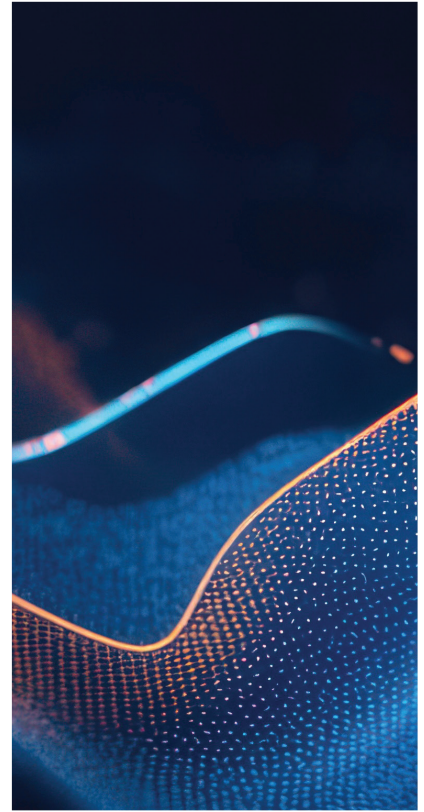
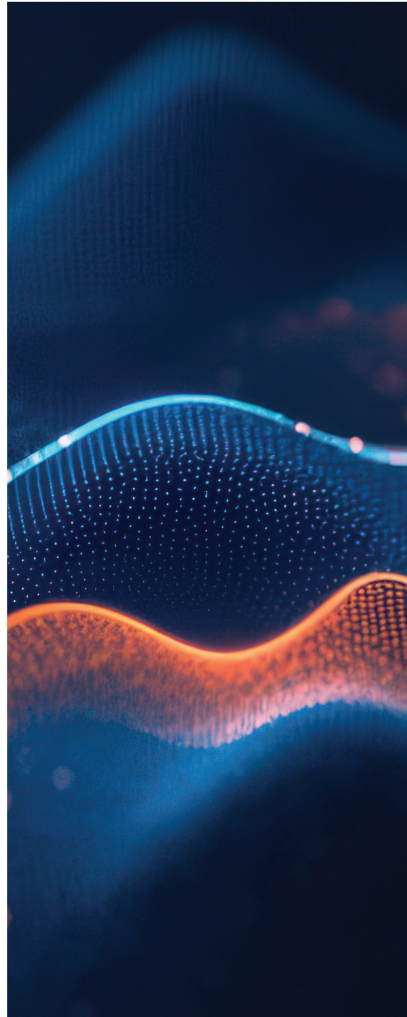


FROST & SULLIVAN
BEST PRACTICES



2026

GLOBAL PHARMA AI-POWERED
COMMERCIALIZATION
SERVICES

**ENABLING TECHNOLOGY
LEADERSHIP**



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Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each recognition category before determining the final recognition recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. Indegene excels in many of the criteria in the pharma AI-powered commercialization services space.

RECOGNITION CRITERIA	
Technology Leverage	Customer Impact
Commitment to Innovation	Price/Performance Value
Commitment to Creativity	Customer Purchase Experience
Stage Gate Efficiency	Customer Ownership Experience
Commercialization Success	Customer Service Experience
Application Diversity	Brand Equity

The Transformation of Pharma AI-Powered Commercialization Services

Disruptive technologies, customer value chain compression, and industry convergence are transforming the pharmaceutical (pharma) artificial intelligence (AI)-powered commercialization services market. Generative AI (GenAI) is moving beyond experimentation and reshaping how pharma organizations improve commercial effectiveness, accelerate regulatory processes, strengthen medical content quality, and support cross-functional decision-making. As a result, the market is shifting toward domain-trained, governed AI models that support compliant content generation, medical writing, campaign optimization, and evidence-based engagement while reducing risk in highly regulated environments.

Customer value chain compression is also gaining importance as pharma companies seek to reduce friction across content, review, localization, personalization, and campaign deployment. Traditional commercialization workflows often involve multiple handoffs, separate teams, and long cycle times. AI-powered models can compress these steps into faster, more integrated processes, especially across content lifecycle management, medical review, regulatory authoring, and campaign execution.

Industry convergence further defines the market’s evolution. AI-powered commercialization now requires integrating life sciences domain expertise, technology engineering, data science, marketing operations, regulatory knowledge, and change management. The market can no longer rely on standalone agencies, generic technology tools, or siloed internal teams. Instead, growth increasingly depends on cross-functional operating models that connect commercial, medical, regulatory, safety, analytics, and field engagement data into unified decision-making systems.

In this context, Frost & Sullivan identifies Indegene as a strong example of how the market is shifting toward integrated, domain-led, AI-powered commercialization models. The company's ability to combine life sciences expertise, technology, data, and execution support positions it well to help pharma organizations improve speed, effectiveness, and workflow reliability across the commercialization value chain.

Operationalizing AI for Regulated Pharma Workflows

Founded in 1998 and headquartered in Bengaluru, India, Indegene is a strategic operating partner to the life sciences industry. The company supports commercial, medical, research and development, and safety operations across the product lifecycle, helping leading biopharmaceutical organizations strategize and manage complex, highly regulated workflows at a global scale.

Indegene's pharma AI-powered commercialization services combine life sciences domain depth, GenAI, data, in-house technology platforms, workflow integration, consulting, and execution support to help pharma companies modernize how they plan, create, review, deploy, and optimize commercial and medical content. Rather than applying AI as a point solution to isolated tasks, the company reengineers underlying processes so clients can replace fragmented, sequential workflows with integrated, adaptive, and outcome-driven operating models.

A core element of this approach is Indegene's Pharma Operating System (OS), which can bring domain expertise and technology together. The vision behind Indegene's Pharma OS is that isolated systems or standalone AI tools will not define the next phase of life sciences commercialization. Operating models will define it by continuously connecting business decisions, workflow execution, and intelligence across the enterprise.

Generic AI tools alone cannot solve life sciences challenges because pharma workflows require regulatory knowledge, therapeutic context, claims understanding, medical accuracy, market-specific rules, and compliant execution. Pharma OS is Indegene's vision for the OS of life sciences commercialization. It brings together real-world signals, organizational knowledge, business processes, and technology capabilities into a connected ecosystem that supports the full commercialization lifecycle. Cortex, Indegene's life sciences-native reasoning engine, strengthens this model by separating life sciences expertise from the underlying AI model. Subject matter experts can codify knowledge in natural language, create validated knowledge graphs, and guide agents across use cases such as clinical study report authoring, protocol authoring, regulatory report generation, creative adaptation, and medical-legal regulatory review.

This architecture allows clients to use preferred models, hyperscalers, or their own agents while relying on Indegene's specialized knowledge layer to produce outputs that are more relevant, reliable, and workflow-ready. It also reflects a practical innovation strategy: instead of investing heavily in proprietary models that may quickly become outdated, Indegene preserves durable domain intelligence while remaining flexible as AI models evolve. As organizations move toward AI-native ways of working, the focus will shift from implementing individual technologies to creating operating models that continuously learn, adapt, and improve.

Knowledge Orchestration and Scalable Execution

Indegene's creativity lies in reframing AI transformation as knowledge orchestration and process redesign, not model ownership. The company does not try to compete with foundation models on generic capabilities such as summarization, translation, or authoring. Instead, it applies validated life sciences expertise, workflow logic, regulatory requirements, process experience, and operational context to those models.

This approach bridges the gap between technology teams and domain experts, allowing each group to contribute where it is strongest. Through Cortex, subject matter experts can teach the system document structures, data requirements, workflow rules, edge cases, and approval logic. These reusable knowledge graphs support more consistent execution across brands, markets, clients, and use cases.

Indegene also improves stage-gate efficiency by embedding validated domain knowledge into AI-enabled workflows before execution begins. In regulated industries, speed alone is not enough; outputs

"Frost & Sullivan recognizes that Indegene's pharma AI-powered commercialization services stand out for combining model-agnostic AI architecture, domain-led knowledge orchestration, process reengineering, and validated workflows across the life sciences value chain."

- Surbhi Gupta
Industry Principal

must meet quality, compliance, traceability, and expert-review standards. Once subject matter experts validate the relevant knowledge graphs, agents can follow defined workflows more consistently, reducing rework and helping clients move from experimentation to controlled implementation.

The company further supports execution through consulting, workflow redesign, technology implementation, program management, training, handholding, feedback loops, hotlines, and change management resources. Its activation teams translate strategy into actionable work plans with milestones,

helping clients move from high-level transformation goals to executable programs and sustained adoption.

Data-driven Omnichannel Execution

Indegene embeds data into content and campaign decisions through platforms such as Invisage™ and Tandem. The company strengthens this capability through its acquisition of BioPharm Communications, adding deeper precision marketing and data activation capabilities to support more targeted engagement.¹ These capabilities support precision marketing, next-best-action journeys, healthcare professional targeting, field force optimization, channel selection, content frequency planning, and sales and marketing spend optimization.

By connecting digital engagement, claims, field interaction data, affinity signals, customer relationship management data, and prescribing signals, Indegene helps pharma companies move from multichannel activity to more intelligent omnichannel execution. This data integration helps teams determine which

¹ Indegene, "Indegene Announces Acquisition of BioPharm to Expand AI-driven Marketing and AdTech for Global Pharma," October 1, 2025, <https://www.indegene.com/news/indegene-announces-acquisition-of-biopharm-to-expand-ai-driven-marketing-and-adtech-for-global-pharma>.

healthcare professionals to reach digitally, which require field-force engagement, which content is likely to work, when to reach out, and how to optimize commercial spend.

Medical, Regulatory, and Safety Application Diversity

Indegene's application diversity extends beyond commercial execution into medical writing, regulatory automation, safety workflows, and broader product lifecycle operations. The company supports clinical study reports, regulatory documents, safety filings, adverse event reporting, and related medical writing workflows. Indegene's acquisition of Trilogy Writing & Consulting GmbH further reinforces this regulatory authoring focus, strengthening its ability to support complex medical writing and document development needs.²

Its approach links reports to source clinical trial data, connects interdependent documents, supports narrative consistency, and helps ensure teams capture important claims early enough to support future commercial leverage. This integrated model matters because delays between database lock and regulatory filing can reduce time-to-market, while inconsistent narratives across reports can weaken downstream value. Indegene's ability to connect documents, data, and workflows helps reduce unnecessary revision cycles and supports more consistent, efficient, and strategically useful outputs across medical and regulatory functions.

Frost & Sullivan recognizes that Indegene's pharma AI-powered commercialization services stand out for combining model-agnostic AI architecture, domain-led knowledge orchestration, process reengineering, and validated workflows across the life sciences value chain. This approach shows that the company views AI transformation not as automation alone, but as a governed, integrated, and outcome-driven model for improving execution across commercial, medical, regulatory, safety, analytics, content, field engagement, and product lifecycle operations.

Customer Value through Transparent AI Execution

Indegene strengthens customer value by linking investment more directly to measurable outputs, lowering adoption friction, and supporting clients through implementation. Its outcome-based pricing model moves clients away from traditional full-time equivalent structures and provides clear visibility into cost per deliverable. In some cases, performance-linked structures tie Indegene's work to outcomes such as marketing effectiveness, speed-to-market, and campaign performance. This structure helps clients justify investments more easily by connecting value to measurable execution rather than activity alone.

The company also improves the purchase experience by making AI-led transformation easier to evaluate, approve, and adopt within large pharma environments. Indegene remains platform-agnostic and allows customers to work within existing technology environments, preferred models, cloud relationships, tokens, security requirements, and governance structures rather than adapt to a rigid proprietary setup. This flexibility protects prior technology investments and eases procurement, information technology, security, and governance reviews.

² Indegene, "Indegene Acquires Trilogy Writing & Consulting GmbH, a Medical Writing Consultancy," March 5, 2024, https://www.indegene.com/news/indegene-acquires-trilogy-writing-and-consulting-gmbh-a-medical-writing-consultancy?page_url=https://www.indegene.com/.

Indegene further reduces onboarding complexity by aligning with major pharma infrastructure environments, including Amazon Web Services and Microsoft Azure. It can also create direct links and pass-through structures when needed. By bringing strategy, technology, domain expertise,

“Frost & Sullivan believes Indegene’s commercialization model stands out for connecting strategy, data, content, execution, and measurable outcomes in a highly regulated market. Its delivery-led credibility and ability to scale adaptive commercialization workflows position it as a strong partner for pharma organizations seeking faster, more effective, and more accountable engagement models.”

- Ojaswi Rana
Best Practices Research Analyst

implementation, and change management into a single engagement model, the company limits the burden of vendor coordination and gives clients clear accountability from evaluation through execution.

The company enhances ownership by replacing black-box delivery with transparent, embedded collaboration. Instead of collecting inputs and returning outputs weeks or months later, Indegene keeps customers involved as work progresses. Clients can follow the work as it develops, understand what to expect, shape creative options, review alternatives, and adjust direction while campaigns

are still underway. This participatory model gives customers greater speed, control, and confidence, especially as campaign development timelines move from months to days and, in some cases, to a single day.

Indegene also strengthens service confidence through training, handholding, feedback loops, hotlines, governance support, AI policies, data governance practices, internal audit certifications, and infrastructure alignment with major pharma technology environments. Its teams work with chief information officers and business stakeholders to align enterprise technology priorities with functional needs, which is especially important in GenAI programs where business alignment, technical readiness, governance, process redesign, and user adoption must advance together.

The company maintains ongoing engagement through front-end teams that stay close to clients and gather post-implementation feedback. It runs client satisfaction surveys for individual projects and conducts annual Net Promoter Score assessments across engagements, using customer input to identify areas for improvement and strengthen long-term relationships. Frost & Sullivan finds that this integrated customer value model helps clients move faster, reduce implementation risk, maintain control, and realize more consistent value from AI-led transformation.

Data-driven Commercialization Excellence

Indegene’s commercialization business anchors its operating model and growth agenda, accounting for 70% of its current business mix. This work spans agency services, content operations, campaign execution, patient analytics, medical, legal, and regulatory review, and related commercialization workflows. The company helps pharma clients bridge the gap between agency-led strategy and downstream execution by centralizing content creation, adaptation, review, deployment, and performance optimization. This approach allows clients to reduce fragmented handoffs across agencies, global capability centers, review teams, and local markets while improving speed, consistency, and market alignment.

Indegene also uses data to make commercialization more precise and measurable. Its tools help clients connect marketing and sales activity, determine which healthcare professionals to target, choose the right channels, set engagement frequency, and assess whether campaigns are improving outcomes. The company also supports chief commercial officers by improving marketing spend effectiveness, linking some engagements to performance-based payouts, and accelerating the path from campaign idea to in-market execution. Its model can also expand into medical affairs by helping teams track key opinion leader engagement, event participation, and broader physician interaction patterns.

The company's commercialization capabilities extend across the full content continuum, from brand strategy and creative development to localization, personalization, quality assurance, deployment, and campaign optimization. Indegene's Content Super App connects concepting, ideation, creative evolution, localization, and persona-based content generation in one operating environment, allowing agencies to retain strategic oversight while it accelerates execution. This model helps clients shift from quarterly campaign cycles toward real-time or near-real-time adaptive campaigns.

Indegene also expands the types of content and channels pharma companies can execute cost-effectively. By accelerating content generation, adaptation, and approval, the company helps clients explore podcasts, dynamic digital assets, localized emails, and other formats that were previously too slow or costly to scale. It can also use historical data and physician feedback patterns to simulate likely market response before deployment, helping clients refine creative concepts and improve campaign effectiveness.

Execution-led Brand Equity

Indegene builds brand equity less through traditional visibility and more through delivery, referrals, and long-standing customer relationships. The company acknowledges that it can strengthen external brand recognition. However, its credibility comes from solving difficult execution problems and being called in to fix work when other providers fall short. This delivery-led reputation reinforces trust and helps Indegene expand engagements across functions, geographies, and long-term client relationships.

Frost & Sullivan believes Indegene's commercialization model stands out for connecting strategy, data, content, execution, and measurable outcomes in a highly regulated market. Its delivery-led credibility and ability to scale adaptive commercialization workflows position it as a strong partner for pharma organizations seeking faster, more effective, and more accountable engagement models.

Conclusion

Indegene stands out for turning artificial intelligence (AI) from a point-solution tool into a governed operating model through its Pharma Operating System for regulated pharmaceutical (pharma) workflows. Its model-agnostic architecture, domain-led knowledge orchestration, and integrated execution capabilities help clients improve speed, consistency, compliance, and measurable business impact. The company also enhances customer value through output-based pricing, lower-friction adoption, transparent collaboration, and sustained change management support. By connecting commercial, medical, regulatory, safety, analytics, content, and field engagement workflows, Indegene enables pharma organizations to scale AI transformation with greater confidence and accountability.

With its strong overall performance, Indegene earns Frost & Sullivan's 2026 Global Enabling Technology Leadership Recognition in the pharma AI-powered commercialization services industry.

What You Need to Know about the Enabling Technology Leadership Recognition

Frost & Sullivan's Enabling Technology Leadership Recognition identifies the company that applies its technology in new ways to improve existing products and services and elevate the customer experience.

Best Practices Recognition Analysis

For the Enabling Technology Leadership Recognition, Frost & Sullivan analysts independently evaluated the criteria listed below.

Technology Leverage

Commitment to Innovation: Continuous emerging technology adoption and creation enables new product development and enhances product performance

Commitment to Creativity: Company leverages technology advancements to push the limits of form and function in the pursuit of white space innovation

Stage Gate Efficiency: Technology adoption enhances the stage gate process for launching new products and solutions

Commercialization: Company displays a proven track record of taking new technologies to market with a high success rate

Application Diversity: Company develops and/or integrates technology that serves multiple applications and multiple environments

Customer Impact

Price/Performance Value: Products or services offer the best ROI and superior value compared to similar market offerings

Customer Purchase Experience: Purchase experience with minimal friction and high transparency assures customers that they are buying the optimal solution to address both their needs and constraints

Customer Ownership Excellence: Products and solutions evolve continuously in sync with the customers' own growth journeys, engendering pride of ownership and enhanced customer experience

Customer Service Experience: Customer service is readily accessible and stress-free, and delivered with high quality, high availability, and fast response time

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty, which is regularly measured and confirmed through a high Net Promoter Score®

Best Practices Recognition Analytics Methodology

Inspire the World to Support True Leaders

This long-term process spans 12 months, beginning with the prioritization of the sector. It involves a rigorous approach that includes comprehensive scanning and analytics to identify key best practice trends. A dedicated team of analysts, advisors, coaches, and experts collaborates closely, ensuring thorough review and input. The goal is to maximize the company's long-term value by leveraging unique perspectives to support each Best Practice Recognition and identify meaningful transformation and impact.

VALUE IMPACT			
STEP		WHAT	WHY
1	Opportunity Universe	Identify Sectors with the Greatest Impact on the Global Economy	Value to Economic Development
2	Transformational Model	Analyze Strategic Imperatives That Drive Transformation	Understand and Create a Winning Strategy
3	Ecosystem	Map Critical Value Chains	Comprehensive Community that Shapes the Sector
4	Growth Generator	Data Foundation That Provides Decision Support System	Spark Opportunities and Accelerate Decision-making
5	Growth Opportunities	Identify Opportunities Generated by Companies	Drive the Transformation of the Industry
6	Frost Radar	Benchmark Companies on Future Growth Potential	Identify Most Powerful Companies to Action
7	Best Practices	Identify Companies Achieving Best Practices in All Critical Perspectives	Inspire the World
8	Companies to Action	Tell Your Story to the World (BICEP*)	Ecosystem Community Supporting Future Success

*Board of Directors, Investors, Customers, Employees, Partners

About Frost & Sullivan

Frost & Sullivan is the Growth Pipeline Company™. We power our clients to a future shaped by growth. Our Growth Pipeline as a Service™ provides the CEO and the CEO's growth team with a continuous and rigorous platform of growth opportunities, ensuring long-term success. To achieve positive outcomes, our team leverages over 60 years of experience, coaching organizations of all types and sizes across 6 continents with our proven best practices. To power your Growth Pipeline future, visit Frost & Sullivan at <http://www.frost.com>.

The Growth Pipeline Generator™

Frost & Sullivan's proprietary model to systematically create ongoing growth opportunities and strategies for our clients is fueled by the Innovation Generator™.

[Learn more.](#)

Key Impacts:

- **Growth Pipeline:** Continuous Flow of Growth Opportunities
- **Growth Strategies:** Proven Best Practices
- **Innovation Culture:** Optimized Customer Experience
- **ROI & Margin:** Implementation Excellence
- **Transformational Growth:** Industry Leadership



The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

- **Megatrend (MT)**
- **Business Model (BM)**
- **Technology (TE)**
- **Industries (IN)**
- **Customer (CU)**
- **Geographies (GE)**

