CANARY SPEECH

2025 TECHNOLOGY INNOVATION LEADER

Enhancing Customer Impact Through Powerful Technology Integration

RECOGNIZED FOR BEST PRACTICES IN THE NORTH AMERICAN INTELLIGENT VOCAL BIOMARKER DIAGNOSTICS INDUSTRY

FROST & SULLIVAN

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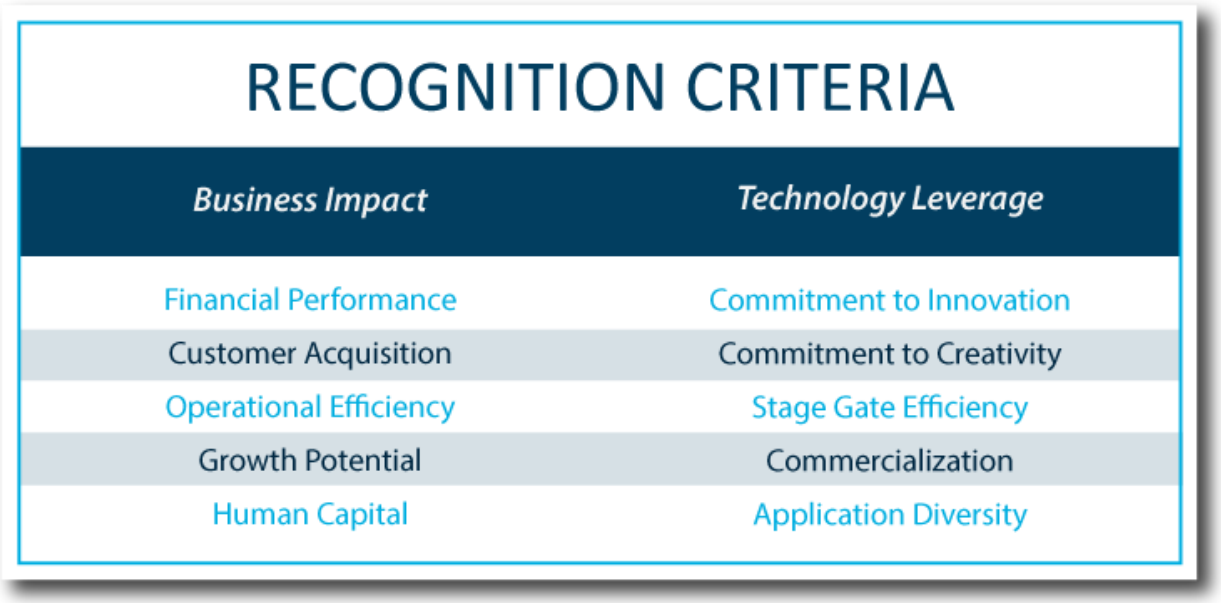
Best Practices Criteria for World-class Performance

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. Canary Speech Inc. excels in many of the criteria in the intelligent vocal biomarker diagnostics space.



The Transformation of the Intelligent Vocal Biomarker Diagnostics Industry

The intelligent vocal biomarker diagnostics market is undergoing significant transformation with the convergence of artificial intelligence (AI), speech and voice analytics, and digital health solutions. A central strategic imperative is the development of cost-effective, non-invasive, scalable, and objective digital diagnostic tools for real-time monitoring and clinical decision support. Vocal biomarkers, being a data-rich modality, eliminate the need for subjective questionnaires and cumbersome lab-based diagnostics. This has led to the development of high-precision, multi-parameter diagnostic platforms for cognitive, neurological, and neuropsychiatric conditions using predictive analytics, which opens up new revenue opportunities in underserved markets. This makes healthcare more accessible in rural and low-income regions, providing a decentralized and affordable solution for enhanced healthcare access.

The second imperative is customer value chain compression, achieved through smartphone-based diagnostic systems. By streamlining the testing process and providing immediate results at the point of care, these diagnostic platforms eliminate the need for multiple steps that traditionally involve sending samples to centralized laboratories (labs). This innovation shortens the diagnostic timeline, enabling quicker decision-making and more immediate treatment. Healthcare providers benefit from the reduced logistical and operational burdens, making testing more efficient while lowering costs for medical facilities, such as doctors' offices, clinics, and veterinary hospitals.

Ultimately, disruptive technologies are reshaping healthcare by introducing intelligent, AI-based diagnostic platforms. Smartphone-based platforms accelerate access to actionable insights at the point of

care, challenging the traditional model that relies on distant and costly reference labs. This shift enables healthcare providers to perform accurate, cost-effective diagnostics in smaller, decentralized, and more accessible environments, such as rural clinics, telehealth settings, and private practices, without compromising quality. This disruptive innovation is revolutionizing diagnostic workflows and driving market growth by offering mobile, scalable solutions that meet the evolving needs of healthcare providers and patients.

Frost & Sullivan identifies Canary Speech Inc. (Canary Speech) as a key player in transforming the diagnostics market, noting the company's ability to use AI-powered analysis of vocal biomarkers for smartphone-based disease diagnostics. By leveraging its multi-parameter diagnostic platform, Canary Speech addresses healthcare access challenges and creates new point-of-care (POC) testing opportunities in clinical and remote settings. This approach reduces operational costs and enables faster, more accurate diagnostics, offering a significant competitive advantage in developed and developing markets.

Redefining Diagnostics through AI-powered Analytics of Vocal Biomarkers

The medical diagnostics space is undergoing a convergence of AI and biomarker-based testing, which has become an inevitable reality. Only a few industry players demonstrate the foresight and technological leadership that Canary Speech possesses in the realm of intelligent vocal biomarker diagnostics. Founded in 2016 by Henry O'Connell and Jeff Adams, two seasoned professionals with expertise in voice analytics, AI, medical research, and entrepreneurship, Canary Speech is a pioneer in AI-powered speech analytics that improves health outcomes.

The company has been clear about its mission since its inception to develop an accessible and affordable objective digital diagnostic tool for mental health conditions through speech analysis. The founders believed in the potential of vocal biomarkers to transform clinical decision support. They navigated the complexities of the medical industry, regulatory hurdles, and technological challenges to bring this vision to life. Jeff Adams, who played a key role in developing Nuance Communications' Dragon NaturallySpeaking and Amazon's Alexa, joined hands with Henry O'Connell, who brought his National Institute of Health (NIH) and more than a decade of marketing and sales experience to the team, including six successful corporate turnarounds as chief executive officer.

The Technology

Canary Speech developed the MedTech industry's first ambient listening tool, Canary Ambient™, a vocal biomarker technology that analyzes conversational speech in under a minute to detect mental health issues and neurological conditions. The technology uses proprietary machine learning modeling to measure acoustic and linguistic features. It is delivered via smart devices, such as cellular phones or tablets, as well as telehealth, video conferencing, and phone calls, and functions as a clinical decision support tool with Canary Behavioral™ for both screening and diagnostics. The patient engages with the smartphone-enabled digital solution through its microphone in routine speech, like talking to a medical professional, while the system captures vocal features to detect mental health conditions, fitting conveniently into the user's day-to-day life. The in-pocket technology enables patients, payers, and clinicians to perform preventative screening, proactive and continuous care, and risk stratification.

Unlike traditional voice analytics platforms that employ natural language processing (NLP), post-parsing semantic interpretation of speech, Canary Speech's technology focuses on capturing involuntary voice characteristics, including pitch, tone, jitter, consistency, and prosody. These characteristics are objective and uninfluenced by the patient's conscious choice of words or self-reporting, thereby increasing the platform's predictive accuracy. These characteristics are correlated with a wide spectrum of cognitive conditions, including post-traumatic stress disorder, Huntington's, Parkinson's, and childhood diseases such as attention-deficit/hyperactivity disorder and autism.

> *"Canary Speech believes that NLP-based early disease detection through speech analytics will become obsolete due to inherent inaccuracies and reproducibility limitations. As such, it recognizes the potential for merging vocal biomarker datasets with generative AI and large language models via quantum computing. This convergence will unlock new insights as evolving AI models are implemented on data collected from vocal biomarkers."*
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Operational Efficiency

Canary Speech's technology focuses on extracting sub-language elements that screen and objectively collect data points, return a voice score, monitor disease-specific clinical-grade symptoms, and predict early signs of a health condition. The cloud-based predictive data analytics about the health condition is secure and personalized using on-device assessments and reporting tools. This architecture enables the platform to work seamlessly in both clinical and remote settings, and can be scaled up according to patient volume.

Canary Speech addresses the cost challenges that often limit the use of POC diagnostics. The company's platform meets the reimbursement requirements for critical tests, such as speech fluency, auditory processing, and oral functions, making these tests more affordable and sustainable for healthcare providers. Unlike traditional systems where doctors can incur losses on these diagnostics, Canary Speech enables physicians to run these diagnostics at a profit, ensuring that they can offer essential services without compromising financial viability.

Canary Speech provides patients with 13 different reimbursable Current Procedural Terminology (CPT) codes, which have undergone extensive validation in collaboration with the American Academy of Professional Coders (AAPC) and healthcare institutions. Reimbursement rates range from $2.33 to $122.83 per visit. Frost & Sullivan is impressed by Canary Speech's ability to integrate cutting-edge technology with cost-effective solutions, addressing key challenges in POC diagnostics. The company enhances operational efficiency by combining multiple parameters into a single smartphone-enabled platform while maintaining high accuracy and reliability. Its innovative approach expands access to advanced diagnostics and optimizes resource utilization, making clinical-grade diagnostics at the POC available to a broader range of healthcare providers.

Rise of Digital Health: Commercial Success, Market Expansion, and Future Growth

Canary Speech has boldly launched a solution that is not solely based on NLP techniques, which, for over 25 years, has not produced a commercially viable MedTech product despite massive investment and academic research.

Depending on the application for clinical decision support, certain US Food and Drug Administration (FDA) pathways permit deployment without full regulatory oversight. The company has been validated and audited for those applications by the US FDA and European Medicines Agency, which ensure AI integrity, security, quality systems, and compliance. The company's clinical security-first philosophy motivates it to meet the stringent data protection regulations imperative for cloud storage of patient data and healthcare information exchange. It is HITRUST certified and Health Insurance Portability and Accountability Act (HIPAA) compliant, with the technology undergoing extensive internal, partner, and external audits.

Growth Potential and Technological Expansion

The company's collaborations encompass neurologists, psychiatrists, and disease specialists worldwide, ensuring linguistically diverse expertise with team members from a host of countries, including the United States, the United Kingdom, India, Germany, Spain, and Korea. As of 2025, Canary Speech owns an impressive intellectual property portfolio, including 13 issued and 12 pending patents.

> *"Despite raising substantial funding, competing tech developers have been unable to validate and commercialize their platforms for a broad spectrum of mental health conditions, unlike Canary Speech. Others exited the industry when Canary Speech refused to license its intellectual property."*
>
> ***– Swati Mishra***
> ***TechVision Research Analyst***

The platform commercializes 18 ML models in multiple regional languages, including Japanese, English, and Spanish, covering diverse geographies such as North America, Europe, and the Asia-Pacific region, excluding China, Latin America, the Middle East, and India. The company's dominance is not limited to the United States, as evidenced by its collaborations with industry giants such as Samsung, LG, and Microsoft, operating internationally.

Customer Acquisition and Market Strategy

The company's mental health assessments are objective questionnaires prepared by health experts based on the clinical-grade General Anxiety Disorder 7 and Patient Health Questionnaire 8, which medical professionals widely use to detect mental health conditions. Through its fast-paced technology, the company captures 15.5 million data points per minute from human voices in real-time.

Henry O'Connell confidently states that the company has no direct competitors, specifically in the United States.[1] Despite raising substantial funding, competing tech developers have been unable to validate and commercialize their platforms for a broad spectrum of mental health conditions, unlike Canary Speech.

Others exited the industry when Canary Speech refused to license its intellectual property. Unlike

[1] Frost & Sullivan's Interview with Canary Speech Inc. (May 12, 2025)

competitors that perform data analytics on unstructured data acquired from unreliable data sources such as social media or publicly available information, the company collects data ethically and under Institutional Review Board (IRB)-approved scenarios.

Thanks to its partnership with Microsoft as part of the Medical Dragon Copilot platform, in 2025, Canary Speech's digital solution was embedded in the Microsoft Azure package for use on personal computers for enterprise licensing and adoption, resulting in a significant revenue increase. The solution will be integrated with Microsoft Teams for AI-based detection to identify stress and changes in mood before clinical screening.

Future Focus

Canary Speech has 13 new models for disease detection under development while expanding the existing ones to new languages. With the help of its proprietary ambient listening and real-time AI diarization technology, the company plans to add up to four to six new diseases and significantly grow global deployment by 2026.

With robust investment from Cortes Capital, Sorenson Communications, Dasein Capital, Hackensack Meridian Health, and SMK Corporation, the company sidesteps the academic pathway for research and development and collaborates with global premier institutions, including Harvard University, Beth Israel Lahey Health, New York University, Massachusetts General Hospital, the National Institute of Health, the Centers for Disease Control and Prevention, and other frontline healthcare providers that are actively engaged to improve patient outcomes.

Conclusion

From the beginning of its journey to transform vocal biomarker-based diagnostics with AI, Canary Speech has developed an unparalleled globally applicable platform for at-home diagnostics, primary care screening, remote patient management, and objective clinical decision support. The company's sustained leadership and ability to develop, validate, and commercialize data-driven, AI-implemented, smartphone-enabled diagnostics have set a benchmark for other players in this industry. By leveraging disruptive technologies, it enhances diagnostic accuracy while reducing costs and operational complexity. The platform offers unmatched flexibility, making high-quality POC testing accessible in diverse healthcare settings, including rural clinics and less-resourced hospitals.

The company's proprietary platform reduces infrastructure and operational costs for healthcare providers. Its commercial success and customer acquisition strategy focuses on expanding global market penetration, particularly in underserved regions, through direct distribution and regulatory approvals. It employs multimodal AI, combining vocal biomarkers with large datasets and modern analytics, replacing outdated health monitoring systems. With AI-driven, large-scale health trend tracking becoming a standard, this approach is poised to revolutionize healthcare.

With its strong overall performance, Canary Speech earns Frost & Sullivan's 2025 North American Technology Innovation Leadership Recognition in the intelligent vocal biomarker diagnostics industry.

What You Need to Know about the Technology Innovation Leadership Recognition

Frost & Sullivan's Technology Innovation Leadership Recognition is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

Best Practices Recognition Analysis

For the Technology Innovation 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

Business Impact

Financial Performance: Strong overall business performance is achieved in terms of revenue, revenue growth, operating margin, and other key financial metrics

Customer Acquisition: Customer-facing processes support efficient and consistent new customer acquisition while enhancing customer retention

Operational Efficiency: Company staff performs assigned tasks productively, quickly, and to a high-quality standard

Growth Potential: Growth is fostered by a strong customer focus that strengthens the brand and reinforces customer loyalty

Human Capital: Leveraging innovative technology characterizes the company culture, which enhances employee morale and retention

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 fuelled 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)