

STRATEGIC LEADERSHIP IN THE AGE OF SMART ECOSYSTEMS

Integrating People, Technology, and Purpose



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STRATEGIC LEADERSHIP IN THE AGE OF SMART ECOSYSTEMS: INTEGRATING PEOPLE, TECHNOLOGY, AND PURPOSE

Strategic leadership is being rewritten by a new operating reality: **smart ecosystems**. Organizations no longer compete as isolated firms with self-contained resources and linear value chains. They operate within connected systems of platforms, data flows, AI models, supply networks, public institutions, customers, communities, and increasingly autonomous digital agents. In this environment, strategy is not only about positioning and resource allocation; it is also about **orchestration**—the ability to align many semi-independent actors around shared outcomes while maintaining trust, resilience, and ethical integrity.

This shift is not merely technological. It changes what leadership *is*. Traditional strategic leadership assumed that leaders could “see the whole,” plan a direction, and then mobilize execution through hierarchy. But smart ecosystems combine **speed** (rapid technological evolution), **complexity** (interdependence across actors), and **uncertainty** (volatile markets, geopolitics, and regulatory dynamics). The World Economic Forum’s framing of “Collaboration for the Intelligent Age” captures this era: progress increasingly depends on cross-actor coordination, not only internal excellence. ([World Economic Forum](#))

At the same time, internal conditions are strained. Global engagement remains low—only about one-fifth of employees are engaged—while the managerial layer that should translate strategy into human energy is itself under pressure. Gallup reports manager engagement at 27% and estimates hundreds of billions in lost productivity linked to disengagement; it also emphasizes that managers strongly shape team engagement. ([World Economic Forum Reports](#)) (Gallup 2025 report page is linked in the citation.)

Meanwhile, AI is shifting value creation. The frontier is moving from “digital transformation” (adopting tools) to “intelligent transformation” (redesigning work and decisions). McKinsey argues that the biggest barrier to scaling AI is frequently leadership, not employee readiness. Microsoft similarly describes a growing “capacity gap” where leaders demand productivity gains while workers report time/energy depletion, pushing firms toward new organizational forms that integrate human and AI capability. ([World Economic Forum](#))

This essay proposes that strategic leadership in smart ecosystems requires a disciplined integration of **people, technology, and purpose**—not as three separate agendas, but as a single strategic system. “People” provides agency, judgment, creativity, and legitimacy. “Technology” provides speed, scale, and pattern intelligence. “Purpose” provides direction, trustworthiness, and durable alignment across boundaries. When leaders treat these elements in isolation (e.g., technology as an IT project, people as HR work, purpose as branding), ecosystems fragment. When leaders integrate them as one system, organizations can co-create value at ecosystem scale.

1) What are “smart ecosystems” and why do they change leadership?

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A smart ecosystem is an evolving network of actors—firms, customers, partners, regulators, communities, and digital systems—connected through data, platforms, AI, and interoperable processes. It is “smart” not because it is fully automated, but because **decision-making and coordination** are increasingly informed by data and AI, and because multiple participants can adapt in near real time.

Smart ecosystems are visible in:

Platform economies (marketplaces, fintech rails, logistics platforms)

Industrial IoT networks (smart factories, predictive maintenance supply webs)

Healthcare and education systems (interoperable records, tele-services, AI triage and tutoring)

Energy transition systems (smart grids, renewables integration, carbon data infrastructures)

Public service ecosystems (digital government platforms, AI-enabled policy cycles)

These systems create strategic opportunity—rapid scaling, new business models, innovation through partnerships—but also strategic risk: cascading failures, data governance issues, reputational spillovers, and trust breakdown.

Leadership changes because **control weakens**. In ecosystems, many contributors do not report to you: contractors, platform developers, subcontractors, gig workers, alliance partners, AI vendors, and community stakeholders. MIT Sloan’s work on workforce ecosystems emphasizes that orchestrating such systems requires leadership mindsets and behaviors different from direct managerial control. ([MIT Sloan](#))

This is also the core point of ecosystem strategy scholarship: value depends on the ability to “sense, seize, and reconfigure” across interdependent networks rather than optimize an internal chain. (A well-cited example in this domain is the dynamic capabilities view of ecosystem orchestration.) ([ScienceDirect](#))

So, strategic leadership becomes less about commanding a machine and more about **enabling a living system**.

2) From command-and-control to orchestration-and-co-creation

The old logic: **command**

Strategy designed by a small group

Execution cascaded through hierarchy

Control via targets, reporting, compliance

Risk managed through standardization

Innovation treated as a special function

The emerging logic: **co-creation**

Strategy shaped by distributed intelligence (inside/outside)

Execution emerges through aligned autonomy

Control replaced by transparency, standards, and shared accountability

Risk managed through resilience, early warning signals, and shared learning

Innovation embedded in networks and frontline feedback

This shift aligns with current macro signals. The WEF *Future of Jobs 2025* highlights rapid skill change and the rising importance of resilience,

flexibility, leadership, and social influence—capabilities essential for co-creation rather than compliance. ([World Economic Forum Reports](#))

It also aligns with the trust environment. Edelman's 2025 Trust Barometer underscores widespread distrust in institutions and concerns around credibility. In such a world, leadership legitimacy increasingly depends on participatory transparency—people support decisions more readily when the process is intelligible and fair.

3) The integration problem: People, technology, and purpose must be designed as one system

Many transformation failures come from “split-brain leadership”:

The **technology agenda** pursues automation and analytics.

The **people agenda** pursues engagement, culture, and skills.

The **purpose agenda** pursues narratives, ESG, and brand trust.

Each agenda can succeed locally yet fail systemically if not integrated.

For example:

AI pilots succeed technically, but employees resist because workflows worsen or job meaning erodes.

Culture programs increase “values talk,” but decision rights remain opaque, so trust decays.

Purpose branding increases external expectations, but internal incentives still reward short-term exploitation.

Strategic leadership in smart ecosystems means treating integration as an explicit design task: **How does technology amplify human capability in service of purpose, and how does purpose constrain and guide technology use to remain legitimate and trustworthy?**

OECD guidance on trustworthy AI principles (updated 2024) reinforces this integration idea: AI should be innovative and beneficial, but aligned to human rights, transparency, robustness, and accountability. These are leadership design constraints, not optional add-ons. ([OECD](#))

4) A practical framework: The “P-T-P Triangle” for strategic leadership

A) People: Build agency, capability, and trust

Strategic leadership begins with the human system because ecosystems ultimately run on *participation*. In practice this means:

Capability building at speed

WEF signals a large portion of workforce skills will change in coming years, demanding continuous reskilling. ([World Economic Forum Reports](#)) Leaders must design reskilling as a strategic investment, not a training event: pathways, apprenticeships, peer learning, time allocation, and incentives.

Manager reinvention

Deloitte’s 2025 findings highlight managerial overload and the mismatch between what organizations need (coaching, development) and what managers are forced to do (administration, firefighting). Strategic leadership requires redesigning the manager role so managers become *capability multipliers*, not bureaucratic routers.

Psychological safety and voice

In ecosystems, early-warning signals often come from the edge: frontline workers, customers, community feedback, partner friction. Leaders must build norms where raising issues is rewarded, not punished—otherwise small failures compound into systemic crises.

B) Technology: Shift from tools to operating model

Smart ecosystems are not just “more tech.” They represent a new operating logic:

AI as workflow redesign, not software deployment

McKinsey argues leadership is frequently the main barrier to scaling AI, because scaling AI means changing decision-making, roles, and accountability.

From systems of record to systems of action (agentic era)

A current development is the move toward AI agents that execute tasks and deliver outcomes. A recent industry explainer notes Gartner-style expectations about increasing embedding of task-specific AI agents in enterprise apps, and frames “Outcome as Agentic Solution” as an emerging model—where value shifts from tool access to guaranteed execution. ([IT Pro](#))

Whether or not one accepts the exact forecast, the leadership implication is clear: when systems act, leaders must intensify governance, auditability, and accountability.

Digital trust and governance as core strategy

OECD work on digital trust highlights how generative AI intensifies risks from bots, fakes, and integrity failures. ([OECD AI](#)) Leaders must invest in data governance, model risk management, cybersecurity, and transparency—because ecosystem partners and customers will demand proof, not promises.

C) Purpose: Turn meaning into a coordination mechanism

Purpose is not simply inspirational language. In ecosystems, purpose is a **coordination technology**: it aligns semi-independent actors when contracts and hierarchy are insufficient.

Purpose has three strategic functions:

Direction: It narrows strategic choices and clarifies trade-offs.

Legitimacy: It supports trust in the institution's decisions.

Resilience: It stabilizes identity and commitment during shocks.

WEF's ecosystem-oriented work emphasizes responsible innovation and principles for building ecosystems, highlighting why "how we innovate" matters as much as "what we innovate." ([World Economic Forum Reports](#)) Purpose translates those principles into daily decision rules.

5) Strategic leadership capabilities for smart ecosystems

Below are core leadership capabilities that integrate people, technology, and purpose.

5.1 Ecosystem sensemaking

Leaders must interpret signals from markets, partners, regulators, and technologies. Sensemaking involves mapping dependencies and understanding second-order effects: how a platform change impacts partners, how a data policy affects innovation, how an AI model impacts fairness and trust.

5.2 Orchestration (not domination)

Orchestration is the ability to align actors without direct control. MIT Sloan's workforce ecosystem perspective makes the point directly: when contributors are external, direct control is limited; leaders must shift toward influencing through design, incentives, and shared outcomes. ([MIT Sloan](#))

5.3 Governance as leadership (rules, roles, accountability)

In smart ecosystems, governance is not bureaucracy—it is the enabling infrastructure for cooperation. OECD's framing of AI in government

highlights enablers such as governance, data, infrastructure, skills, investment, procurement, and partnerships. (OECD) Similar enablers apply in business ecosystems: governance is how trust becomes scalable.

5.4 Human–AI teaming

The leader must set boundaries and expectations: what AI can decide, what humans must decide, how escalation works, how bias is monitored, how errors are handled. The leadership virtue here is not enthusiasm or fear; it is **disciplined judgment**.

5.5 Purpose-based trade-off management

Ecosystems generate conflicts: speed vs safety, personalization vs privacy, efficiency vs inclusion. Leaders must make trade-offs visible, reasoned, and consistent with purpose to preserve legitimacy—especially under heightened trust skepticism.

6) Narrative case: A “smart ecosystem” leadership scenario

Imagine a regional bank transforming into a “smart financial ecosystem.” It partners with fintechs, integrates with e-commerce platforms, deploys AI for credit scoring and fraud detection, and offers embedded finance. The CEO announces a bold digital strategy and invests heavily in AI.

What goes wrong under a command model

AI adoption becomes an IT project.

Branch teams and call centers are told to “use the new system,” but workflows become more complex.

Customers experience faster onboarding but also confusing dispute resolution when AI flags transactions.

Partner fintechs complain about unclear API governance and shifting rules.

A fraud incident spreads on social media; trust declines.

The organization is "more digital" but less coherent.

What changes under a co-creative strategic leadership model

The CEO reframes strategy as a **purpose-driven ecosystem**: "trusted financial access with responsible intelligence." Then she designs integration:

People

Redesigns manager roles to spend time coaching on AI-enabled workflows.

Builds cross-functional "decision pods" including compliance, data science, frontline service, and partner management.

Technology

Establishes model governance: audit trails, bias testing, explainability thresholds, escalation rules.

Automates routine work but keeps human review for high-impact decisions.

Purpose

Makes trade-offs explicit: "We will accept slightly slower approvals in exchange for fairness and explainability."

Publishes customer-facing transparency commitments and partner governance standards.

Result: the bank becomes an ecosystem orchestrator rather than a tool adopter. It can scale innovation while sustaining trust.

This narrative reflects the broader pattern found in current evidence: technology creates potential, but leadership determines whether the potential becomes value or chaos. ([World Economic Forum](#))

7) Measurement: how leaders know they are succeeding

Traditional metrics (revenue, margin, market share) remain important, but smart ecosystems require additional indicators.

People metrics

Skill velocity (time-to-competence for new tools)

Engagement and burnout indicators (especially managers) ([World Economic Forum Reports](#))

Internal mobility and talent marketplace participation

Quality of voice (issue detection rate, time-to-escalation)

Technology metrics

AI adoption depth (workflow penetration, not licenses)

Decision quality (error rates, bias metrics, appeal rates)

Auditability and governance maturity

Cyber resilience

Purpose/trust metrics

Customer trust indicators and complaint resolution time

Partner satisfaction and ecosystem stability (retention of key partners)

Transparency metrics (explainability coverage, disclosure compliance)

8) Conclusion: the strategic leader as integrator of meaning, capability, and intelligence

The age of smart ecosystems demands a new definition of strategic leadership. Leaders can no longer rely primarily on hierarchical command or isolated transformation initiatives. They must become integrators of three forces:

People: the source of agency, creativity, and legitimacy

Technology: the engine of scale, speed, and augmented intelligence

Purpose: the moral and strategic compass that makes collaboration and trust sustainable

The evidence base points in the same direction: skills are shifting rapidly (WEF), trust is fragile (Edelman), AI scaling depends heavily on leadership redesign (McKinsey, Microsoft), and managers are overloaded in ways that undermine human development (Deloitte). ([World Economic Forum Reports](#))

In this landscape, strategic leadership is increasingly the craft of **orchestrating co-creation**—designing conditions where diverse participants (human and machine, internal and external) can coordinate intelligently toward outcomes that are economically viable, socially legitimate, and ethically defensible. That is the leadership advantage of the smart ecosystem era.

Below is a **Glossary** and a **Selected References list (APA style)** to accompany the essay:

“Strategic Leadership in the Age of Smart Ecosystems: Integrating People, Technology, and Purpose.”

Glossary

Adaptive Leadership

A leadership approach designed for environments characterized by complexity, uncertainty, and systemic change. It emphasizes learning, stakeholder engagement, and shared problem-solving rather than top-down control.

AI Governance

The structures, policies, standards, and accountability mechanisms that ensure artificial intelligence systems are transparent, fair, secure, explainable, and aligned with ethical and legal norms.

Agentic AI

AI systems capable of autonomously executing multi-step tasks, making contextual decisions within defined boundaries, and interacting dynamically with digital systems and users.

Collective Intelligence

The enhanced problem-solving capacity that emerges when diverse individuals, teams, and digital systems collaborate effectively.

Co-Creation

A strategic process in which value is jointly developed by multiple stakeholders (employees, customers, partners, communities), rather than delivered unilaterally by an organization.

Digital Trust

Confidence that digital systems, platforms, and data practices are secure, transparent, ethical, and aligned with user expectations and societal norms.

Dynamic Capabilities

An organization's ability to sense opportunities and threats, seize them through strategic decisions, and reconfigure resources accordingly in changing environments.

Ecosystem Orchestration

The leadership practice of aligning and coordinating independent but interdependent actors within a broader network to achieve shared strategic outcomes.

Human-AI Collaboration

A working model where humans and artificial intelligence systems complement each other's strengths—AI providing speed and scale, humans providing judgment and ethical reasoning.

Innovation Ecosystem

A network of organizations, institutions, and individuals whose interactions enable innovation through shared knowledge, infrastructure, and collaboration.

Managerial Reinvention

The redesign of managerial roles to shift focus from administrative supervision toward coaching, capability development, and strategic coordination.

Organizational Resilience

The capacity of an organization to absorb shocks, adapt to change, and continue functioning effectively amid disruption.

Psychological Safety

A team climate where individuals feel safe to speak up, admit mistakes, challenge assumptions, and offer new ideas without fear of humiliation or retaliation.

Purpose-Driven Strategy

A strategic orientation that integrates economic performance with a clearly articulated mission and societal value proposition.

Smart Ecosystem

An interconnected system of organizations, technologies, platforms, data flows, and stakeholders that dynamically co-create value using digital intelligence and collaborative governance.

Stakeholder Capitalism

A governance perspective that views organizations as accountable not only to shareholders but also to employees, customers, communities, partners, and society at large.

Strategic Leadership

The capacity to align long-term direction, organizational capabilities, technology deployment, and stakeholder relationships in order to create sustainable competitive advantage.

Workforce Ecosystem

A broader network of full-time employees, contractors, gig workers, partners, and digital agents contributing to organizational performance.

Selected References (APA Style)

Deloitte. (2025). *2025 Global Human Capital Trends: Navigating workplace tensions*. Deloitte Insights.

<https://www.deloitte.com>

Edelman. (2025). *2025 Edelman Trust Barometer: Global report*. Edelman.

<https://www.edelman.com>

Gallup. (2025). *State of the global workplace 2025 report*. Gallup.

<https://www.gallup.com/workplace>

McKinsey & Company. (2025). *Superagency in the workplace:*

Empowering people to unlock AI's full potential at work. McKinsey Global Institute.

<https://www.mckinsey.com>

MIT Sloan Management Review. (2024). *How to harness strategic power in a workforce ecosystem*. MIT Sloan.

<https://mitsloan.mit.edu>

OECD. (2024). *OECD principles on artificial intelligence (updated framework)*. Organisation for Economic Co-operation and Development.

<https://www.oecd.org/ai>

OECD. (2025). *Governing with artificial intelligence*. OECD Publishing.

<https://www.oecd.org>

PwC. (2025). *Global AI jobs barometer 2025*. PricewaterhouseCoopers.

<https://www.pwc.com>

Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. Doubleday.

Rudy C Tarumingkeng : *Strategic Leadership in the Age of Smart Ecosystems - Integrating People, Technology, and Purpose*

Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*, 51(1), 40–49.

World Economic Forum. (2025). *The future of jobs report 2025*. World Economic Forum.

<https://www.weforum.org>

World Economic Forum. (2025). *Innovation ecosystems 2025: Principles for responsible innovation*. World Economic Forum.

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