



**20  
25**

**TECHNOLOGY  
INNOVATION  
LEADER**

*Enhancing Customer Impact Through  
Powerful Technology Integration*

*RECOGNIZED FOR BEST PRACTICES IN THE  
GLOBAL SEMICONDUCTOR IP INTERCONNECT  
SOLUTIONS INDUSTRY*

F R O S T & S U L L I V A N

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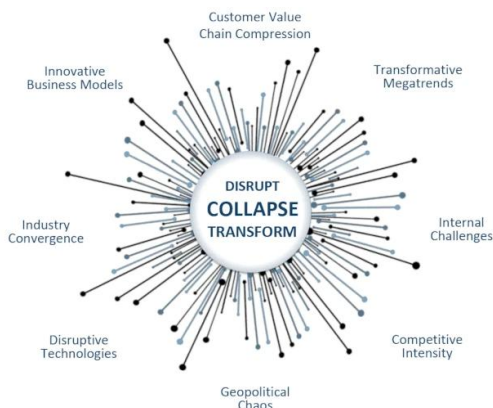
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## Best Practices Criteria for World-class Performance

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. Baya Systems excels in many of the criteria in the semiconductor IP interconnect solutions space.

RECOGNITION CRITERIA	
<i>Business Impact</i>	<i>Technology Leverage</i>
Financial Performance	Commitment to Innovation
Customer Acquisition	Commitment to Creativity
Operational Efficiency	Stage Gate Efficiency
Growth Potential	Commercialization
Human Capital	Application Diversity

## The Strategic Imperative 8: Factors Creating Pressure on Growth



- **Innovative Business Models:** A new revenue model that defines how a company creates and capitalizes economic value, typically impacting its value proposition, product offering, operational strategies, and brand positioning
- **Customer Value Chain Compression:** Customer value chain compression as a result of advanced technologies, internet platforms, and other direct-to-consumer models that enables the reduction of friction and the number of steps in customer journeys
- **Transformative Megatrends:** Global forces that define the future world with their far-reaching impact on business, societies, economies, cultures, and personal lives
- **Disruptive Technologies:** New, disruptive technologies that are displacing the old, and significantly altering the way consumers, industries, or businesses operate
- **Internal Challenges:** The internal organizational behaviors that prevent a company from making required changes

- **Competitive Intensity:** A new wave of competition from start-ups and digital business models that challenge the standing conventions of the past, compelling established industries to re-think their competitive stance
- **Geopolitical Chaos:** Chaos and disorder arising from political discord, natural calamities, pandemics, and social unrest that impact global trade, collaboration, and business security

## The Transformation of the Semiconductor Intellectual Property Interconnect Solutions Industry

*“Baya Systems stands out in the semiconductor industry for its innovation and technical leadership in chiplet-based interconnect solutions, crucial for the next wave of AI and HPC architectures. The company differentiates itself through its unified chiplet interconnect architecture, AI/HPC-optimized solutions, and a platform-centric approach, making it a key enabler for the future of modular, scalable computing systems.”*

**- Varun Babu**  
**Industry Principal, GOA**

As advanced technologies like artificial intelligence (AI) and machine learning (ML) become more prevalent across industries, developers of internet-connected and AI-driven hardware and software require enhanced Intellectual Property (IP) capabilities. IP providers face the challenge of increasing computing and processing power while also enhancing network performance and capacity to enable more seamless data movement. Moreover, as the demand for intelligent computing grows, traditional System-on-a-Chip (SoC) designs face challenges related to data movement efficiency and compute density. As a result, they must bridge multiple complex computers

together to meet the growing requirements. Furthermore, as upgrading network or component hardware is costly and time-consuming, IP providers must also take the potential future needs into account when creating solutions, thereby safeguarding their long-term effectiveness.

Headquartered in Santa Clara, California, and founded in 2023, Baya Systems stands out in the semiconductor industry for its innovation and technical leadership in chiplet-based and SoC interconnect solutions, crucial for the next wave of AI and high-performance computing (HPC) architectures. The company differentiates itself through its unified chiplet interconnect architecture, AI/HPC-optimized solutions, and a platform-centric approach, making it a key enabler for the future of modular, scalable computing systems.

### Empowering Flexibility, Scalability, and Significant Performance through Technology Leadership

Baya Systems’ unified fabric features an algorithm-driven, software-based design with scalable, modular IP adaptable to all fabric types. The company’s data-driven, unified design flow delivers a common transport that supports multiple protocols and coherency requirements. The unified fabric’s customization removes guesswork, reduces risk, and the cost of delivering complex high-performance systems by enabling efficient scalability for SoCs and chiplets. The company’s multi-level cache coherency and dynamic microarchitecture enable developers to easily adapt protocols based on specific project needs, delivering unmatched scalability. As such, the unified fabric optimizes physically-aware solutions for power and area while optimizing performance and low latency from concept to deployment. This

unprecedented flexibility and scalability make the unified platform applicable to various applications, such as data centers, Internet of Things solutions, automotive, AI accelerators, and telecommunications.<sup>1</sup>

### A Motivated, Passionate Team Driving Outcomes

Baya Systems recognizes the importance of a passionate, collaborative team that encourages collective creativity to tackle customer challenges. To reflect this focus, the company grants equity to its employees from the outset, fostering a sense of investment in its success across the entire workforce. Moreover, this approach naturally attracted professionals who are genuinely passionate about technology advancement and creative thinking, helping Baya Systems build a core team of dedicated experts.

With offices located in Santa Clara, California, Austin, Texas, and Bangalore, India, the company creates a close internal culture, fostering inventiveness and teamwork to design solutions overcoming customers' various challenges. In addition to its internal culture fostering a spirit of collaboration, Baya Systems' agility powers its internal transparency, allowing ideas to flow between teams to enhance development. The company's founders demonstrate their commitment to creativity by actively engaging in problem-solving and designing solutions for clients. Moreover, Baya Systems goes beyond its internal expert team, working with advisors, its board members (including Siva Yerramilli, SVP of the Corporate Incubation Group at Synopsys, Inc. and Manish Muthal, Senior Managing Director at Maverick Silicon<sup>2</sup>), and customers to remain at the forefront of innovation and design solutions that directly meet cross industry shifts.

Baya Systems prioritizes its customers by leveraging exceptional flexibility. It recognizes that an out-of-the-box solution cannot meet everyone's needs and, as such, brings together tools and technologies to create a solution that best fits each customer's needs. Furthermore, the company forms partnerships with clients, setting clear expectations from the project origination and placing client input directly into its solution creation. Baya Systems' customer-first mindset extends to its strategic innovation. As a startup, it maintains informal innovation processes, continuously empowering product ideation during client interactions. Moreover, it holds "hackathons" every two weeks, bringing its teams together to creatively solve customers' problems. These strategies foster an internal culture of creativity and continuous innovation to consistently enhance its infrastructure and framework capabilities. In addition, the company looks to incorporate its solutions back into its processes and software, allowing it to learn from each project and integrate advancements back into its products. This approach enables Baya Systems to proactively address similar issues faced by existing or new clients, simplifying the problem-solving process significantly.

### Ongoing Collaboration Driving Growth and Brand Equity

Baya Systems is quickly becoming a recognized player within the semiconductor IP interconnect solutions industry. The company partners with leaders across various industries, designing solutions fitting their specific and emerging projects. It focuses on solving high-end problems, helping industry leaders successfully expand their technological capabilities to meet emerging needs. As a result, Baya Systems

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<sup>1</sup> <https://bayasystems.com/technology/#technology-overview>

<sup>2</sup> <https://bayasystems.com/2025/01/28/board-of-directors/>

exceeds its aggressive growth targets for 2025 and expects to remain on this high-growth trajectory throughout the year.

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In 2024, the company signed two partnerships, including with Semidynamics to create hyper-efficient, next-generation platforms (including AI, ML, and HPC applications)<sup>3</sup>. Since then, it signed agreements with five more clients, showcasing the industry’s growing recognition of Baya Systems technology leadership and ability to bring solutions to market quickly. The company prioritizes client success by adopting a royalty pricing model that links payment directly to the profitability of a client’s project, ensuring the solution aligns with their network needs and timelines.

Baya Systems offers a suite of products, including:

WeaverPro™: A software platform that enables continuous refinement of architecture and micro-architecture development from initial specification through post-silicon tuning. It features built-in simulation and workload analysis to ensure designs meet key performance indicators. WeaveIP™: An advanced system IP portfolio with a common transport layer supporting custom and standard protocols. The WeaveIP maximizes performance and throughput while minimizing latency, silicon footprint, and power consumption, facilitating rapid delivery of complex solutions.

Baya Systems also integrates customers directly into its innovation roadmap, helping to broaden and modernize its product line to meet interconnect standards while also overcoming customers’ specific pain points. For example, the release of the new Ultra Accelerator Link™ (UALink™) interconnect standards in 2024 created a demand for a more scalable switching solution to address AI’s evolving needs. The company’s agile innovation led it to begin ideation in quarter four of 2024, leveraging its flexible transport architecture, support protocols, and performance and configuration models to develop the NeuraScale Scalable Switch Fabric (NeuraScale Fabric), overcoming critical scaling and data movement challenges in AI infrastructure.<sup>4</sup> The company worked actively with clients during the development process, testing the solution’s capabilities, evaluating its cost effectiveness, and benchmarking the industry’s needs. Baya Systems released NeuraScale Fabric in March 2025, with the first implementation appearing in designs by quarter three of 2025, demonstrating its remarkable agility in developing impactful products efficiently. The company’s focus on addressing critical challenges in data movement and scalability positions it strategically within the evolving semiconductor industry. Its modular, software-driven approach aligns with the industry’s shift towards chiplet-based architectures, offering flexibility and efficiency.

<sup>3</sup> <https://bayasystems.com/2025/02/25/risc-v-soc-development/>

<sup>4</sup> <https://bayasystems.com/2025/03/06/ai-scale-up-scale-out/>

## Conclusion

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As artificial intelligence (AI), machine learning, and high-performance computing (HPC) become more widely adopted across various industries, developers of internet-connected and AI-driven hardware and software require enhanced Intellectual Property (IP) capabilities. Baya Systems differentiates through its unified chiplet and SoC interconnect architecture, AI/HPC-optimized solutions, and a platform-centric approach, giving clients unmatched flexibility and scalability in creating solutions aligned directly with their project's needs. The company couples its technology leadership with a customer-first focus and aligns its internal structures to continuously uphold this value. Baya Systems maintains an internal team of passionate industry experts and fosters a culture of creativity, thereby encouraging teamwork for experts to creatively leverage its tools and technologies to design a solution directly overcoming customers' specific needs. The company also maintains a royalty pricing model, aligning its revenues directly with clients' achievements to safeguard its client-success-first mentality. As a result, Baya Systems encounters mounting industry recognition of its value and technology advancement, resulting in the company exceeding its already aggressive growth targets.

With its strong overall performance, Baya Systems earns Frost & Sullivan's 2025 Global Technology Innovation Leadership Recognition in the semiconductor IP interconnect solutions industry.

## What You Need to Know about the Technology Innovation Leadership Recognition

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

