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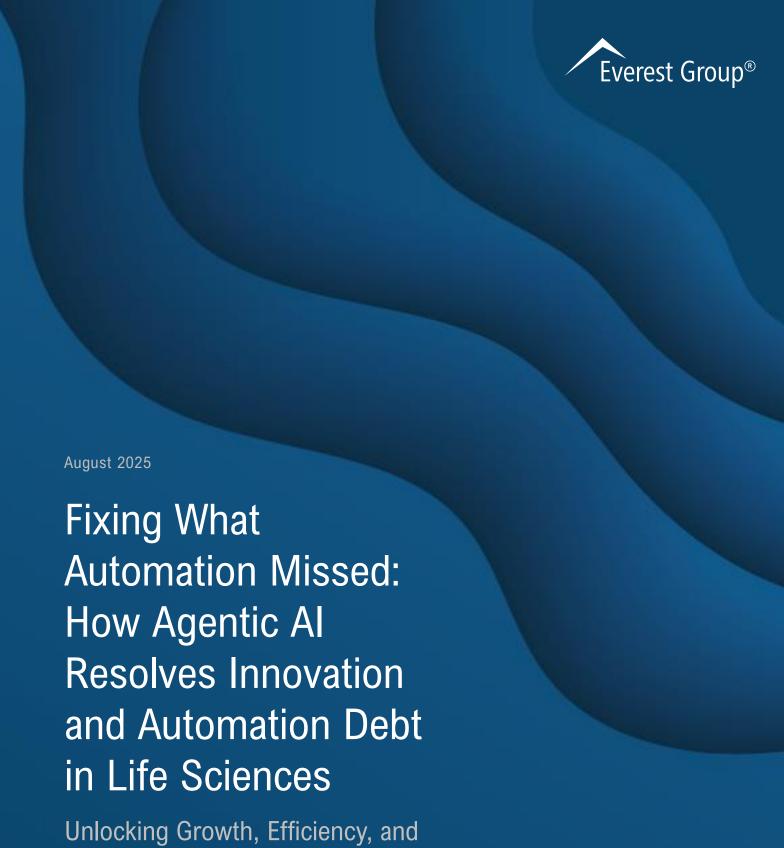
Dear Readers,

The life sciences industry is at a crucial point. As the sector increasingly turns to new technologies for innovation, many organizations struggle with innovation and automation debt. This refers to the ongoing inefficiencies caused by outdated systems, disjointed workflows, and dependence on manual decision-making. These challenges hinder progress, slow down innovation, and limit an organization's ability to respond to a constantly changing landscape.

At Agilisium, we understand the urgent need to address the barriers that hold back progress in the life sciences sector. We are excited to lead the discussion with this industry-first publication by Everest Group that marks the start of a new era in intelligent, autonomous decision-making, offering life sciences organizations the chance to overcome their current limitations. Agentic AI has the potential to drive significant levels of innovation, efficiency, and success. It empowers organizations to move past outdated systems and discover new pathways for growth and transformation.

This whitepaper explores how Agentic AI, the next step in autonomous decision-making, can provide a major solution for organizations struggling with innovation and automation debt. It aims to eliminate these challenges and offer a clear path to operational excellence and sustained innovation. As life sciences companies work to speed up research, improve patient outcomes, and simplify operations, Agentic AI can help them escape the inefficiencies of traditional automation systems while unlocking new opportunities for innovation and adaptability. By adopting Agentic AI, organizations can improve decision-making, streamline processes, and better position themselves to thrive in a competitive, data-driven future. The issues of automation debt and innovation debt are real challenges that block growth and restrict an organization's potential. These debts have troubled the industry for too long, and it is essential that we start addressing them immediately.

We hope this whitepaper provides useful insights into how Agentic AI can assist your organization in overcoming its current limitations and exploring new opportunities. We are eager about the possibilities for transformation and look forward to working with you on your path to a more intelligent, autonomous future.



Unlocking Growth, Efficiency, and Productivity with Autonomy

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Introduction

The rapid AI evolution is significantly transforming the life sciences industry. While early waves of AI and generative AI have enhanced creativity, data analysis, and automation, a new frontier is emerging: agentic AI. Unlike traditional AI systems that require human prompts and oversight, agentic AI can independently analyze data, make decisions, and execute actions with minimal human intervention. This capability promises to address persistent inefficiencies and innovation barriers across life sciences workflows.

As delays and missed opportunities continue to accumulate due to legacy processes, fragmented data systems, and risk-averse structures, life sciences enterprises face an urgent need to adopt autonomous, intelligent systems.

This Viewpoint presents insights from a survey of Al/ML and technology transformation leaders at leading pharmaceutical companies on the evolving agentic Al landscape in life sciences. It explores agentic Al's rising role as a strategic tool to unlock agility, precision, and sustained innovation in an increasingly complex and competitive environment. It outlines:

- The concept and potential of agentic AI in life sciences
- Barriers to adoption and lessons from generative AI deployments
- · Strategies and frameworks to guide successful agentic Al integration
- A human-Al partnership model for long-term success
- Key actionable steps to master agentic Al adoption

Life sciences enterprises will gain practical insights to assess their readiness, overcome adoption challenges, and harness agentic AI to future-proof their operations, drive innovation, and build competitive advantage in the AI-driven era.

Why agentic AI is the next step after automation

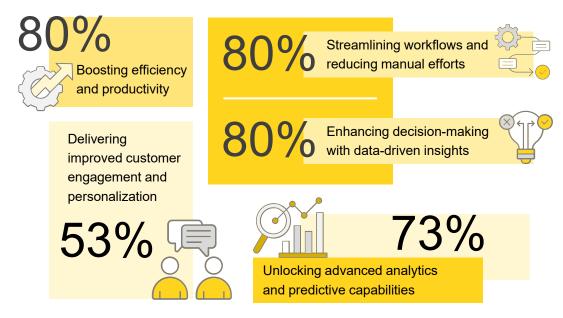
Shifting from Al assistance to Al autonomy

Over the past year, life sciences enterprises have significantly improved their operations by integrating AI and generative AI into their workflows. Exhibit 1 highlights that these technologies have streamlined complex workflows, optimized data-driven decision-making, and substantially enhanced predictive accuracy, helping researchers achieve faster and more precise outcomes. As the AI landscape continues to evolve, new avenues in scientific discovery and innovation are emerging, particularly with the rise of agentic AI.

Exhibit 1: Key success themes with Al adoption

Source: Everest Group (2025)

Percentage of respondents indicating high importance in experiencing the success themes



Agentic AI, characterized by autonomous decision-making, marks a significant leap forward in AI. Unlike traditional AI systems that depend heavily on predefined rules and constant human oversight, it independently evaluates situations, makes informed decisions, and executes actions without explicit human intervention. This paradigm shift promises to fundamentally alter workflows, enhancing efficiency and enabling agile responses.

Nearly 93% of enterprises believe moderate-to-high innovation debt exists because of relying on traditional decision-making methods.¹

Unpacking innovation and automation debt in pharma

Traditionally, human-driven decision-making methods have slowed innovation within life sciences, creating what is known as innovation debt. Innovation debt is the accumulated costs or missed opportunities occurring because of relying on outdated decision-making methods.

Exhibit 2 highlights several key factors contributing to this innovation debt. A majority of enterprises struggle with siloed data systems where fragmented data limits collaborative decision-making.

Exhibit 2: Factors contributing to innovation debt and its consequences

Source: Everest Group (2025)

Percentage of respondents who believe this as an important factor

Factors contributing to innovation debt

siloed, experience-

based decision-making



Consequences due to continued reliance on human-driven decision-making

due to limited Al-driven

optimization



evidence generation

and payer engagement

affecting brand and

launch planning

requirements and

compliance risks

¹ According to an Everest Group survey (details in Appendix)

The survey results also revealed that most respondents do not perceive a lack of provider support as a serious factor leading to innovation debt, which suggests that most respondents feel adequately supported or see other factors as more significant for innovation debt contribution.

Innovation debt also leads to various tangible consequences that severely impact organizational efficiency and competitive positioning, which are further demonstrated in Exhibit 2.

"By leveraging vast datasets, agentic AI reduces human intervention, enhances precision, and accelerates processes."

- Senior Director, Enterprise Products and Technology at a Top 10 pharma

Hence, enterprises resisting the shift toward Al-enhanced decision-making risk falling behind in an industry that increasingly values speed, precision, and innovation. By supporting human decisions with Al-generated insights, enterprises can reduce these inefficiencies, speed up progress, encourage innovation, and open new possibilities for scientific breakthroughs.

Lessons from the gen Al revolution

Generative AI: Is potential still outpacing reality?

The rapid adoption of generative AI tools in the life sciences industry has significantly broadened creative and analytical possibilities, driving innovation at an unprecedented pace. However, despite its transformative potential, there remains a noticeable gap between what generative AI could theoretically achieve and the extent of its actual integration into core enterprise operations.

Several factors contribute to this adoption gap, as presented in Exhibit 3. With poor data quality, unclear RoI, regulatory uncertainties, and integration complexities remain major challenges.

Exhibit 3: Barriers to Al adoption

Source: Everest Group (2025)

40%

Percentage of people marking it a significant factor

Lack of trust and reliability in Al-driven decisions such as hallucinations







Regulatory and compliance hurdles and lack of clear guidelines for using AI





About 40% of enterprises describe a large gap between generative Al's transformative potential and its current rate of enterprise adoption because of major issues with rules, compliance, and trust.²

These issues highlight the urgent need for better data management, clear governance, strong infrastructure and partnerships, and committed executive leadership to successfully drive AI implementation across enterprises.

Unlocking agentic AI: how generative AI learnings can power the next AI wave

Understanding the hurdles to generative AI adoption is essential as enterprises now stand on the brink of adopting the next evolution: agentic AI. To effectively prepare for this shift, it is important to first recognize the fundamental relation between generative AI and agentic AI. Both technologies share common ground in their reliance on quality data, an integrated platform, and ethical oversight, making generative AI experiences directly instructive for agentic AI deployment.

However, agentic AI significantly raises the stakes by moving beyond data synthesis to autonomous decision-making and action execution. While some challenges overlap, agentic AI introduces additional complexities:



Integrating multiple models, which increases orchestration complexity



Coordinating specialized validation agents and managing smooth task transitions



Developing highly specific use case agents can create a sprawling ecosystem that becomes costly while producing fewer, broader agents risks lower accuracy

Enterprises can leverage lessons learned from generative AI adoption, particularly around data quality and management, governance frameworks, regulatory compliance, and operational integration, as mentioned in Exhibit 4. Prioritizing these areas early will help life sciences enterprises smoothly transition into autonomous AI-driven decision-making.

Exhibit 4: Key lessons learned for transitioning into the next Al wave Source: Everest Group (2025)



Invest in continuous workforce training and community development: important to maintain ongoing training, skill-building, and active Al groups.



Al governance and cybersecurity practices: necessary to implement strict security testing, ethical use guidelines, and consistent human-inthe loop judgement.



Leverage pilot programs and Proof-of-Concept (PoC) experiments: effective use of pilot agents and PoCs for reliable risk and accuracy assessments.



Prioritize data quality and robust infrastructure: essential to have accurate data, strong governance, and solid infrastructure.



Foster clear commitment and cultural adaptation: vital to cultivate a culture supportive of digitization and clearly demonstrate Rol benefits to obtain strong commitment.

"Generative AI is definitely a solution helping us in the era of agents, because the model is already there."

Executive Director, Data and Analytics Enablement, Insights
 and Decision Science) at a leading top 10 pharmaceutical company

Therefore, enterprises that have already refined their AI infrastructure and governance frameworks and successfully implemented a cultural shift during the generative AI adoption phase are now better positioned to implement autonomous AI applications.

Agentic AI as the strategic antidote

Perceptions of agentic AI: bridging awareness to action

As agentic AI begins to reshape traditional decision-making methods, life sciences enterprises are increasingly recognizing the potential for remarkable efficiency gains and innovative outcomes that autonomous decision-making systems offer. However, despite this growing interest, industry-wide confidence in deploying and operating fully autonomous systems is still developing. Exhibit 5 highlights the varying levels of maturity in agentic AI adoption across the industry.

Exhibit 5: Current levels of agentic Al adoption

Source: Everest Group (2025)



% Level of adoption



AWARENESS

currently only familiar with the idea of agentic AI (basic use cases) and not thought about implementing agentic AI initiatives.



CONSIDERATION

exploring how agentic AI can be applied in specific business areas, assessing feasibility, challenges, and potential benefits.



PLANNING

defining clear objectives, choosing suitable AI models, estimating costs, and designing workflows for a future PoC.



actively testing potential agentic AI solutions, collecting data, refining models, and examining integration requirements.



PRODUCTION

scaling successful PoCs into full production, with large-scale implementation and ongoing optimization.

Approximately 20% of enterprises are in the initial stages, exploring feasibility, challenges, and potential agentic AI applications. While a large segment of enterprises is actively testing agentic AI solutions through PoCs, refining

models, collecting data, and addressing integration requirements, only 13% have successfully scaled these PoCs into full-scale production.

Exhibit 6 highlights the evolving perception of Al's role. Currently, most enterprises primarily use Al for basic routine automation, yet a pronounced shift is anticipated over the next three to five years.

Exhibit 6: Evolution of perception of Al's role

Source: Everest Group (2025)

Now (0-3 years) Next (3-5 years) Beyond (>5 years)

Al as a support tool

Al is limited to routine automation only

6.70%

Al primarily acts as an analytical tool for quick data interpretation

46.70% 53.30%

93.30%

Al supports operational decision-making across functions



All augments tactical decision-making and short-term planning

13.30%	73.30%	13.30%
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Al delivers insights for day-to-day decisions

26.70%	53.50%	20%
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Al as a strategic partner

Al is fully established as a strategic leader with autonomous capabilities



Al serves as a strategic advisor to leadership



Al is integrated as a strategic partner in core business processes

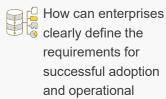


This progression highlights the industry's recognition of AI as an essential strategic asset, though substantial effort and careful planning will be necessary to achieve these ambitious goals.

While a clear intention to leverage agentic AI in life sciences workflows exists, enterprises must consider some key questions:



What specific →⊘ workflows or use cases could benefit most from agentic Al integration?



integration?

How ready is the enterprise, from technology infrastructure and governance to cultural readiness perspectives, to manage and sustain this transformative change effectively?

Strategic spotlights in life sciences workflows

Agentic AI holds transformative potential across the entire life sciences value chain, from drug discovery and supply chain management to regulatory compliance and market analytics.

Enterprises are increasingly identifying specific processes that can benefit most from automated decision-making, aiming to achieve quicker, more accurate outcomes.

As depicted in Exhibit 7, industry leaders anticipate significant impacts from agentic AI, particularly in areas such as supply chain and distribution, sales and marketing, and pharmacovigilance. These functions are prime targets for agentic AI due to their reliance on routine, data-intensive tasks, which can be greatly streamlined through automation and autonomous decision-making, yielding faster and more efficient outcomes. Moreover, innovation in drug discovery and research has high potential due to Al's predictive and digital twin capabilities.

However, the perceived ease of adopting agentic AI varies significantly across these areas. Sales and marketing, for instance, have a high ease of adoption, benefiting from clearer immediate benefits in customer engagement and market responsiveness. Conversely, clinical trials and regulatory affairs present substantial adoption challenges due to strict regulatory compliance requirements. This gap between high-impact potential and practical ease of adoption signifies the need for enterprises to strategically prioritize initiatives, balancing anticipated benefits against realistic implementation capabilities.

"We already see that Al's use cases in pharma are evolving from content generation to agentic AI in various fields such as drug discovery, patient identification/stratification, business planning, forecasting, and even to execute certain tasks with little human oversight."

Digital Health Leader at a Top 10 pharma

Low High

Exhibit 7: Agentic AI impact and adoption perception across life sciences value chain Source: Everest Group (2025)

Life sciences value chain function

Drug discovery, research, and pre-clinical trials

Clinical trials

Manufacturing

Supply chain and distribution

Sales and marketing

Pharmacovigilance

Regulatory and medical affairs

Quality

Measuring up: Is your enterprise ready for agentic AI?

While the conceptual understanding of agentic Al's benefits is increasing, the first step to practically pivot toward Al-driven decision-making is to assess life sciences enterprises' readiness and capability to integrate agentic Al within their existing systems. A majority of enterprises currently lack the necessary frameworks and benchmarks to accurately gauge this readiness.

To address this gap, Everest Group has introduced a practical readiness assessment tool called the autonomy quotient. It helps enterprises comprehensively evaluate their internal readiness to adopt agentic AI, spanning governance practices, technology infrastructure, and leadership commitment.

Exhibit 8 further elaborates the autonomy quotient framework and how to interpret it.

Exhibit 8: Autonomy quotient Source: Everest Group (2025)

An enterprise's maturity levels across the defined framework parameters determine its autonomy quotient.

The parameters and their weightages include:



Data quality and accessibility



Strategic vision and C-level sponsorship



Al infrastructure and deployment capability

Decision governance and compliance



Workforce Al literacy and change

O Al systems' workflow integration

10% Ecosystem and provider partnerships

Total observed score Autonomy _ X 100 quotient Total maximum score

How is it calculated?

Autonomy quotient score is calculated based on the scores (1-5) that enterprises assign to each parameter based on their assessment of internal capabilities. The rating definitions based on parameter scores are provided in the Appendix.

Observed score = sum product of input scores by the enterprise and the weightage for each parameter.

Maximum score = 5 (as maximum score that can be given is 5 for all parameters and the weightages are a total 100%).

The resulting autonomy quotient can be interpreted and categorized into stages of readiness:

Initial stage (0-20%)

The enterprise has just begun considering agentic AI and needs significant groundwork, including technology and cultural changes, before even basic Al integration can start.

Transitional stage (40-60%)

The enterprise demonstrates clear efforts toward integrating agentic AI, actively building the required systems and competencies, but requires further alignment and enhancements.



Advanced stage (80-100%)

The enterprise is fully prepared, having a highly sophisticated infrastructure, mature governance structures, and a proactive culture, placing it at the forefront to harness the strategic benefits of autonomous AI at an enterprise-wide scale.

Developing stage (20-40%)

The enterprise possesses basic awareness and limited capabilities. However, substantial progress in technology, governance, and internal skills is necessary to meaningfully integrate agentic AI.

Progressive stage (60-80%)

The enterprise shows strong preparedness, with robust systems, defined governance, and supportive culture already largely in place to effectively conduct pilot agentic AI projects.

Hence, using the autonomy quotient, enterprises can effectively assess their current preparedness stage, identifying areas that require proactive improvements and appropriate immediate next steps. This approach enables them to strategically address gaps, facilitating smoother integration of agentic AI systems into their workflows, enhancing efficiency, and strengthening their competitive advantage.

The human-Al partnership model

As enterprises increasingly integrate AI into their workflows to achieve greater efficiencies, a growing concern about AI replacing human roles rather than enhancing them has emerged among the workforce. This misconception often overshadows AI's true role: a collaborative partner designed to reduce manual workloads and amplify human strategic capabilities. Rather than supplanting human judgment, AI systems complement and augment human expertise, creating powerful, integrated teams.

Exhibit 9 shows how blending human creativity, ethics, and context with Al's speed and analytical power consistently produces smarter, faster, and more trusted solutions than either could achieve alone.

Exhibit 9: Why human-Al teams consistently perform better?

Source: Everest Group (2025)

Collaboration area		Human strength	Al strength	Combined advantage
	Adaptive decision-making	Intuition and real-world judgment	Instant multi-scenario analysis	Timely and flexible decisions, enhancing agility
	Communication	Ability to interpret complex data and audience empathy	Generates rich, complex data and analytics	Clearer, actionable insights for stakeholders and better engagement
	Ethical oversight	Alignment with values, empathy, and social norms	Unbiased rule enforcement at scale	Responsible, fair decisions, sustaining trust in Al
	Contextual insights	Deep domain knowledge and contextual understanding	Pattern recognition across huge datasets	Highly accurate and contextually appropriate recommendations
	Innovation	Creativity and lateral thinking	Exhaustive option- testing and precision	Unique, innovative breakthroughs and rigorous validation

About 80% of enterprises say that roles that blend deep analytics with domain expertise best reflect the changes in workforce dynamics in the digital and AI era.³

³ According to a survey conducted by Everest Group (details in Appendix)

"Agentic AI empowers humans. They kick off the process and vet the reasoning, so we see a lot of upskilling, extended capabilities, and more productivity."

- Al and ML Lead at a leading multinational pharma

Workforce 2.0: adapting skills for Al integration

The human-Al synergy is transforming workforce dynamics by automating repetitive tasks, routine data processing, and other less strategically intensive processes and enabling humans to focus more effectively on complex problem-solving, creative thinking, and high-level decision-making.

Enterprises are increasingly recognizing the importance of adapting workforce skills to align with AI integration:

- Building teams that combine technical expertise with strategic business decision-making highlights the need for professionals who can bridge analytical capabilities and business goals
- Similarly, creating data-centric roles that blend analytics with domain expertise is
 a high priority, emphasizing the growing importance of specialized knowledge in
 leveraging AI effectively
- Furthermore, strengthening cybersecurity and regulatory compliance skills, encouraging continuous learning cultures, and shifting employee roles toward digital strategy and responsible AI management are key areas gaining attention

Enterprises are thus investing strategically in developing these competencies, enabling their workforces to effectively navigate and capitalize on Al's transformative potential. Exhibit 10 highlights skills that will become essential in the Al era, as per the survey.

Exhibit 10: Skills that will become essential in the AI era

Source: Everest Group (2025)

Importance level

.ow High

Human-in-the-loop judgment: ability to validate, question, and refine Al outputs using domain expertise and critical thinking.



Cross-functional collaboration: comfort working across data science, commercial, clinical, and IT teams to co-develop Al-enabled solutions.



Al literacy and adoption readiness: understanding how Al works, its capabilities, and its limitations in the context of life sciences.



Life sciences and Al application knowledge: understanding how Al can be applied across drug discoveries, clinical trials and commercial and patient-support functions.



Al oversight and explainability: ability to monitor Al systems, detect anomalies, and clearly communicate how Al-derived decisions were made.



From debt to deployment: a six-point fix plan

Life sciences enterprises are proactively embracing transformative technology advances, However, it require strategic planning and meticulously organized steps to effectively harness this transformative potential.

Understanding how industry leaders effectively use AI to gain a competitive advantage is essential. By identifying and adopting proven strategies, best practices, and organizational approaches, enterprises can strategically navigate their AI journey. Exhibit 11 highlights the defining traits of early AI adopters who strategically leveraged it to drive measurable impact and are now leading this AI forefront. By taking intentional actions on these themes, other enterprises can follow suit to unlock meaningful success.

Exhibit 11: Key differentiators of Al leaders

Source: Everest Group (2025)



believing it to be a significant factor



93.33%

Visionary leadership and strategic commitment to AI transformation.



93 33%

High-quality, curated datasets and robust data management practices.



80%

Proactive establishment of risk management, ethical guidelines, and regulatory compliance for AI.



73 33%

A clear, actionable AI strategy with well-defined use cases.



73.33%

Continuous talent development and a high-caliber workforce in AI and related fields.

Deep dive: key steps to master adoption

Enterprises entering the agentic AI era must focus on several key strategic pillars to enable successful and meaningful integration of agents in their workflows:

Secure executive sponsorship and set a north-star Al roadmap

A clear, well-resourced mandate from leadership creates organizational confidence and enthusiasm, aligning every function behind a shared AI future. Key considerations to achieve and sustain executive commitment to translate agentic AI ambitions into tangible enterprise impact include:

- Visible C-suite endorsement that signals AI is a strategic priority, not an experiment
- Dedicated funding and resources proportionate to the scale of intended transformation
- Consistent, top-down communication that articulates the purpose, benefits, and expectations of AI
- Integrated change management approach to surface concerns early and mitigate resistance
- Unified vision for Al-driven growth that links business objectives, risk appetite, and cultural values

About 47% of enterprises have witnessed that companies with leadership buy-in for Al-driven decision-making experience competitive advantages such as efficiency gains and revenue growth.⁴

Modernize data and tech foundations

Establishing a robust AI infrastructure supported by good-quality, curated datasets is fundamental for successful agentic AI adoption. Enterprises should adopt an iterative approach, progressively improving data quality and adding new sources over time while simultaneously advancing AI initiatives. Here are some essential data and security prerequisites for seamless agentic AI integration:

- Clean data: a clean, standardized data pool as per the data's use case needs and reliability validation
- Robust metadata and lineage: detailed tracking of data origin and transformations to ensure reproducibility and audit readiness
- Scalable infrastructure: cloud-native or hybrid infrastructure that scales up for heavy training jobs and scales down for low-latency inference
- Security and privacy: encryption and differential privacy safeguards for patient data safety and regulatory compliance
- Continuous iteration: real-time monitoring of pipelines and models to catch data issues and iteratively improve the data requirements for the model

"If your underlying data is not good, nothing can be done; data trust is the key."

Executive Director, Data and Analytics Enablement, Insights and
 Decision Science at a Top 10 Swiss-based pharmaceutical multinational

3 Define Rol metrics and prioritize high-value use cases

Linking spend to concrete returns and visible gains not only safeguards margins but also builds a transparent value narrative for boards, investors, and health authorities, reinforcing both competitive edge and proven financial impact. The following points lay out the highest-impact approaches to rigorously measure and maximize RoI:

- Define clear, business-aligned KPIs and performance metrics for AI projects
- Conduct Al investments' periodic Rol assessments and cost-benefit analyses
- Invest in ongoing training and skill development for teams working with AI
- Integrate Al insights into key business decision-making processes
- Establish a baseline of current performance before launching AI initiatives

About 73% of enterprises say that while implementing agentic AI solutions is expensive, they believe it justifies the RoI it can deliver.⁵

4

Prepare people: upskill, communicate, and manage change

An Al-literate, adaptable workforce is the key link between promising technology and realized value. Without capable people to interpret insights, supervise decisions, and refine workflows, even the most sophisticated agentic systems cannot deliver sustainable impact:

- Creating mentorship programs, cross-functional teams, and promoting continuous learning will enable smoother Al adoption, reduce friction in operational integration, and enhance overall organizational agility.
- The table below demonstrates the workforce-focused enablers that respondents consider the most essential to accelerate adoption.

Strategies	% of respondents citing high importance	
Develop clear communication channels to share AI transformation's benefits and opportunities	87%	
Launch cross-functional pilot projects that give teams hands-on experience with AI solutions	73%	
Implement real-time feedback systems to continually adjust training programs and address emerging workforce challenges	67%	
Create incentive and recognition programs to reward innovation and early adoption of AI practices	53%	
Offer flexible, self-paced e-learning and simulation- based training specifically tailored to Al tools and techniques	47%	

About 67% of enterprises believe that investing in employee training and change management is an important step toward transition.⁶

Build a unified governance, ethics, and compliance framework

A robust governance framework protects the enterprise from ethical, legal, and reputational risks while sustaining long-term trust in AI decisions. Here are five impactful governance strategies to balance AI autonomy with compliance:

- Define clear governance policies that delineate roles, responsibilities, and decision boundaries for both AI autonomy and compliance
- Embed risk management processes directly into the AI development life cycle to identify and mitigate potential compliance gaps early
- Establish a cross-functional oversight committee (including legal, compliance, IT, and business leaders) dedicated to AI ethics and governance
- Develop flexible guidelines that allow AI to innovate but also keep it accountable to the principles of system trustworthiness, human oversight and accountability, beneficence, equity and ethics, and continuous learning
- Integrate continuous monitoring and periodic audits to track AI performance and compliance in real time

Start with smart pilots; plan for enterprise scale

Implementing small pilot projects within specific functions is a key step for enterprises to successfully adopt agentic AI. Pilot initiatives allow enterprises to gather feedback in controlled, manageable environments, facilitating iterative refinements before broader deployment. The following approaches can help organizations design low-risk, high-impact gen AI pilots that chart a clear path to scaled deployment:

- Narrow, function-specific pilot scopes that keep risk and complexity manageable
- Rapid feedback loops to capture practical insights and refine models and processes
- Early identification of operational and regulatory challenges in a safe environment
- Objective benchmarks and success criteria that make pilot results transferable and credible
- Documented lessons and readiness checkpoints that pave a clear path to scaled deployment

"Increasing pilot initiatives is one of the top three strategic shifts to implement agentic decisionmaking capabilities in existing Al workflows."

- Head, Information Solutions Lab at a large European biopharma

While these immediate actions lay the foundation to integrate agentic AI into enterprise workflows, leading organizations distinguish themselves by demonstrating the confidence to trust autonomous AI to drive outcomes once considered beyond reach. This mindset shift transforms AI from a tactical tool into a strategic catalyst for breakthrough innovation and sustained competitive advantage.

Conclusion

Agentic AI represents a defining moment for the life sciences industry, offering a shift from incremental improvements to transformative impact. By enabling autonomous decision-making and execution, it addresses long-standing inefficiencies tied to manual processes, siloed data, and slow, hierarchical decision-making. Organizations that embrace this shift can unlock faster innovation cycles, enhance precision, and improve agility across drug discoveries, clinical development, regulatory compliance, and commercial operations.

Success in this journey depends not only on technology capabilities but also on leadership commitment, ethical governance, workforce readiness, and strategic use case prioritization. Enterprises must balance ambition with realism, starting with focused pilots, aligning investments with measurable Rol, and continuously improving data quality and Al infrastructure. Simultaneously, cultivating a culture of human-Al collaboration is essential to enable each to contribute their unique strengths.

Those who act decisively today will shape the future of life sciences. With a thoughtful, phased approach, enterprises can build resilient, intelligent systems that not only respond to today's challenges but also anticipate tomorrow's opportunities, positioning themselves as leaders in a new era of Al-driven life sciences innovation.

Appendix

The inputs are based on an Everest Group survey of 15 Al/ML senior executives and directors. The respondent profile includes:

- By buyer size: large enterprises (47%) | SMBs (53%)
- By geography: North America (80%) | Europe (20%)

Exhibit 12 describes how enterprises can score their internal capabilities for each parameter of the autonomy quotient. These ratings can help enterprises picture where they stand today and the specific gaps, they must close to reach full agentic Al maturity.

Exhibit 12: Rating definition for autonomy quotient parameters

Source: Everest Group (2025)

Parameter	Basic (1)	Developing (2)	Competent (3)	Proficient (4)	Best-in-class (5)
Data quality and accessibility	Scattered, unreliable data	Basic integration and cleaning starts	Central data platform emerging	Real-time accessible enterprise data	Unified and high-quality data source
Strategic vision and C-level support	No clear AI strategy or executive sponsors	Emerging executive sponsorship	C-suite defines Al roadmap and KPIs	Al central to corporate strategy	C-suite fully committed; budgets allocated
Al infrastructure and deployment	Ad hoc, limited Al resources	Basic cloud/GPU experiments	Central AI platform and MLOps in place	Robust, automated MLOps pipelines	Autoscaling, continuous AI deployment
Decision governance and compliance	No Al governance	Initial AI governance discussions	Governance committees and policies active	Fully integrated Al governance	Proactive, fully automated compliance
Workforce Al literacy and change	Workforce unaware and resistant	Early AI awareness and training	Broad Al training across teams	High AI proficiency, workforce ready	AI-native workforce and culture
Al's workflow integration	Manual processes or traditional IT- driven	Pilot AI integration in workflows	Workflows actively embedding Al steps	Most key workflows Al- ready	Al embedded fully in workflow design
Ecosystem and provider partnerships	Insular, limited external engagement	Initial provider/partner exploration	Strategic partnerships forming	Broad strategic Al partner ecosystem	Industry-leading ecosystem engagement



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