

FROST & SULLIVAN
BEST PRACTICES



2026

**GLOBAL BIOMETRIC
SOLUTIONS**

COMPANY OF THE YEAR

NEC

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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. NEC Corporation excels in many of the criteria in the biometric solutions space.

RECOGNITION CRITERIA	
<i>Visionary Innovation & Performance</i>	<i>Customer Impact</i>
Addressing Unmet Needs	Price/Performance Value
Visionary Scenarios Through Megatrends	Customer Purchase Experience
Leadership Focus	Customer Ownership Experience
Best Practices Implementation	Customer Service Experience
Financial Performance	Brand Equity

Transformation of the Biometric Solutions Industry

The global biometrics market is experiencing rapid growth, driven by the need for secure, frictionless identity verification across sectors such as government, finance, healthcare, and commercial enterprises. Advances in artificial intelligence, multimodal authentication, and privacy-preserving technologies are transforming biometrics from a niche security tool into a cornerstone of digital identity ecosystems. Face recognition, fingerprint scanning, and iris authentication remain dominant modalities, while emerging technologies (e.g., behavioral biometrics, decentralized identity frameworks) address concerns regarding data protection and user trust. As organizations prioritize both security and user experience, biometrics is evolving into a critical enabler of digital transformation worldwide.

In a world increasingly reliant on secure, seamless digital identity verification, NEC Corporation (NEC) has emerged as a global leader in biometric innovation. With a legacy of technological excellence and a future-focused approach to ethical artificial intelligence (AI), NEC continues to redefine the boundaries of biometric authentication. In 2025, the company’s Bio-IDiom platform and Decentralized Identity Verifiable Credentials (DID/VC) have set new standards for multimodal authentication, privacy-forward identity management, and responsible technology deployment.

NEC’s biometric solutions are not only technically unmatched but purpose-built to meet the evolving needs of governments, enterprises, and individuals. From pioneering face and iris recognition to introducing novel modalities like ear acoustic, it has demonstrated a rare combination of innovation, customer impact, and strategic foresight. This award celebrates the company’s outstanding performance across visionary innovation, customer experience, and global growth.

Multimodal Innovation and the Rise of Ear Acoustic

NEC's innovation strategy is rooted in a deep understanding of emerging trends and unmet needs. NEC began selling its multimodal biometric authentication solution in 2022 by integrating face and iris recognition into a single reader. This fusion enhances accuracy, security, and user convenience, particularly in high-throughput environments like airports and public venues.

NEC's most groundbreaking advancement is its implementation of ear acoustic authentication. This novel modality verifies identity using reflected auditory waves, offering a discreet, contactless, and highly secure method of authentication. The company provides both the recognition algorithms and the acoustic-based reader hardware, positioning itself as a pioneer in this emerging field. Ear acoustic offer unique advantages as they are difficult to spoof, unaffected by face coverings, and ideal for environments where traditional modalities may be impractical.

“NEC’s most groundbreaking advancement is its implementation of ear acoustic authentication. This novel modality verifies identity using reflected auditory waves, offering a discreet, contactless, and highly secure method of authentication.”

- Tara Semon
Security Industry Analyst

This innovation reflects NEC's commitment to expanding the biometric landscape beyond conventional methods. By investing in alternative modalities, it not only enhances security but also broadens accessibility, ensuring that biometric systems can serve diverse populations and use cases.

Complementing these advancements is NEC's DID/VC solution, which empowers users with self-sovereign identity management. Individuals can create, onboard, and control their biometric credentials across digital services, ensuring privacy and autonomy. This aligns with global trends toward

decentralized identity and data protection, reinforcing the company's role as a responsible innovator.

NEC's development of its proprietary Foundational Visual Language Model (FVLM), a vision-based large language model, further demonstrates the company's strong capabilities in AI technology. FVLM generates summarized videos and explanatory text to support investigations and operations, demonstrating the company's commitment to practical, high-impact innovation.

Customer Impact at Scale: Trusted Solutions Across Sectors

NEC's biometric solutions are designed not only for technical excellence but also for real-world impact. In 2025, the company deployed its technologies across a wide range of sectors, demonstrating versatility, scalability, and customer-centric design. Real-world examples include:

- **EXPO 2025 in Osaka:** NEC's face recognition systems powered payment, admissions, and personalized experiences. Attendees used NEC's Bio-IDiom platform credentials to authorize purchases and access exhibits, creating a frictionless and secure event experience.
- **The University of Osaka:** NEC's DID solution planning to replace physical IDs with digital credentials for students, faculty, and staff. This enables secure access to facilities, library services, and attendance tracking, showcasing the solution's adaptability to academic environments.

- **Public Safety and Transportation Sectors:** NEC contributes to border protection in many countries. Biometric systems have been introduced for immigration and customs processing at Tokyo International Airport (Haneda Airport), among others, helping improve operational efficiency, reduce wait times, and enhance security outcomes.

The company's customer impact is amplified by its commitment to ethical engagement. The company's internal Digital Trust Promotion Department conducts ongoing evaluations to ensure that NEC's solutions align with its vision for responsible technology use. In 2025, the company partnered with The University of Osaka Research Center on Ethical, Legal and Social Issues to study the societal implications of biometric systems, reinforcing its role as a thought leader and ethical steward.

Customers benefit from NEC's high value-to-price ratio, with solutions that deliver superior performance without compromising affordability. The company's emphasis on user experience (from onboarding to long-term ownership) fosters trust, satisfaction, and brand loyalty.

Leadership with Vision: Ethical Growth and Global Expansion

NEC's leadership in the biometric solutions industry is built on a foundation of strategic foresight, ethical responsibility, and global ambition. With over 42,000 patents filed, the company's commitment to research and development is deeply ingrained in its corporate culture. This intellectual capital fuels continuous innovation and creates formidable barriers to entry for competitors.

"Customers proudly own the company's biometric solutions, confident in their performance, reliability, and ethical foundation. This brand loyalty is a testament to its consistent delivery of value and its unwavering commitment to customer success."

- Tara Semon
Security Industry Analyst

In 2025, NEC's growth was marked by strategic deployments and regional expansion. While the company maintains strong leadership in Asia and North America, it is now poised to expand in Europe, particularly with the rollout of the European Union's Entry/Exit System (EES). NEC's biometric solutions have a strong track record of successful deployments in border security and immigration environments, making

them well-suited for applications such as those found across the Schengen region, where scalable, secure, and privacy-conscious technologies are essential.

NEC's organizational mission balances technological advancement with social good. The company's Initiatives for Ethics & Human Rights Principles guide its R&D and outreach efforts, ensuring that innovation is aligned with societal values. This ethical framework not only differentiates NEC from competitors but also strengthens its brand equity and customer trust. NEC's brand is perceived as trustworthy, innovative, and socially responsible. Customers proudly own the company's biometric solutions, confident in their performance, reliability, and ethical foundation. This brand loyalty is a testament to its consistent delivery of value and its unwavering commitment to customer success.

Conclusion

NEC's achievements in 2025 reflect a rare blend of technical excellence, ethical leadership, and customer-centric innovation. From pioneering multimodal authentication and ear acoustic to championing self-sovereign identity and responsible AI usage, the company has consistently delivered solutions that meet the evolving needs of a global market.

Its deployments across public safety, education, and consumer experiences demonstrate the versatility and impact of its technologies. NEC's commitment to research, ethics, and global expansion positions it as a beacon of excellence in the biometric solutions industry.

With its strong overall performance, NEC Corporation earns Frost & Sullivan's 2026 Global Company of the Year Recognition in the biometric solutions industry.

What You Need to Know about the Company of the Year Recognition

Frost & Sullivan's Company of the Year 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 Company of the Year Recognition, Frost & Sullivan analysts independently evaluated the criteria listed below.

Visionary Innovation & Performance

Addressing Unmet Needs: Customers' unmet or under-served needs are unearthed and addressed to create growth opportunities across the entire value chain

Visionary Scenarios Through Megatrends: Long-range scenarios are incorporated into the innovation strategy by leveraging mega trends and cutting-edge technologies, thereby accelerating the transformational growth journey

Leadership Focus: The company focuses on building a leadership position in core markets to create stiff barriers to entry for new competitors and enhance its future growth potential

Best Practices Implementation: Best-in-class implementation is characterized by processes, tools, or activities that generate consistent, repeatable, and scalable success

Financial Performance: Strong overall business performance is achieved by striking the optimal balance between investing in revenue growth and maximizing operating margin

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 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)**

