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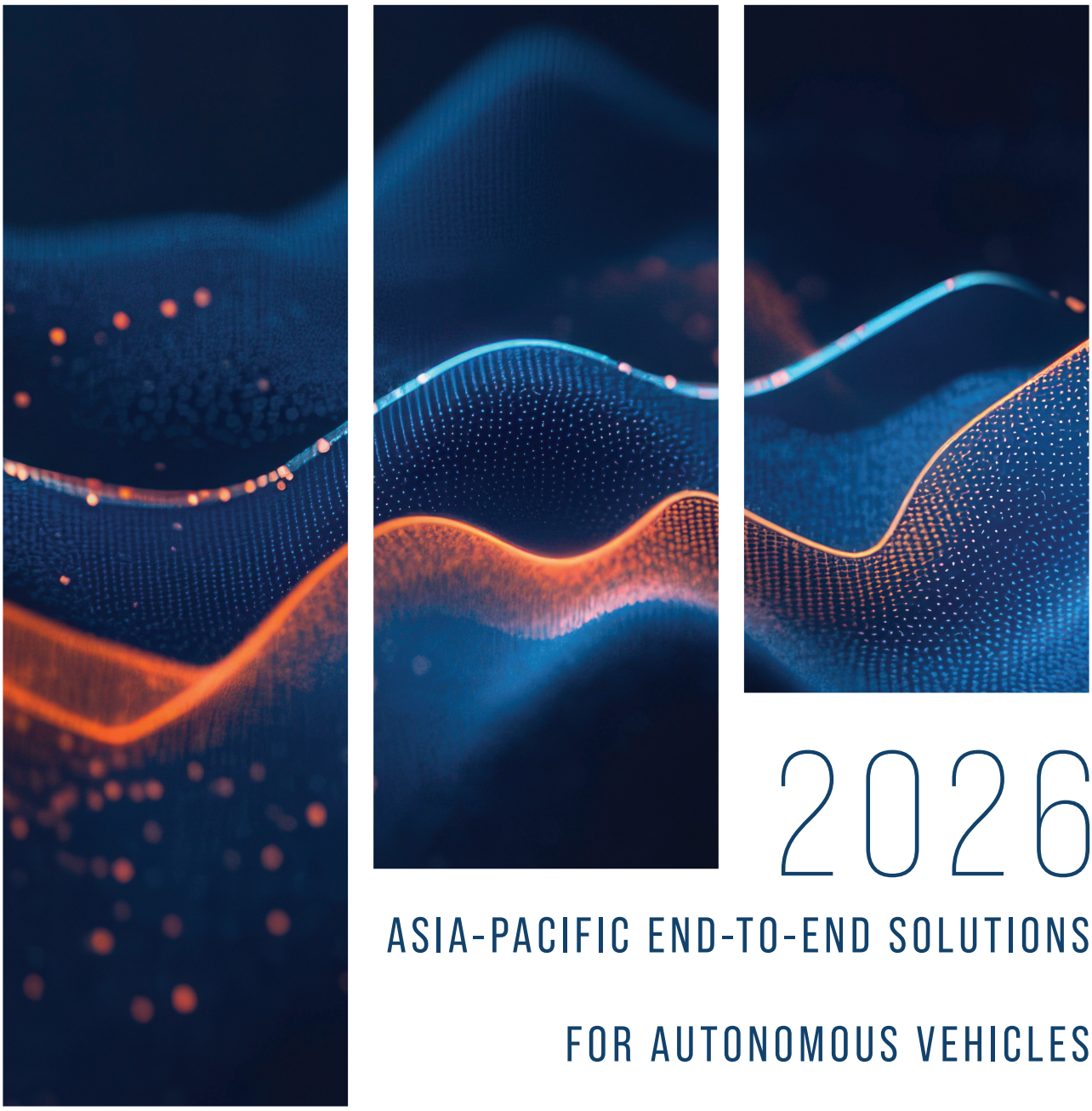
BEST PRACTICES



2026

ASIA-PACIFIC END-TO-END SOLUTIONS FOR AUTONOMOUS VEHICLES

COMPANY OF THE YEAR

TATA

TATA TECHNOLOGIES

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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. Tata Technologies excels in many of the criteria in the end-to-end solutions for autonomous vehicles space.

RECOGNITION CRITERIA	
Visionary Innovation & Performance	*Customer Impact*
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

Navigating APAC's Diverse Path to Autonomous Mobility

The Asia-Pacific (APAC) automotive industry is undergoing a profound transformation as original equipment manufacturers (OEMs) and technology providers accelerate towards a connected, autonomous, shared, and electric future. Across the region, advancements in artificial intelligence (AI), advanced driver-assistance systems (ADAS), high-performance computing, sensors, and vehicle connectivity are driving the shift toward higher levels of vehicle autonomy. However, unlike more uniform markets, APAC presents a highly heterogeneous landscape, where countries differ significantly in infrastructure maturity, regulatory frameworks, and consumer readiness for autonomous and ADAS-enabled vehicles.

These disparities create a unique set of challenges that underscores the need for end-to-end autonomous vehicle solution providers. While countries such as China and South Korea are progressing rapidly with large-scale ADAS deployment and autonomous pilot programs, other parts of APAC continue to struggle with inconsistent infrastructure, evolving safety standards, and fragmented data and regulatory regimes. Simultaneously, consumer expectations across the region remain highly polarized, ranging from cost-sensitive demand for foundational driver-assistance features to a growing demand for advanced autonomy and integrated digital experiences. Together, these dynamics complicate vehicle development and commercialization, making it increasingly difficult for OEMs to rely on fragmented, software-only, or geography-specific development models.

In response, solution providers must move beyond siloed or component-level offerings and adopt a holistic approach to autonomous vehicle development. This framework requires tight integration across hardware, software, AI-driven perception and decision-making, high-performance computing, cybersecurity, connectivity, validation, and lifecycle management. Moreover, scalability and modularity are becoming essential, enabling rapid localization and phased adoption of autonomy as regulations mature and market readiness evolves. To fully capture APAC's long-term growth potential, reduce deployment risk, accelerate alignment, and build trust across markets, providers must also work closely with automakers, infrastructure stakeholders, and policymakers. Companies that bridge these diverse regional realities with flexible, integrated solutions will be the ones to lead the next era of autonomous growth in APAC.

Tata Technologies: A Differentiated Engineering Partner for Autonomous Mobility

Building on the market's growing demand for integrated, scalable, and localized autonomous vehicle solutions, Tata Technologies is positioned as one of the most differentiated end-to-end engineering partners in the mobility ecosystem. While many regional service providers concentrate on isolated domains such as software development, simulation, or ADAS feature tuning, Tata Technologies distinguishes itself through a full-vehicle, lifecycle-oriented engineering model that spans concept, system architecture, validation, industrialization, and post-launch support. This system-level, platform-driven approach enables OEMs to translate autonomous and ADAS innovations into production-ready, compliant, and commercially scalable vehicles, tailored to APAC's diverse regulatory, operational, and market realities.

> *"While many regional service providers concentrate on isolated domains such as software development, simulation, or ADAS feature tuning, Tata technologies distinguishes itself through a full-vehicle, lifecycle-oriented engineering model that spans concept, system architecture, validation, industrialization, and post-launch support. This system-level, platform-driven approach enables OEMs to translate autonomous and ADAS innovations into production-ready, compliant, and commercially scalable vehicles, tailored to APAC's diverse regulatory, operational, and market realities."*
>
> ***- Somesh Sadasivam, Senior Research Analyst***

At the core of this differentiation is Tata Technologies' deep system-level understanding of vehicles as integrated physical and digital products, supported by a globally distributed engineering organization. With more than 12,600 engineers across 20 global delivery centers spanning APAC, Europe, and North America,[1] the company combines local market proximity with global engineering depth. This scale enables OEMs to draw on cross-regional expertise, whether in vehicle architecture, electronics integration, or autonomous validation, while ensuring solutions are tailored to local regulatory, infrastructure, and consumer requirements.

Rather than approaching autonomy as a standalone software challenge, Tata Technologies operates at the intersection of mechanical, electrical/electronic (E/E), and software engineering. This allows the

[1] https://www.tatatechnologies.com/en/about-us/

company to support autonomous and ADAS programs from vehicle architecture definition and sensor integration through embedded software development, validation, homologation, manufacturing readiness, and lifecycle management. In contrast to providers that focus on prototype engineering or software-only stacks, Tata Technologies extends its ownership into production engineering and after-sales enablement. These capabilities are especially critical in APAC, where manufacturability, cost optimization, and service readiness often determine commercial success.

Tata Technologies reinforces this comprehensive strength through its role as a system integrator rather than a Tier-1 product supplier. The company does not compete directly with ADAS hardware vendors; instead, it embeds deeply within OEM development programs to incorporate multi-vendor technologies into cohesive, vehicle-level solutions. This system-centric approach addresses one of the region's most persistent challenges: translating advanced ADAS and autonomous capabilities into robust, road-ready vehicles that perform reliably across diverse operating conditions. Tata Technologies' ability to integrate sensors, compute platforms, and control systems, while ensuring functional safety, cybersecurity, and regulatory compliance, positions it as a critical enabler for OEMs navigating APAC's complexity.

Tata Technologies further strengthens its market position through targeted acquisitions and strategic partnerships that address critical gaps in the autonomous vehicle value chain. The 2025 acquisition of Germany-based ES-Tec Group represents a pivotal enhancement of its ADAS and autonomous driving credentials, adding significant expertise in systems engineering, vehicle testing, validation, and homologation for advanced driver assistance and automated driving functions[2]. ES-Tec's established presence in Europe and access to state-of-the-art proving grounds significantly improve the company's ability to support OEMs with high-fidelity validation and regulatory readiness.

Tata Technologies fortifies this capability expansion with a growing ecosystem of strategic collaborations across semiconductors, software-defined vehicle (SDV) platforms, and E/E architectures. For instance, the company's memorandum of understanding with Telechips focuses on co-developing ADAS platforms, cockpit domain controllers, and central and zonal gateway controllers, directly addressing hardware-software integration challenges that frequently delay autonomous programs.[3] Meanwhile, the BMW TechWorks India joint venture underscores Tata Technologies' credibility in large-scale automotive software development for automated driving and SDV architectures from conceptualization to detailed engineering and turnkey SDV development.[4] Its collaboration with Synopsys further strengthens early-stage verification, validation, and digital twin capabilities,[5] helping OEMs manage the growing complexity of autonomous and software-defined vehicles.

By bridging global best practices with regional execution, Tata Technologies is well equipped to help OEMs reduce risk, accelerate deployment, and localize autonomous technologies effectively. The company's holistic, lifecycle-driven approach positions it at the forefront of the APAC autonomous mobility market

[2] https://www.tatatechnologies.com/en/newsroom/tata-technologies-acquires-es-tec-group-germany-strengthening-its-global-capabilities-in-next-gen-mobility-solutions/
[3] https://www.tatatechnologies.com/in/newsroom/tata-technologies-and-telechips-join-forces-to-innovate-solutions-for-next-gen-software-defined-vehicles-sdvs/
[4] https://www.tatatechnologies.com/en/newsroom/tata-technologies-and-bmw-group-establish-a-jv-bmw-techworks-india/
[5] https://www.tatatechnologies.com/in/newsroom/tata-technologies-collaborates-with-synopsys-to-accelerate-software%e2%80%91defined-vehicle-innovation/

as it evolves from experimentation to execution, anchoring its role in the region's next phase of automotive innovation and growth.

Strengthening Competitive Advantage in the End-to-End Autonomous Mobility Ecosystem

As competition in the autonomous vehicle ecosystem intensifies, Tata Technologies maintains its differentiation by strategically aligning its operating model with APAC's evolving technology, cost, and localization dynamics. Recognizing that the region's mobility roadmap is being influenced by rapid innovation in China and the accelerating adoption of AI-driven engineering, the company positions itself at the intersection of global scalability and deep regional relevance rather than competing on cost or isolated software capabilities alone.

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- Sama Suwal,
Best Practices Research Analyst

A central pillar of this strategy is Tata Technologies' long-established presence in China, underpinned by a dual "China-for-China" and "China-for-the-world" delivery models. Through its China-for-China approach, the company supports global and domestic OEMs in adapting vehicle platforms, ADAS features, and software-defined architectures to local regulatory, infrastructure, and consumer requirements. In parallel, its China-for-the-world model enables OEMs to leverage China's fast-evolving innovation ecosystem in EVs, SDVs, and autonomous driving, transferring mature technologies, supplier capabilities, and engineering learnings into global and broader APAC vehicle programs. This bidirectional flow of innovation has become progressively more valuable as OEMs seek to reduce development timelines and avoid duplicating investments across regions.

Tata Technologies is also evolving its value proposition to address the growing competitive pressure from software commoditization, AI-led automation, and low-cost engineering hubs. To this end, the company is reinforcing its role as an AI-enabled engineering partner, embedding intelligence, automation, and proprietary accelerators into core engineering workflows. Its in-house AI framework exemplifies this shift by improving productivity across manufacturing engineering, validation, and program execution, while preserving Tata Technologies' core strength in vehicle integration and industrialization. This approach allows the company to enhance efficiency without diluting its domain depth or system-level accountability.

Crucially, as autonomous vehicle development becomes more modular and software-centric, Tata Technologies' differentiation increasingly lies in its ability to translate emerging technologies into production-ready, compliant, and serviceable vehicles. The challenges of system coordination, regulatory alignment, production readiness, and lifecycle support remain highly complex and region-specific, even as software development, simulation, and testing become more automated. By engaging OEMs early in the development cycle and anchoring its services around full-vehicle ownership, cross-domain

orchestration, and long-term collaboration, Tata Technologies helps customers navigate APAC's fragmented regulatory landscape while scaling autonomy programs with speed and resilience.

Overall, these capabilities position Tata Technologies to withstand intensifying competition and remain a trusted partner for OEMs pursuing autonomous mobility across APAC. Leveraging localized execution, innovation transfer, AI-driven engineering efficiency, and deep system-integration expertise, the company is not only adapting to the market's structural shifts but actively shaping how autonomous vehicle solutions are engineered, deployed, and scaled across one of the world's most complex automotive regions.

Translating Customer-Centric Engineering into Measurable Business Impact

Tata Technologies centers its differentiated customer-centric approach in its ability to build enduring, high-trust relationships that evolve alongside its customers' technology and business priorities. Anchored in its "One Team with Customers" philosophy, the company goes beyond transactional delivery by embedding itself deeply within client organizations through dedicated account structures that combine client partners, delivery partners, and transformation partners. This integrated engagement model enables closer co-engineering, faster decision-making, and solutions that are tightly aligned to real-world operational, regulatory, and commercialization challenges.

Tata Technologies reinforces this relationship-led approach with its focus on delivering seamless, lifecycle-wide customer experiences. Through omnichannel, 360-degree engagement across physical and digital touchpoints, the company supports customers from early concept and pre-sales stages through development, production, and after-sales. At the same time, its ability to digitalize the product lifecycle using on-premises and cloud-based product lifecycle management (PLM) technologies creates comprehensive visibility, aligning people, processes, and data across complex autonomous and ADAS programs. This holistic view of the vehicle lifecycle not only reduces friction and risk but also enhances transparency, predictability, and time-to-market for customers navigating increasingly software-defined and AI-driven vehicle architectures.

The effectiveness of this customer-centric strategy is reflected in Tata Technologies' consistently strong customer satisfaction metrics. In 2025, the company recorded a customer satisfaction score of 4.43 out of 5 for embedded projects, supported by a robust response rate of 66%, underscoring delivery quality and responsiveness in complex engineering engagements.[6] In parallel, its Embedded Net Promoter Score improved from 55 in 2024 to 57 in 2025, with an 83% response rate,[7] signaling growing customer advocacy and confidence in the company's ability to deliver sustained value as programs scale in complexity and ambition.

These strengths have translated directly into expanded customer trust and new wins, most notably Tata Technologies' selection as a strategic engineering supplier by Volvo Cars in 2025.[8] This milestone marks a significant expansion of a long-standing relationship and underscores the company's credibility as a partner capable of supporting global OEMs through their transition to electrified, software-defined, and

[6] Frost & Sullivan's discussion with Tata Technologies.
[7] Ibid.
[8] https://www.tatatechnologies.com/in/newsroom/tata-technologies-has-been-selected-as-a-strategic-supplier-by-volvo-cars/

more autonomous vehicles. Under this collaboration, Tata Technologies will deliver product engineering, vehicle systems, and component engineering, embedded software, and PLM solutions from its global delivery hubs across Sweden, India, Romania, and Poland, enhancing Volvo Cars' engineering capacity while ensuring consistency, scalability, and localization across regions.

Overall, Tata Technologies' deep customer integration, strong satisfaction outcomes, and growing portfolio of strategic partnerships reinforce its position as a high-value, long-term partner. By consistently translating engineering excellence into measurable customer outcomes, the company continues to expand its customer base and strengthen its role as a trusted enabler of next-generation automotive innovation.

Building Financial Strength, Brand Equity, and Scalable Growth Momentum

Tata Technologies underpins its industry leadership with strong financial performance, a trusted global brand, and a growth strategy aligned with the evolving needs of software-defined and autonomous mobility. The company's consistent revenue growth and margin resilience reflect both the durability of its business model and its ability to execute effectively amid market volatility and technological disruption.

In the quarter ended December 31, 2025, Tata Technologies reported total operating revenues of $148.5 million (₹13,657 million), representing 3.2% quarter-on-quarter growth, despite seasonal softness and short-term headwinds. Services revenues grew even faster, rising 4.7% quarter-over-quarter to $115.3 million (₹10,602 million), with earnings before interest, taxes, and amortization reaching $20.9 million (₹1,929 million) and margins standing at a healthy 14.1%.[9] This performance highlights the company's operational discipline, diversified portfolio, and growing relevance across high-value engineering programs, particularly in autonomous, embedded, and software-led domains.

Tata Technologies' combination of financial resilience and brand credibility directly supports the company's long-term growth potential in APAC. The company's strategy of building deep, multi-decade relationships with a focused set of global OEMs enables it to expand share-of-wallet across mechanical, electrical, software, manufacturing, and digital domains, rather than pursuing fragmented, transactional engagements. As autonomous vehicle development becomes more complex and integration-driven, this "go-deep, not wide" approach creates sticky, high-value revenue streams while reducing concentration and execution risk.

Looking ahead, Tata Technologies is well-positioned to sustain growth as the engineering services industry reaches an inflection point shaped by AI, automation, and software commoditization. By combining AI-enabled tools with deep domain expertise, the company continues to align its growth engine with the areas where OEMs derive the greatest value. This positions Tata Technologies to not only withstand intensifying competition but to emerge as a long-term leader in APAC's autonomous mobility transformation.

[9] https://www.tatatechnologies.com/in/newsroom/tata-technologies-reports-3-2-percent-qoq-growth-in-operating-revenues/

Conclusion

The Asia-Pacific (APAC) autonomous mobility market faces complex challenges, including fragmented regulations, uneven infrastructure, and highly diverse consumer readiness, which make end-to-end, scalable, and locally adapted solutions critical for original equipment manufacturers (OEMs). Overall, Tata Technologies addresses these unmet needs with a strong leadership focus that combines customer-centric strategies and best practice execution. The company exemplifies this approach through its holistic, lifecycle-driven engineering model, spanning vehicle concept, system architecture, validation, industrialization, and post-launch support, and its deep integration within client programs, enabling production-ready, compliant, and commercially scalable autonomous vehicles across APAC. Tata Technologies remains a trusted partner, earning a reputation for delivering the overall best in end-to-end autonomous mobility solutions and helping OEMs navigate one of the world's most complex automotive regions.

With its strong overall performance, Tata Technologies earns Frost & Sullivan's 2026 Asia-Pacific Company of the Year Recognition in the end-to-end solutions for autonomous vehicles 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 megatrends 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.

		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

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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.

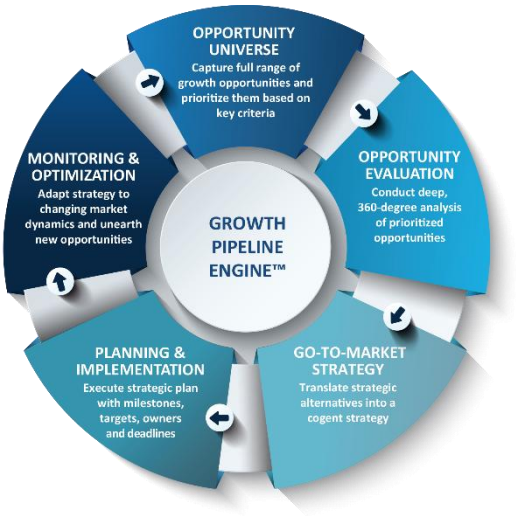
The Growth Pipeline Generator™

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)