

Paper LS-441

Strategic AI Coaching for Life Sciences: A Framework for Industry Leaders and Managers

Dr. Priscilla Gathoni, Wakanyi Enterprises Inc., Gaithersburg, MD, USA

ABSTRACT

As we stand on the cusp of the Fourth Industrial Revolution, leaders are facing a "virtual thunderstorm of change" propelled by the rapid acceleration of Artificial Intelligence (AI). To remain competitive in this high-stakes landscape, the life sciences industry must move beyond traditional management toward a holistic hybrid coaching model. This paper introduces the Farhan-5As framework—a systematic roadmap of Analysis, Architecture, Application, Ascertainment, and Adjustment—designed to harmonize AI-driven efficiency with a necessary company-wide shift in mindset. While technology often triggers a sense of things "falling apart," this framework proves that strategic AI integration actually brings organizational structures together for a greater good. We explore the transformative power of CoachBots and generative AI assistants, which empower leaders to shift their focus from routine technical tasks to high-value social and personal competencies. By positioning leaders as the primary "designers" of human-AI interaction, organizations can ensure that digital transformation remains human-centered, ethical, and transparent. Join me to discover how to turn technological overload into a sustainable competitive advantage, ensuring your leadership remains resilient in the age of the Singularity.

INTRODUCTION

The pharmaceutical sector, which reached a global market value of approximately \$1.48 trillion in 2022, is currently facing unprecedented disruption from cyber-physical systems and pervasive digitalization (Abdelgawad, 2024). As cyber-physical systems and pervasive digitalization generate an "enormous amount of data," leaders face the daunting task of transforming socio-technical work systems. This era of Fourth Industrial Revolution (4IR) is characterized by quantum leaps in computational speed and AI discoveries that threaten to overwhelm traditional, linear leadership models.

The life sciences industry is currently engulfed in a "virtual thunderstorm of change" driven by the 4IR. This era is characterized by a shift from Artificial Narrow Intelligence (specific task focus) toward the impending Singularity, where machine intelligence may surpass human capabilities as early as 2029. In the high-stakes pharmaceutical sector, leaders must navigate a landscape of relentless flux, moving beyond traditional management to embrace digital business models that leverage Machine Learning (ML), Natural Language Processing (NLP), and Big Data to ensure organizational survival.

In this volatile and ambiguous environment, leaders often encounter high levels of fear, uncertainty, and doubt (FUD). Traditional, linear leadership models frequently collapse under such complexity, necessitating a shift toward adaptive, situationally responsive strategies (Forbes, 2024). Effective leadership in the AI era requires a synergy between technological advancements and the social and personal competencies of the professionals involved.

Executive coaching has emerged as a strategic catalyst to close this performance gap, serving as a mission-critical intervention rather than a luxury. Executive coaching acts as a scaffold in this

transition, reconstructing leadership capacity to bridge the gap between technological potential and organizational performance (Aridi, 2025). By integrating AI tools—such as CoachBots, natural language assistants, and behavioral analytics—into professional development, organizations can reconstruct leadership capacity to improve decision-making under pressure.

This paper explores the integration of AI-driven coaching frameworks, such as the Farhan-5As application, to empower life science leaders to navigate the digital landscape with resilience, ethics, and strategic clarity.

1. STRATEGIC FRAMEWORKS: THE FARHAN-5AS AND HEALTHCARE COACHING MODELS

To successfully implement AI, leaders require more than technical tools; they need a robust roadmap. To guide organizations through AI transformation, the Farhan-5As Application provides a structured five-stage process: Analysis, Architect, Apply, Ascertain, and Adjustment (Murtza & Murtza, 2023). This framework includes a multi-dimensional evaluation of technology gaps and the redesign of workforce systems to align with the AI mission (Murtza & Murtza, 2023). In high-stakes healthcare environments, this strategic alignment is supported by the Healthcare Leadership Coaching Contribution Model, which addresses 28 critical items including crisis triage, ethical decision-making, and cybersecurity risk governance (Aridi, 2025). During emergencies, leaders are coached to ensure the "Canoe Theory" is applied—where every team member paddles in unison toward a shared destination (Aridi, 2025).

To navigate AI transformation, organizations can utilize the Farhan-5As Application model, a structured five-stage consulting process highlighted below:

- **Analysis:** A multi-dimensional evaluation of current technology, value-chain processes, and the digital readiness of people, including the CEO.
- **Architect:** Setting a clear AI mission and vision while overhauling workforce systems and job descriptions to align with technology.
- **Apply:** Bridging the AI literacy gap through development programs and applying Lewin's Change Management Model (Unfreeze-Change-Refreeze) to mitigate disruption.
- **Ascertain:** Scrutinizing KPIs and user feedback to calculate the Return on Investment (ROI).
- **Adjustment:** Continuous iteration and fine-tuning of the AI solution to stay agile in a changing market.



OpenAI. (2026, January 16). *Navigating AI Transformation: The Farhan-5As Application [AI-generated infographic]*. Generated with ChatGPT (OpenAI image generator).

How does the Farhan-5As framework improve AI strategic implementation?

The Farhan-5As framework (Analysis, Architect, Apply, Ascertain, and Adjustment) improves AI strategic implementation by providing a structured, systematic, and user-friendly roadmap for organizations that otherwise lack a clear path in the complex digital landscape (Murtza & Murtza, 2023). By moving beyond mere technological adoption, the framework ensures that AI transformation is integrated into the organization's very core through a holistic three-legged table approach that balances business direction, technology alignment, and people's involvement.

The framework improves implementation through the following specific stages:

1. Comprehensive Multi-Dimensional Analysis

Strategic implementation is improved at the outset by evaluating more than just software; it assesses technology, processes, and people. This phase identifies gaps in the current technological landscape and analyzes competitor maturity to ensure the organization understands "where they are now" and "where they want to go". By examining the value chain, the framework identifies static or slow processes that can be optimized to align with new technological capabilities.

2. Strategic Architecture and Structural Alignment

The framework improves implementation by defining a clear AI Transformation Mission and Vision, which explains why the company is shifting toward AI and what value it creates for stakeholders. This stage involves a complete overhaul of workforce systems, where organizational structures, procedures, and job descriptions are redesigned to integrate seamlessly with AI technologies. This prevents AI from being a "bolt-on" and instead makes it a central part of the operational framework.

3. Human-Centered Application and Change Management

One of the most significant ways the framework improves success is by addressing the human aspect of change, which is a primary reason for the high failure rate of AI initiatives. The "Apply" stage focuses on:

- **Bridging the AI Literacy Gap:** It identifies disparities in the current workforce's skills and implements AI Transformation Development Programs to enhance social, emotional, and cognitive intelligence.
- **Disciplined Change Management:** It utilizes Lewin's Change Management Model (Unfreeze-Change-Refreeze) to mitigate organizational disruption during the transition.

4. Data-Driven Validation (Ascertain)

Implementation is improved by shifting the focus to performance evaluation and impact assessment. By scrutinizing Key Performance Indicators (KPIs) and gathering user feedback, consultants can measure the tangible Return on Investment (ROI) and determine if the AI solution is meeting specific business needs. This data-driven approach allows for informed decisions regarding future strategies.

5. Iterative Agility and Continuous Adjustment

Finally, the framework ensures long-term success through a stage of continuous improvement and adaptation. The "Adjustment" phase uses insights from the previous stage to fine-tune the AI solution, allowing the organization to remain agile and responsive to changing market dynamics and technological advancements. This iterative nature prevents the implementation from becoming stagnant or obsolete in the rapidly evolving business landscape.

In summary, the Farhan-5As framework improves implementation by transforming the "virtual thunderstorm" of technological change into a manageable process that pushes an organization out of its comfort zone and toward strategic greatness.

2. THE EVOLUTIONARY SHIFT: FROM TASK-ORIENTED TO AUGMENTED LEADERSHIP

AI is fundamentally transforming leadership practices from autocratic and transactional styles toward more adaptive and democratic approaches. As AI takes over routine technical and administrative tasks, leaders must shift their focus toward social and personal competencies, such as emotional intelligence and ethical clarity. This "Augmented Leadership" allows executives to act as designers of Human-AI interaction, balancing machine-derived insights with human intuition to foster innovation.

The evolution of AI can be categorized into Artificial Narrow Intelligence (ANI), which currently powers industrial applications, and the projected Artificial Super Intelligence (ASI). Computer scientist Ray Kurzweil predicts the "Singularity"—the point where machine intelligence surpasses human brain capacity—will be achieved by 2029. In the life sciences, this necessitates a move toward "Augmented Leadership," where AI acts as a decision-support system, freeing leaders to focus on strategic thinking and originality (Abdelgawad, 2024; Peifer et al., 2022).

In the age of AI, the leader's role shifts from a traditional task manager to a "designer" of the interaction between employees and technology (Peifer et al., 2022). This role requires leaders to determine the optimal division of labor, deciding which activities are best performed by humans—such as those requiring social intelligence and innovation—and which should be automated by AI (Madanchian et al., 2024; Peifer et al., 2022). As designers, leaders must co-create professional roles with their employees, ensuring that the transition to AI-augmented work systems is human-centered and respects values like self-determination and privacy (Abdelgawad, 2024; Peifer et al., 2022). By delegating routine managerial "how-to" tasks to AI, leaders can focus on the visionary "what and why" of the organization (Abdelgawad, 2024).

The role of leaders as designers in AI interaction involves several critical functions:

a. Strategic Task Allocation

Leaders as designers are responsible for determining the division of labor within a socio-technical work system. This involves:

- **Strengths-Based Distribution:** Deciding which activities are best performed by humans (leveraging social characteristics and innovation) and which should be carried out by AI (leveraging data processing and automation).
- **Operational Optimization:** Redesigning organizational structures and procedures to ensure that technology, processes, and individuals are integrated seamlessly.
- **Focusing on Originality:** By delegating mundane, repetitive managerial tasks to AI, leaders "design" their own schedules to prioritize strategic thinking, creativity, and visionary planning.

b. Co-Creation of Professional Roles

The designer role is inherently participatory rather than autocratic. Leaders are expected to:

- **Collaborate with Employees:** Work together with staff to design their specific roles in relation to the AI.
- **Empowerment through Meaning:** Ensure that employees understand their individual significance within the AI-augmented process, helping them transition into new roles that emphasize human-centric strengths.
- **Bridging Skill Gaps:** Act as architects of professional development, identifying disparities between current skills and those required for an AI-driven environment.

c. Ethical and Human-Centered Stewardship

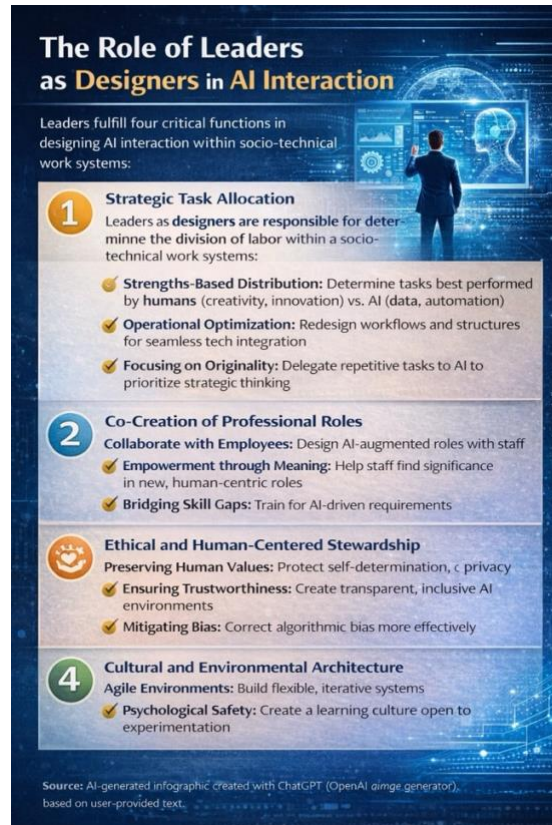
As the primary "designers" of human-AI interaction, leaders must establish the ethical framework under which technology operates. This includes:

- **Preserving Human Values:** Designing systems that respect the values of self-determination, justice, and the protection of privacy.
- **Ensuring Trustworthiness:** Creating a "designer" environment that prioritizes safety, transparency, and social inclusion to foster a culture where stakeholders feel secure using AI tools.
- **Mitigating Bias:** Utilizing AI's "interrogatable" nature to detect and correct algorithmic bias more effectively than traditional human-led oversight.

d. Cultural and Environmental Architecture

Leaders design the organizational culture that allows AI transformation to succeed.

- **Agile Environments:** Designing agile systems with reduced hierarchical levels and leaner processes to support rapid iteration.
- **Psychological Safety:** Building a culture that allows for mistakes and failure during the change process, ensuring that the integration of AI is viewed as a learning opportunity rather than a threat.



In summary, the leader as a designer moves away from being a mere supervisor of tasks to being a strategic integrator who orchestrates the synergy between technological advancements and the capabilities of individuals within the organization. When this interaction is designed effectively, the organization remains stable, resilient, and capable of achieving true greatness.

3. THE RISE OF THE "COACHBOT": AI-POWERED PROFESSIONAL DEVELOPMENT

The emergence of "CoachBots" has introduced a triadic coaching model, where a human client is supported by both a human coach and an AI assistant (Terblanche, 2024). AI-based coaching is currently most effective for narrow, structured tasks such as goal attainment and the induction of reflection processes (Plotkina & Sri Ramalu, 2024). Tools like VoiceVibes and Orari analyze behavioral metrics—such as tone, filler words, and energy levels—to provide leaders with private, unbiased feedback (Khandelwal & Upadhyay, 2021). While AI lacks the "working alliance" of a human coach, it acts as a 24/7 reflective soundboard, maintaining continuity between human-led sessions and following up on distal goals (Plotkina & Sri Ramalu, 2024; Terblanche, 2024).

How can CoachBots and humans effectively collaborate in triadic coaching?

In **triadic coaching**, CoachBots and humans effectively collaborate by establishing a hybrid relationship where the human coach leads the process while the AI provides data-driven support and continuous engagement. This synergy allows for a more holistic developmental experience that combines human intuition with machine-derived insights.

Effective collaboration in this model is achieved through the following methods:

a. Complementary Division of Roles

Collaboration is most effective when roles are divided according to the unique strengths of each party. AI-powered CoachBots excel at objective thinking free of human fatigue, measuring performance, and diagnosing behavioral patterns. Meanwhile, the human coach focuses on critical strategic interventions, relationship building, and handling complex situations that require high emotional intelligence and critical thinking.

b. Real-Time Feedback and Pattern Detection

During live coaching sessions, the human coach can use AI-generated interpretations of human-human interactions to direct the process. For example:

- **Behavioral Metrics:** AI tools like **Orai** or **VoiceVibes** can provide real-time statistics on filler words, tone, energy levels, and "vibes" (e.g., sounding assertive vs. nervous).
- **In-the-Moment Suggestions:** The AI can provide suggestions for coaching questions and detect client cognitive patterns that a human might miss.

c. Maintaining Continuity Between Sessions

A significant collaborative advantage is the use of AI to bridge the gaps between human-led sessions. AI assistants can:

- **Nudge and Follow-up:** Check in on the progress of goals discussed in the previous human coaching session, which is vital for **Goal Theory** and positive outcomes.
- **Act as a Reflective Soundboard:** Provide 24/7 support, allowing clients to practice new skills and receive immediate feedback when the human coach is unavailable.

d. Synergy for Enhanced Efficiency






The human coach, "armed" with an AI-based app, performs in synergy rather than in competition. The AI shares the workload by automating repetitive tasks like administering intake surveys, which allows the human coach to focus their attention on more vital, high-value areas of leadership development. By using open-source models, organizations can further customize these tools to ensure they are free from the cultural or racial biases sometimes found in proprietary AI, making the collaboration more transparent and trustworthy.

4. SYSTEMIC TEAM COACHING: HAWKINS' FIVE DISCIPLINES

Effective AI integration requires moving beyond the individual leader to the collective transformational team. Utilizing Peter Hawkins' Five Disciplines—Commissioning, Clarifying, Co-creating, Connecting, and Core Learning—organizations can ensure that leadership teams remain aligned with stakeholder expectations while "rebuilding the ship while sailing it". This

systemic approach is vital for Unitary Boards and Chief AI Officers (CAIOs) who must manage complex interconnections across the global life sciences matrix (Ramakrishnan, 2021).

Peter Hawkins' Five Disciplines
For a team to function as more than the sum of its parts.

Discipline	Description
 Commissioning	Understanding why the team exists and managing stakeholder expectations.
 Clarifying	Developing a shared purpose, strategic goals, and core values.
 Co-creating	Noticing and interrupting negative patterns and self-limiting beliefs.
 Connecting	Engaging effectively with the wider stakeholder system.
 Core Learning	Stepping back to reflect and consolidate individual and collective capacity

For Unitary Boards and Chief AI Officers (CAIOs), Hawkins' five disciplines of systemic team coaching provide a framework to transition from a "virtual thunderstorm" of technological chaos to a structured, human-centered AI strategy. By integrating these disciplines with emerging roles like **The Explainer**, **The Chooser**, **Auditors**, and **Trainers**, leadership can effectively manage the "three-legged table" of business direction, technology alignment, and people (Seamans, n.d.).

a. Commissioning: Defining the Purpose and Stakeholder Value

The Board and CAIO use this discipline to define *why* the organization is adopting AI. They take advantage of "**The Explainer**", an expert who understands the technology deeply and translates it into plain language for regulators, judges, and other stakeholders. This ensures that AI tasks—such as choosing the best statistical method or recommending medical treatments—are commissioned with clear accountability and performance standards.

b. Clarifying: Establishing Shared Strategic Goals

CAIOs must resolve the "baffling" variety of AI options by utilizing "**The Chooser**", who helps the board figure out which type of AI technology works best for specific tasks. This discipline aligns with the **Farhan-5As "Architect" stage**, where the mission and vision are clarified to ensure every team member is "paddling in unison" (Canoe Theory) toward shared business outcomes.

c. Co-creating: Managing Patterns and Mitigating Bias

To foster a culture of trust and high performance, Boards and CAIOs employ "**Auditors and Cleaners**" to spot and resolve issues like bias in AI decisions. By regularly checking for unfairly skewed results and adjusting the training data, leadership "co-creates" a more just and ethical organizational environment. This mitigates the "Fear, Uncertainty, and Doubt" (FUD) often associated with 4IR transformations.

d. Connecting: Engaging the Stakeholder Ecosystem

This discipline involves managing the relationship between the organization and the wider digital landscape. Leadership uses "**The Explainer**" to ensure that external parties (such as regulators and clinical trial sponsors when an AI model influences eligibility or safety signal detection) understand who is responsible for AI-driven outcomes. This keeps the organization "connected" to its legal and social obligations while maintaining strategic agility.

e. Core Learning: Consolidating Collective Capacity

Finally, CAIOs drive long-term resilience through "**The Trainer**", a new breed of specialist who leverages AI to figure out which teaching style works best for individual employees. This consolidates the "collective capacity" of the workforce, allowing for rapid upskilling and the development of 21st-century essential skills without requiring workers to return to traditional formal education.

In summary, Unitary Boards and CAIOs take advantage of these disciplines to move beyond being "task managers" of software and instead become "**designers**" of a robust, human-machine synergy that is ethically grounded and strategically sound.

5. ETHICAL GOVERNANCE AND THE "HUMAN-CENTERED" MANDATE

The integration of AI into leadership necessitates a "moral imperative" to protect ethical values, specifically self-determination, justice, and the protection of privacy. Leaders must proactively mitigate algorithmic bias—which is often easier to interrogate in an AI than in a human—by using open-source models and transparent training data. Ultimately, the goal is human-centered AI, where technology serves as a scaffold for ethical decision-making rather than a replacement for human values.

In my view and based on the clients I work with, the most common industry practice for mitigating AI bias is "Human-in-the-Loop" (HITL) verification, where no AI-generated decision regarding performance or hiring is finalized without a thorough review and sign-off by a qualified human manager to ensure the output aligns with corporate values and legal standards.

How can leaders and managers recognize and mitigate hidden AI biases?

To recognize and mitigate hidden AI biases, managers must adopt a proactive approach that combines technical best practices with a specific leadership mindset. While AI tools are effective for narrow tasks like goal attainment, they currently lack the competence for deep, individualized approaches, making human oversight essential to identify and correct ethical drawbacks.

Recognizing Hidden AI Biases

Leaders and managers can identify bias by understanding the inherent limitations of the technology they use:

- **Understanding Large Language Models (LLMs):** Leaders and managers should be trained to recognize that generative AI and LLMs are susceptible to biases that can skew **coaching and feedback**.
- **Gap Analysis:** Because AI often lacks a "working alliance" and the ability to provide a truly individualized approach, managers can spot bias by comparing AI-generated feedback against their own human-centered observations of an employee's unique performance and emotional intelligence.
- **Cross-Model Comparison:** Using different AI tools—such as ChatGPT, Gemini, Claude, or Perplexity—for the same task can help a manager identify inconsistencies or stereotypical patterns that may indicate a hidden bias in a specific model.

Mitigating AI Biases

Once potential biases are identified, several strategies for mitigation can be harnessed:

- **Responsible Usage Best Practices:** Managers should follow established "best practices for responsible AI usage," which involve treating AI as a "complementary helping tool" rather than a total replacement for human judgment.
- **Structured Prompt Engineering:** One of the most effective ways to reduce bias is to use a "5-Step Process for Crafting Coaching Prompts". By carefully gathering information and crafting specific, data-driven prompts, managers can unlock deeper, more objective insights into employee performance while minimizing the chance of triggering biased algorithmic responses.
- **Developing Cultural Intelligence:** To effectively lead a diverse workforce, leaders and managers should leverage cultural intelligence and self-awareness. These skills allow leaders to evaluate AI suggestions through a lens of equity and inclusion, ensuring the technology supports rather than hinders diversity.
- **Adopting a Growth Mindset:** AI is "forcing leaders to raise their game". By maintaining a growth mindset, leaders can continuously adapt their strategies and remain vigilant against the "dark side" of technology, which includes the risk of automated bias.
- **Verification Through Simulation:** Leaders can use AI for immersive role-playing and simulations. By testing various coaching scenarios with the AI, they can observe how the tool responds to different personality types or demographics, allowing them to adjust their prompts or interventions before interacting with actual employees.

6. WHAT ARE THE LIMITATIONS OF AI IN LONG-TERM COACHING?

The limitations of artificial intelligence in long-term coaching are significant and centered on the inability of current technology to replicate the depth of human connection and personalization.

The key limitations include:

- **Lack of Deep, Long-Term Competence:** While AI is effective for narrow, structured tasks—such as attaining specific goals, supporting psychological conditions, or inducing reflection—deep, long-term coaching remains outside the current competence of AI tools.
- **Inability to Form a "Working Alliance":** A foundational element of professional coaching is the working alliance (the relationship and bond between coach and coachee). The sources explicitly state that AI currently lacks the ability to establish this alliance, which is critical for successful long-term outcomes.
- **Limited Individualization:** Although AI can generate personalized feedback based on data, it struggles with the individualized approach required for complex, evolving coaching needs over time. AI tools are currently viewed as complementary helpers rather than replacements for human coaches.
- **Vulnerability to Bias:** AI systems, including Large Language Models (LLMs), are susceptible to biases that must be actively recognized and mitigated by human coaches. If left unaddressed, these biases can undermine the integrity of the coaching process.
- **Dependency on Human "Design":** As noted in the paper earlier, AI requires a human leader to act as a "designer" of the interaction. Without human oversight to set ethical boundaries and interpret machine-derived data within a social and ethical context, the long-term utility of the tool is diminished.

7. HOW CAN LEADERS AND MANAGERS DESIGN BETTER PROMPTS FOR COACHING FEEDBACK?

To design better prompts for coaching feedback, leaders and managers should move beyond basic queries and follow a structured, systematic approach that emphasizes information gathering and goal alignment. To maximize the utility of Large Language Models (LLMs) like ChatGPT or Claude, managers must adopt a structured 5-step process for crafting coaching prompts (Towne, 2025). This process involves gathering comprehensive performance information, identifying specific team needs, and using immersive role-playing to simulate coaching conversations (Towne, 2025). By using AI-assisted SMART goal setting, leaders can identify specific technical and leadership skill gaps and address performance challenges with precision and empathy (Towne, 2025).

1. Follow a Structured 5-Step Process

Towne (2025) highlights a specific 5-step process for crafting coaching prompts designed to enhance the precision of AI outputs. While the specific tactical steps of this model are detailed within the "AI for Managers" curriculum, the core methodology involves:

a. Gather Comprehensive Information

The first step involves collecting relevant data regarding the team member's performance and specific challenges. This ensures the AI has the necessary context to provide feedback that is both precise and empathetic. As "The Explainer" role suggests, a manager must be able to translate these organizational

needs into "plain language" that stakeholders and AI systems can interpret effectively.

b. Identify Specific Team Needs

Leaders must identify the specific team members who require intervention. This stage focuses on pinpointing individuals whose performance or leadership development is at a "Moment of Truth." By focusing the prompt on those who need help fast, managers avoid generic outputs and instead target specific technical or leadership skill gaps.

c. Establish SMART(ER) Goal Parameters

The process integrates **SMART** (Specific, Measurable, Achievable, Relevant, and Time-bound) frameworks into the prompt. By defining the technical and leadership competencies required, managers provide the AI with a structured boundary. This helps the AI act as a "**Trainer**," leveraging its capabilities to figure out which learning style works best for the individual and tailoring the lessons to fit.

d. Engineer the Prompt Using Diverse LLMs

Managers use Large Language Models (LLMs) like **ChatGPT, Claude, or Perplexity** to unlock deeper insights into employee performance. This step involves:

- Using immersive **role-playing prompts** to simulate coaching scenarios.
- Generating personalized coaching feedback in minutes.
- Crafting the prompt to induce **reflection processes** in the coachee.

e. Audit and Mitigate Bias

The final step is critical for ethical governance. Managers must act as "**Auditors and Cleaners**," conducting regular checkups to ensure the AI's produced results are not unfairly skewed. This involves recognizing hidden biases in the AI's output and adjusting the system or the data to eliminate those problems. This human oversight ensures that the feedback remains **human-centered** and just.



2. Incorporate SMART Frameworks

Better prompts are created when managers integrate established leadership frameworks into their queries. Using AI to support SMART goal setting (Specific, Measurable, Achievable, Relevant, and Time-bound) helps the AI generate more actionable and technical skill development goals for employees.

3. Use Immersive Role-Playing Prompts

Managers can design prompts that instruct the AI to act as a simulation partner. By using prompts for immersive role-playing, leaders can test their coaching techniques and receive feedback on their delivery before engaging in the actual conversation with an employee.

4. Target Narrow, Functional Tasks

AI is currently most effective for narrow tasks, such as goal attainment and the induction of reflection processes. To get the best results, managers should design prompts that focus on these specific outcomes rather than asking the AI to manage deep, long-term coaching relationships, which remains a human competency.

5. Leverage a Growth Mindset

Designing better prompts requires a growth mindset and a willingness to adapt. As you are all aware, AI is "forcing leaders to raise their game". Leaders and managers should view prompt engineering as a skill to be mastered to identify and close skills gaps within their teams more effectively.

6. Mitigate Bias Through Prompting

A critical part of prompt design is recognizing and mitigating AI biases. Managers should craft prompts that include instructions for the AI to remain objective or provide feedback based on diverse perspectives to ensure the generated coaching is ethical and responsible.

CONCLUSION

The integration of AI into leadership practices is not merely a technical update but an organizational metamorphosis. The life sciences industry stands at the precipice of a "virtual thunderstorm of change," where the path forward is defined by an organizational metamorphosis rather than mere technical adoption (Abdelgawad, 2024). By integrating triadic coaching (Terblanche, 2024) and the Farhan-5As framework (Murtza & Murtza, 2023), leaders can bridge the gap between technological potential and human ingenuity, effectively stabilizing the "three-legged table" of business direction, technology alignment, and people (Abdelgawad, 2024). As we navigate toward the Singularity (Abdelgawad, 2024), these AI strategies empower us to lead not as rigid managers, but as jazz ensemble leaders (Forbes, 2024), ensuring that every member of our industry is paddling in unison (Aridi, 2025) toward a future of resilience, empathy, and collective brilliance. As the "Singularity" approaches, the synergy between human intuition and machine-derived data will be the defining factor of success in the life sciences industry (Abdelgawad, 2024; Forbes, 2024).

ACKNOWLEDGEMENTS

This work draws significantly from the Farhan-5As based AITL-Consulting framework and the research conducted by the ifaa – Institute of Applied Industrial Engineering and Ergonomics. These combined resources provided the necessary scaffold to bridge the gap between technological potential and organizational performance in the life sciences sector.

REFERENCES

- Abdelgawad, M. M. (2024). *Organizational leadership in the artificial intelligence age: Impacts on the pharmaceutical industry* [Doctoral dissertation, Westcliff University]. [Source History]
- Anderson, J., & Winter, J. (2025). *The chief AI officer's handbook: Master AI leadership with strategies to innovate, overcome challenges, and drive business growth*. Packt Publishing.
- Aridi, A. S. (2025). Need for executive leadership coaching in public health, healthcare administration, public safety crisis management, and healthcare humanitarian relief. *Health Economics and Management Review*, 6(2), 76–94. <https://doi.org/10.61093/hem.2025.2-06>
- Forbes, R. L. (2024). Leadership coaching in the fourth industrial revolution. *Advances in Social Sciences Research Journal*, 11(8), 274–282. <https://doi.org/10.14738/assrj.118.17468>
- Khandelwal, K., & Upadhyay, A. K. (2021). The advent of artificial intelligence-based coaching. *Strategic HR Review*, 20(4), 137–140. <https://doi.org/10.1108/SHR-03-2021-0013>
- Kurzweil, R. (2005). *The singularity is near: When humans transcend biology*. Viking.
- Madanchian, M., Taherdoost, H., Vincenti, M., & Mohamed, N. (2024). Transforming leadership practices through artificial intelligence. *Procedia Computer Science*, 235, 2101–2111. <https://doi.org/10.1016/j.procs.2024.04.199>
- Murtza, F., & Murtza, A. (2023). Artificial Intelligence (AI) transformation leadership consulting framework. *International Journal of Management Studies and Social Science Research*, 5(5), 20–30. <https://doi.org/10.56293/IJMSSSR.2022>

Owen, J. (2024). *The leadership skills handbook: 100 essential skills you need to be a leader* (6th ed.). Kogan Page Limited.

Owen, J. (2025). *The mindset of success: From good manager to great leader* (3rd ed.). Kogan Page Limited.

Peifer, Y., Jeske, T., & Hille, S. (2022). Artificial intelligence and its impact on leaders and leadership. *Procedia Computer Science*, 200, 1024–1030. <https://doi.org/10.1016/j.procs.2022.01.301>

Plotkina, L., & Sri Ramalu, S. (2024). Unearthing AI coaching chatbots capabilities for professional coaching: A systematic literature review. *The Journal of Management Development*, 43(6), 833–848. <https://doi.org/10.1108/JMD-06-2024-0182>

Ramakrishnan, S. (2021). *Brief summary of leadership team coaching: Developing collective transformational leadership (Peter Hawkins)* [Summary Paper].

Seamans, R. (n.d.). Four new jobs that may be in future of AI. *The New York University Stern School of Business*.

Terblanche, N. H. D. (2024). Artificial Intelligence (AI) coaching: Redefining people development and organizational performance. *The Journal of Applied Behavioral Science*, 60(4), 631–638. <https://doi.org/10.1177/00218863241283919>

Towne, L. B. (2025). *AI for managers: Elevate your coaching, feedback, and employee engagement using AI tools* (1st ed.) [Video]. Pearson.

Weinberg, F. J., & Scandura, T. (2024). Advancing the future of workplace development: Integrative approaches to mentoring and coaching. *Journal of Managerial Psychology*, 39(6), 832–843. <https://doi.org/10.1108/JMP-08-2024-717>

CONTACT INFORMATION

Your comments and questions are valued and encouraged. Contact the author at:

Name: Dr. Priscilla Gathoni, DM, MS, MBA, GHMC

Enterprise: Wakanyi Enterprises Inc.

Address: 509 Quince Orchard Road – Suite 304

City, State ZIP: Gaithersburg, MD 20878

Work Phone: (202) 236 2598

Email: drgathoni@wakanyienterprises.com

LinkedIn: www.linkedin.com/in/wakanyienterprisesinc

Website: <http://www.wakanyienterprises.com/>

X: WakanyiE

Brand and product names are trademarks of their respective companies.