

FROST & SULLIVAN
BEST PRACTICES



2026

NORTH AMERICAN POSITIVE
AIRWAY PRESSURE DEVICES

**NEW PRODUCT
INNOVATION**



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. SleepRes excels in many of the criteria in the PAP devices space.

RECOGNITION CRITERIA	
<i>New Product Attributes</i>	<i>Customer Impact</i>
Match to Needs	Price/Performance Value
Reliability	Customer Purchase Experience
Quality	Customer Ownership Experience
Positioning	Customer Service Experience
Design	Brand Equity

The Transformation of the Positive Airway Pressure Devices Industry

PAP devices remain the gold standard for managing obstructive sleep apnea (OSA). The global PAP market—including continuous positive airway pressure (CPAP), bilevel positive airway pressure (BiPAP), and automatic positive airway pressure (APAP)—was valued at \$3.6 billion in 2025 and is projected to grow at a 6.7% CAGR through 2031. Historically, PAP therapy has relied on fixed or auto-adjusting pressure

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Industry Analyst**

paradigms that stabilize airways but often introduce discomfort, noise, and pressure intolerance. Innovations in pressure sensing and algorithmic control are reshaping how pressure is delivered and perceived, aligning therapy more closely with natural respiration while maintaining clinical efficacy.

Traditional constant-pressure CPAP is effective in controlled settings, yet adherence remains a challenge due to discomfort, aerophagia, and dryness. Innovations now anticipate airway dynamics, synchronize with breathing patterns, and minimize

unnecessary force across the breathing cycle. By integrating novel pressure modes alongside standard PAP options, manufacturers allow personalization within familiar clinical workflows. As a result, the PAP ecosystem is shifting toward solutions that balance comfort, adherence, and measurable outcomes.

One such company is SleepRes, Inc., a US-based sleep therapy company founded in 2022 and guided by sleep physicians. Their founder and CMO are both leading clinical and research sleep physicians and are advancing the PAP category through its proprietary Kairos positive airway pressure (KPAP) algorithm and the Cricket™, powered by KPAP™, which received FDA 510(k) clearance in December 2025.

Addressing the Market Need for Comfort

In PAP therapy, the core barrier is intolerance to sustained, elevated pressure across the entire breathing cycle. SleepRes addresses this through KPAP, an algorithm that adapts pressure delivery in real time and restores full therapeutic pressure by synchronizing it with patient physiology. Unlike traditional CPAP and APAP systems that maintain constant or slowly adjusted pressure, KPAP modulates pressure dynamically across the respiratory cycle, delivering therapeutic pressure only when needed.

KPAP supports pressure reductions during inspiration (up to ~5 cm H₂O below therapeutic levels), sustains low pressure during most of expiration, and precisely restores pressure at the later portion of expiration—when upper airway collapse risk is highest. This time-sensitive modulation directly addresses long-standing comfort limitations associated with traditional CPAP therapy.

Kricket™, powered by KPAP™, SleepRes's PAP system incorporating KPAP, offers a differentiated option for patients struggling with comfort and early adherence. Rather than altering the clinical goal of PAP therapy, Kricket™ with KPAP™ enhances how pressure is delivered and experienced, simulating more natural breathing dynamics while reducing discomfort associated with conventional pressure profiles.

Focus on Comfort and Clinical Effectiveness

Skeptics often argue that reducing pressure to improve comfort may weaken clinical effectiveness. SleepRes counters that concern with evidence indicating that KPAP's lower-pressure delivery matches the

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airway support of traditional CPAP while improving perceived comfort. Published findings summarized by SleepRes report KPAP as equal in effectiveness and superior in comfort—a rare combination in PAP innovation and central to long-term outcomes. The efficacy clinical trial proved that KPAP reduced AHI slightly more than CPAP, while the comfort trial showed participants preferred KPAP over CPAP.¹ The Kricket PAP device received FDA 510(k) clearance for treating OSA in patients over 66 pounds, validating its safety and performance profile.

Kricket powered by KPAP, reduces pressure-related discomfort and side effects while maintaining expected therapeutic efficacy. The platform introduces a responsive pressure-delivery model intended to simulate natural breathing patterns and improve tolerance. Its uniqueness lies in enhancing the pressure experience without compromising therapeutic performance—an area where traditional systems remain constrained by legacy delivery methods.

¹ <https://www.sciencedirect.com/science/article/pii/S1389945724004490?via%3Dihub>

Performance Value

PAP failure includes repeat clinic visits, mask refits, device returns, and deteriorating health outcomes, increasing costs for providers and payers. SleepRes addresses this by focusing on upstream comfort to reduce early discontinuation, improve nights used and hours used, and enhance therapy return. Blending KPAP with CPAP/APAP algorithms reduces complexity, allowing clinicians to standardize on a single device family while tailoring modes to each patient's needs. By mitigating common pressure-related challenges and side effects associated with traditional CPAP, Cricket powered by KPAP, provides added value without compromising clinical performance.

Multi-Mode Architecture

Customer purchase experience is simplified through familiar interfaces and the availability of conventional PAP modes. This lowers switching barriers, as clinicians do not need to re-plan their PAP protocols, and patients maintain continuity when transitioning between modes. The Cricket PAP device supports KPAP, traditional CPAP, and APAP modes within a single platform. This multi-mode architecture enables seamless clinician adoption without forcing protocol changes and aligns with existing reimbursement and prescribing frameworks.

Patient-Centric Features

Cricket™, powered by KPAP™, improves comfort while preserving clinical expectations. It features responsive pressure delivery designed to align more closely with natural breathing patterns; K-Delay, a ramp feature that enables a gradual and comfortable transition into therapy; and a streamlined therapy experience that balances simplicity with physician-trusted performance. SleepRes focuses on making CPAP therapy more tolerable through improved pressure delivery and therapy initiation features.

Conclusion

SleepRes delivers a timely, evidence-informed answer to the industry's central challenge of making PAP therapy feel natural without sacrificing clinical rigor. With Cricket and its KPAP algorithm, the company blends physiologic synchrony, multi-mode flexibility, and regulatory validation to lower barriers to adoption and long-term use. By combining clinically validated algorithmic innovation with physician-led design, SleepRes delivers PAP therapy that feels more natural, is easier to tolerate, and maintains full therapeutic effectiveness—supporting better adherence, improved outcomes, and stronger long-term value for patients, providers, and payers.

SleepRes earns Frost & Sullivan's 2026 North American New Product Innovation Recognition for its strong overall performance in the PAP devices industry.

What You Need to Know about the New Product Innovation Recognition

Frost & Sullivan's New Product Innovation Recognition identifies the company that offers a new product or solution that uniquely addresses key customer challenges.

Best Practices Recognition Analysis

For the New Product Innovation Recognition, Frost & Sullivan analysts independently evaluated the criteria listed below.

New Product Attributes

Match to Needs: Customer needs directly influence and inspire the product portfolio's design and positioning

Reliability: Product consistently meets or exceeds customer performance expectations

Quality: Product offers best-in-class quality with a full complement of features and functionality

Positioning: Product serves a unique, unmet need that competitors cannot easily replicate

Design: Product features an innovative design that enhances both visual appeal and ease of use

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.

STEP		VALUE IMPACT	
		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™.

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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)**

