intelligence Index Report 2025

03

FROM
PLANNED
EXECUTION
TO:

Dynamich orchestration

In the age of AI value is rarely created within neat boxes. It emerges at the seams between workflows, technologies, teams, and partners across the organization and beyond. AI accelerates this by automating handoffs, unbundling jobs into tasks, and enabling work to move in parallel rather than sequence.

Managing work in this context is not about enforcing coordination against a fixed plan. It is about dynamically shaping how work flows—less like conducting a pre-written piece of music and more like leading a jazz ensemble: establishing shared principles, tempo, and direction, while allowing for improvisation, emergence, and real-time recombination as conditions change.

Dynamic orchestration is a leader's ability to design and manage multi-threaded work: breaking complex initiatives into modular components, distributing those components across functions, teams, and machines, enabling multiple work streams to progress simultaneously, and integrating outputs and learnings from parallel efforts in real time.

Because capacity, expertise, and decision-making authority are increasingly distributed, dynamic orchestration often depends on the ability to shape outcomes without strong formal control. Leaders must increasingly manage by principle rather than protocol, mobilizing alignment through shared intent, trust, and clarity of outcomes rather than positional power.

Duke Health's implementation of GE HealthCare's AI-enabled Hospital Pulse Tile also illustrates dynamic orchestration at the leadership level. Rather than treating AI as a reporting tool, Duke's leaders redesigned how operational decisions are made across the hospital system. They centralized real-time data from the EMR and other systems into a shared Command Center platform, embedded machine learning models that continuously evaluate more than 20 operational criteria, and made that intelligence visible and actionable across

roles from nursing units to executive leadership.[5]

Leadership shifted from episodic oversight to continuous coordination: monitoring system flow in real time, reallocating staffing proactively, and adjusting patient placement dynamically throughout the day. Results include a 66% reduction in bed request–to–assignment time, and 50% reduction in temporary labor use. The impact did not come from automation alone, but from leaders deliberately distributing decision-making authority, enabling parallel action, and integrating AI insights into the daily rhythm of work.

Dinamic orchestration is evident in **BMW**'s use digital twin factories powered by **Siemens** and **NVIDIA** to simulate hundreds of production scenarios in parallel—testing layouts, robotics flows, and throughput assumptions before making physical changes.[6]

Instead of Engineering designing in isolation, Operations implementing later and Finance validating after the fact, the digital twin environment allows Engineering, Production, IT and others to work in the same environment. The breakthrough is not visualization. It is the ability to redesign and continuously reconfigure the system of work itself.

5.
GE HealthCare announces major academic medical center as first customer to adopt new Hospital Pulse Tile for Command Center.
Link to Nasdaq

6.
Siemens and NVIDIA Expand Partnership to Build the Industrial AI Operating System.
Link to Nvdia

Developing Dynamich orchestration

Leaders who want to further develop Dynamic orchestration can build the following practices:

Outcome-based design

Planning work and workflows by starting from intended outcomes rather than inherited processes.

Orchestrated operations

Actively running work across multiple, concurrent streams, ensuring people and AI systems are coordinated in real time as work unfolds.

Coalition activation

Mobilizing peers and partners to act in concert often without formal mandate.

What we've heard at SYP from pioneering leaders:

ORCHESTRATING SYSTEMS

"Leaders need to be able to do org design, essentially. Because across agents and humans, you need to reinvent complex workflows."

TAKING OWNERSHIP

"When line-of-business owners lead and they're in the driver's seat, then IT is riding shotgun as an enabler. That's where we see organizations move fastest."

SETTING RHYTHM

"If you think about normal business operations and the rhythm—planning and goal-setting… how do you really integrate AI into that process? It's still fairly uncommon but increasingly needed for orgs to do this in a thoughtful way."
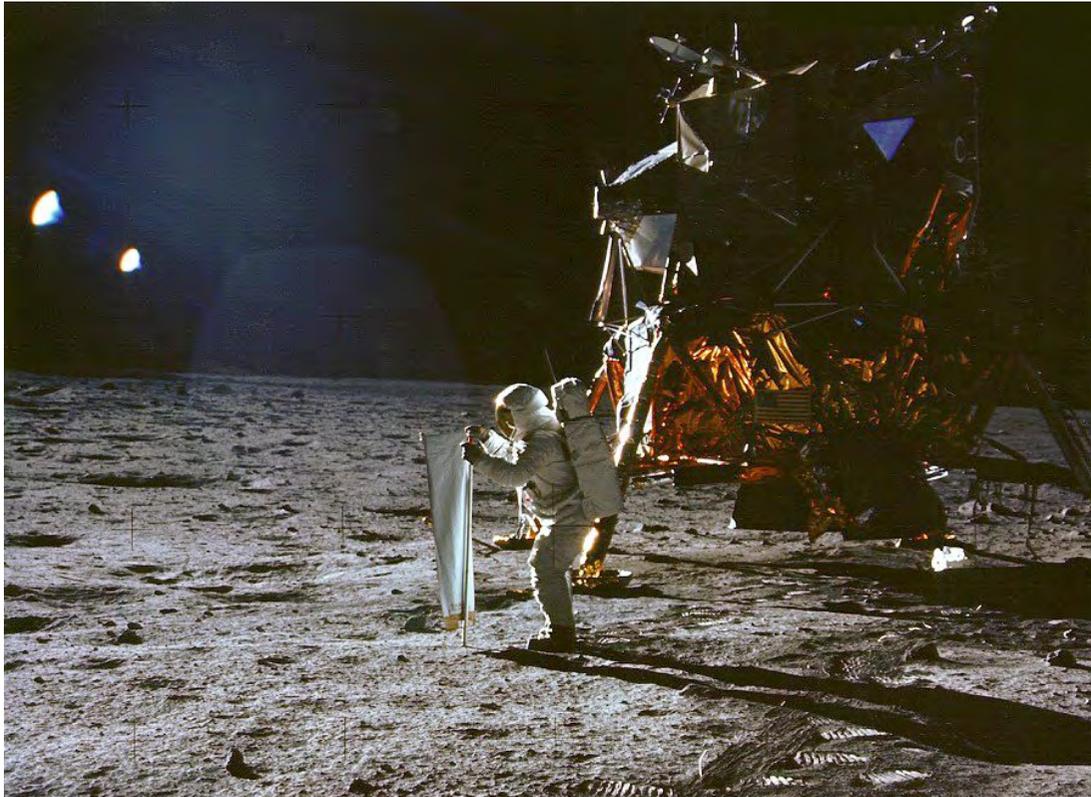
The evidence we're seeing:

58%

Most work time is spent on coordination rather than execution, with 58% of the workday dedicated to "work about work." Employees also lose an average of 4.9 hours per week to inefficient processes.

Source: Asana Anatomy of Global Work Index

04

FROM
FORMAL
DECISION-
MAKING TO:

Proactive discernment

In the age of AI judgment is no longer limited to formal decision making moments. It is embedded in the flow of work itself. Systems now generate analysis, draft communications, recommend actions, simulate scenarios, and act through agents all requiring critical assessment.

Proactive discernment is about interrogating how work is shaped. This is less like approving a final recommendation and more like continuously calibrating direction as conditions evolve. The leader's role is not simply to make the call, but to question inputs, test outputs, define boundaries, and ensure that intelligence—human or artificial—is applied responsibly and coherently.

Proactive discernment is visible in a leader's ability to continually redefine the boundary between human and machine contribution: determining what should be delegated to AI, what requires uniquely human judgment, when autonomy is appropriate, and when escalation is necessary.

At **JPMorgan Chase**, leaders have not simply automated fraud detection; they have institutionalized governance frameworks to manage model risk when deploying ML/AI systems. The firm operates a dedicated Model Risk Governance function that assesses the risk of each AI/ML application and embeds requirements such as explainability, bias mitigation, and ethical safeguards to ensure these systems behave as intended in complex, regulated environments. This work shapes where AI may act autonomously and where human analysts must retain oversight, rather than leaving that boundary to chance.[7]

Leaders at **Klarna** offer a clear example of proactive discernment in action. When Klarna introduced generative AI to its customer service model, it directed high volumes of inquiries to AI in order to claim efficiency gains equivalent to hundreds of full-time human agents. However, leaders observed that cost-driven automation was compromising service quality, particularly on complex or nuanced issues where customers repeatedly expressed frustration.

Based on performance, data, and customer feedback, Klarna's leadership rebalanced the human–machine boundary of its hybrid support model.[8]

Proactive discernment also shows up in assessing information sufficiency and accuracy such as the potential bias of source data, the reliability and usability of outputs, and whether additional analysis adds clarity or simply creates noise.

Morgan Stanley's deployment of GPT-4 for its financial advisors illustrates proactive discernment around information sufficiency. Rather than allowing the model to draw from open internet data, leaders restricted it to a curated library of over 100,000 vetted internal research documents. The system was designed to cite its sources, return "I don't know" when confidence was insufficient, and operate within strict data-permission boundaries. Advisors were trained to treat outputs as starting points requiring verification rather than final answers.[9]

Proactive discernment is key to the use of AI in the creative process, where leaders must interrogate whether outputs reflect genuine creative intent, align with strategic objectives, or meet standards of craft and distinctiveness.

In advertising, recent reactions to gen AI-driven **Super Bowl campaigns** illustrate the stakes. Industry watchers were critical of the many ads that relied on gen AI, characterizing them as "cheap and sloppy" while close to 50% of consumer ad mentions that referenced AI were negative, largely critical of AI-generated commercials for being "uninspired or low-quality".[10]

Because capability now outpaces experience, effective discernment cannot reside only at the top. Leaders must model rigorous engagement, design workflows that embed oversight, and cultivate judgment in others, especially earliercareer talent.

7.
Good governance essential for enterprises deploying AI.
Link to MIT Technology Review

8.
Klarna Customer Service: From AI-First to Human-Hybrid Balance
Link to PromptLayer

9.
Morgan Stanley uses AI evals to shape the future of financial services
Link to OpenAI

10.
Reception of AI ads 'sharply negative' as brand beefs, misinformation brewed
Link to Marketing-Brew

Developing Proactive discernment

SETTING BOUNDARIES

"So everything that I'm doing now starts with: What's the role of AI? What's the role of humans? Without that, you go nowhere."

TAKING OWNERSHIP

"I have people that say, 'Yeah, do it because the machine said so.' It's not about that. It's about remembering to ask the question 'why.'"

SETTING RHYTHM

"It all becomes a trade-off. It's not just because the machine says so, you have to understand and know what you're asking for."

Leaders who want to further develop Proactive discernment can build the following practices:

Strategic questioning

Intentionally framing high-leverage questions to guide work from analysis to judgment.

Output interrogation

Critically examining outputs for bias, reliability, and contextual fit.

Delegation boundary setting

Regularly assessing what should be handled by humans versus machines.

Strategic taste cultivation

Building the power of one's sense of quality or distinctiveness related on any critical choice related to the business.

The evidence we're seeing:

29%

AI summarization tools can still produce incorrect information, with hallucination rates ranging from about 0.7% to 29% depending on the model.

Source: Vectara Hallucination Rate Rankings

About this point of view

SYPartners

We are a consultancy that partners with clients at their critical turning points to design new possibilities for impact, create paths for long-term value, and build cultures of competitive advantage. Since 1994, we've helped some of the world's most iconic organizations lead into the unknown.

This paper—and the four distinct shifts in leadership competencies outlined here—emerged largely from conversations with more than 15 senior executives across the SYPartners network. These discussions explored how AI is reshaping work, value creation, and organizational performance, and how those changes are redefining what's required of leaders. The perspective is also informed by our ongoing signal gathering, client work, and internal reflection.

Here is how we can help you lead in the Age of AI

Building a shared AI vision for your organization.

We create the conditions for leaders to envision how AI can drive new growth and impact.

Defining guiding principles for human+AI collaboration.

We develop principles and guardrails that inspire responsible, values-driven AI usage—anchored in your organization's purpose, goals, and culture.

Designining new ways of working and equipping teams to thrive.

We help establish mindsets, behaviors, and workflows to help employees use AI confidently and creatively—supported by tools, rituals, and learning experiences that make adoption real.

Envisioning new AI-driven customer experiences.

We design experiences, connections, and interactions that express your brand's humanity in the Human + AI era—building trust and lasting relationships with customers.

SYPartners