

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

# 2024 COMPANY OF THE YEAR

*IN THE GLOBAL  
AUTONOMOUS  
ARTIFICIAL INTELLIGENCE  
INDUSTRY*



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

BEST  
2024 PRACTICES  
AWARD

Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. Composabl excels in many of the criteria in the autonomous artificial intelligence space.

AWARD CRITERIA	
Visionary Innovation & Performance	Customer Impact
Addressing Unmet Needs	Price/Performance Value
Visionary Scenarios Through Mega Trends	Customer Purchase Experience
Implementation of Best Practices	Customer Ownership Experience
Leadership Focus	Customer Service Experience
Financial Performance	Brand Equity

A Market Snapshot

As technology shifts and disruptions demand more dynamic solutions, artificial intelligence’s (AI) ability to learn, optimize, and automate tasks has great potential to transform industries like manufacturing. The promise of autonomous AI lies in its ability to adapt to scenarios, handle unknown changes, and process

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**- Karthik Sundaram**  
**Research Director, Industrial**

complex variables. By improving quality control, reducing downtime, and enhancing efficiency, AI realizes the potential of digital transformation, revolutionizing traditional processes and boosting profitability while improving product quality in an evolving industrial landscape.

This AI transformation is just beginning, and the global autonomous AI market faces significant challenges, particularly in industrial automation. Traditional systems are reaching their limits as industries like steel manufacturing face increasingly complex and dynamic

conditions. For example, the shift from standardized production for automakers to more diversified applications, such as heating, ventilation, and air conditioning ductwork, strained existing automated processes.

Current systems lack the flexibility to adapt, and experts struggle to manage these evolving needs, creating a skills gap. With only about 10% of employees considered experts, requiring a decade or more to train, many plants experience sharp declines in performance metrics like throughput and yield when these experts are unavailable. The rapid retirement of experienced workers intensifies the loss of critical operational knowledge further.

Composabl's leadership in the autonomous AI industry derives from its ability to help businesses overcome these hurdles. Composabl enables businesses to create task-specific, expert-driven automation, aiming to codify and preserve high-value skills for dissemination to less experienced workers. This helps organizations manage competing optimization goals, trading off strategies after subject matter experts (SME) define constraints and objectives, improving operational efficiency and helping to bridge the skills gap. However, the transition requires more than just technological innovation; it demands a cultural shift within organizations to embrace autonomy fully. Integrating autonomous AI in industrial settings involves managing human expertise, responding to market changes, and ensuring adequate training for the future workforce.

### ***Best Practices Excellence: Composabl***

Founded in 2023 and headquartered in Walnut Creek, California, Composabl is a platform enabling businesses to create intelligent autonomous agents for the industrial space. Aiming to be the "Excel of agents," the platform leverages a methodology called machine teaching that allows users to understand and guide how agents learn and make decisions. The company's collaborative learning approach enables SMEs to codify expertise, making critical knowledge accessible to less experienced teams. By supporting diverse applications and enhancing operational efficiency, Composabl is driving innovation and adaptability in the industrial sector through AI-powered solutions.

### ***A Leader's Path***

Composabl addresses significant unmet needs in the industrial sector by pushing the boundaries of what "AI agents" can do. While there is excitement about agent-based systems utilizing generative AI (GenAI) and large language models (LLM), many lack the capabilities for high-value decision-making in industrial contexts. The company recognizes that these models, though effective for tasks like customer support, are ill-suited for critical industrial applications. By packaging advanced AI innovations into modular tools, Composabl empowers engineers, regardless of their data science background, to integrate more reliable decision-making technologies, such as deep reinforcement learning, to create tailored AI solutions that meet specific operational needs.

Central to Composabl's best practices is establishing a no-code user interface (UI) and an orchestration platform that enables engineers to develop intelligent agents with minimal coding. This technology democratizes AI access, allowing users to integrate various machine learning (ML) models and tools seamlessly. The platform combines multiple technologies, including ML for perception, reinforcement learning for task execution, and LLMs for human communication, resulting in adaptable agents capable of complex real-time decision-making. The structured architecture of the agents, from sensor data collection to skill execution, enables them to respond effectively in dynamic environments, such as executing emergency procedures during crises. With a vision to become the de facto standard for industrial-strength

agents, Composabl's leadership focuses on connecting the deep domain knowledge of SMEs and engineers with advanced autonomous AI capabilities. The company's approach emphasizes empowering engineers to leverage their expertise in developing explainable digital "skills" that serve as building blocks for agents. By fostering a robust ecosystem of intelligent autonomous agents, Composabl aims to enhance operational efficiency and decision-making, positioning itself as a leader in intelligent automation across various sectors.

The synergy between human expertise and AI capabilities offered by Composabl's platform is set to revolutionize complex industrial processes. This breakthrough will not only optimize operations and reduce costs but also unlock new realms of innovation previously unattainable in the industrial sector.

### ***Composabl: An Innovation Hub***

Composabl's Machine Teaching framework represents a transformative approach to designing, building, training, and deploying intelligent autonomous agents, bringing top-notch efficiency and transparency to AI. By integrating human expertise with AI, Machine Teaching enhances AI agents' capacity through targeted "teaching" that focuses on valuable outcomes. This process mirrors the principles of prompt engineering in GenAI but while prompt engineering produces language and creative content, machine teaching produces agents that can make nuanced decisions and optimize complex processes. Moreover, Composabl's Machine Teaching-based platform excels in rapid prototyping, using standardized design patterns to iterate and develop agents for specific use cases quickly. This flexibility allows businesses to train and evaluate multiple agent configurations, often exceeding benchmark performance. The platform's reporting tools enhance decision-making processes further, offering business leaders insights into the most effective options.

Key techniques within this methodology include skill decomposition, which breaks down complex tasks into smaller, manageable parts, allowing agents to learn and execute them effectively. Action masking restricts agents' choices during reinforcement learning, preventing impractical solutions and ensuring more realistic outcomes. Additionally, heuristics, such as if-then rules, guide agent behavior in predictable scenarios, leading to more reliable and practical decision-making. These combined techniques create efficient, adaptable agents capable of operating within the limits of real-world constraints, making them highly applicable across various industries.

Initially targeting the industrial sector as a strategic "beachhead," Composabl's vision mirrors the growth trajectory of other large technology companies, starting in one domain and expanding outward. The company continues to demonstrate its technology's applicability to various industries. Composabl's approach could be expanded into other functions like commodity trading and financial allocation. As businesses seek more advanced automation solutions, the company's strategic positioning as a leader in "autonomous AI" and "intelligent, autonomous agents" solidifies its role in industry and across broader enterprise landscapes.

***Roadmap to Success: Customer-centric, Continuous, Proactive***

Composabl delivers a holistic customer experience that spans the entire lifecycle of adopting, using, and owning its platform for building intelligent agents.

***Purchase Experience***

Composabl designs its approach to facilitate seamless collaboration between diverse teams of engineers, SMEs, data scientists, and information technology professionals. By enabling cross-functional teams to contribute specialized knowledge, the company helps customers overcome the common pitfalls of industrial AI projects, where 87% fail to reach deployment. The platform's intuitive tools, including the no-code Agent Builder Studio and the Python software development kit, empower engineers with varied expertise to build, train, and deploy autonomous agents easily. This democratization of agent development, supported by a software-as-a-service-like, seat-based licensing model, allows engineers to utilize pre-existing data, algorithms, and models without needing advanced coding skills, making the purchase process straightforward and accessible for companies of all sizes.

***Customer Service Experience***

Composabl prioritizes customer empowerment through a developer evangelism model, offering comprehensive support without relying on a large salesforce. By fostering an ecosystem where engineers can independently troubleshoot and innovate, the company mirrors the strategies of successful platforms that emphasize community-driven learning. The platform provides extensive documentation and examples to support users at every stage. Additionally, Composabl's partnerships with system integrators like RoviSys and Wood PLC provide hands-on guidance and training, ensuring customers maximize the platform's potential. This community-centric approach drives high user engagement and productivity, while the company's commitment to continually developing tools and resources enhances the long-term customer experience.

***Customer Ownership Experience***

Composabl ensures that customers maintain complete ownership of their data, agents, and any other assets created on the platform, even after terminating their subscription. This ownership guarantee, akin to retaining access to a SIM card after a service contract ends, safeguards the customer's creations and ensures agents remain functional and accessible. The company's agents, packaged as containerized functions, can deploy flexibly on-premises, at the edge, or in the cloud, offering versatility and control over their use. Through its training-as-a-service feature, customers can efficiently scale and train agents without managing infrastructure, ensuring smooth operational integration and a sense of autonomy throughout the ownership lifecycle.



### Unmatched Price/Performance Value

Composabl defines its price/performance value through its commitment to continuous improvement, customer-centric updates, and integration of cutting-edge AI technologies, all while maintaining a flexible and accessible pricing structure.

Composabl's licensing model, which combines a no-code user interface and Python software development kit access, offers significant value for engineers at various skill levels, allowing them to develop complex

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**- Samantha Fisher**  
**Best Practices Research Analyst**

agents without extensive coding expertise. This approach democratizes AI development, enabling users to leverage existing data, algorithms, and models without prohibitive costs. Its SaaS-like, seat-based pricing structure accommodates the specific number of seats and agent deployments each organization needs based on their use cases and team structure., providing flexibility for organizations with diverse needs. This model aligns with industry standards, ensuring businesses receive high-quality solutions without unexpected expenses. Additionally,

Composabl focuses on high-value decisions and complex goal attainment rather than simple task completion, maximizing the return on investment for its users.

The company maintains a highly responsive approach to product upgrades, with a continuous feedback loop between its customers and the development team. Customer input and advances in AI technologies are the core drivers for the company's regular updates. Composabl is already in active use by customers, and their experiences directly shape its evolution. This iterative process ensures that enhancements are frequent and tailored to meet users' real-world needs. Moreover, Composabl's LLM integration further reflects its commitment to maintaining a cutting-edge platform, enabling more intuitive user interactions through copilot assistants, helping users understand and optimize agent behavior.

Beyond addressing current user needs, Composabl positions itself as a leader in AI by incorporating forward-looking technologies such as multi-agent systems and quantum algorithms. The platform's multi-agent capability allows users to create sophisticated networks of collaborating agents, significantly enhancing its power and adaptability for complex tasks. The ability to integrate any decision-making algorithms or ML model expands the platform's flexibility and applicability across various industries.

By combining an agile, user-informed update process with cutting-edge AI innovations, Composabl ensures that its platform remains highly performant and adaptable, delivering exceptional value for its users in cost and functionality.

### *A Promising Outlook for 2024 and Beyond*

Composabl establishes itself as a significant player in the industrial AI landscape, bolstered by its strong brand equity, promising financial performance, and clear growth trajectory. The company's brand is gaining recognition, particularly following its successful seed funding round led by Momenta venture capitalists in April 2024, where it raised \$4.25 million, with notable support from Rockwell Automation.<sup>1</sup> Backing from a strong leader in autonomous AI underscores the credibility and innovative potential of Composabl's approach in the industrial sector. The collaboration with four Fortune 500 clients, including one that successfully deployed real agents in a factory setting, highlights its technology's practical applicability and transformative potential. These endorsements are crucial in building brand equity, signaling trust and reliability to potential customers.

Despite economic headwinds, such as tighter budgets and cautious procurement strategies in the larger industrial landscape, Composabl is experiencing robust demand for its solutions, evidenced by the fact that 75% of leads come from inbound inquiries.<sup>2</sup> This level of interest indicates a strong market appetite for innovative methodologies that can enhance operational efficiency. As skepticism grows around the real-world applicability of GenAI, the company is well-positioned as a viable alternative by delivering concrete, actionable agents. This adaptability to market needs is vital for maintaining strong financial performance and attracting ongoing investment.

Composabl strategically centers its growth plans on forging key technology partnerships that enhance its platform's capabilities and market reach. The company aims to streamline data access for training agents by collaborating with organizations that manage industrial data, enabling seamless historical data transfer into its platform. This capability simplifies the development and refinement of intelligent agents. Additionally, by establishing partnerships with providers of pre-trained models and algorithms, Composabl is creating a marketplace within its ecosystem. This approach will allow customers to access a diverse range of optimization and ML models, enhancing the platform's versatility and appeal.

Finally, building relationships with major control layer providers like Rockwell Automation is essential for enabling seamless agent deployment into existing enterprise applications. This interconnected strategy enhances the platform's "stickiness," making it more integral to customers' operations, positioning Composabl as a pivotal player in industrial automation.

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<sup>1</sup> "Composabl Launches Breakthrough No-Code UI Platform for Industrial Strength Autonomous Agents and Raises \$4.25M." *Composabl*. Press release. 7 May 2024. Web. [https://cdn.prod.website-files.com/65973bba7be64ecd9a0c2ee8/663a80cc7e799ef6091315fe\\_Press%20Release%20Draft\\_%20Composabl%20Series%20Seed.pdf](https://cdn.prod.website-files.com/65973bba7be64ecd9a0c2ee8/663a80cc7e799ef6091315fe_Press%20Release%20Draft_%20Composabl%20Series%20Seed.pdf) Accessed 23 September 2024.

<sup>2</sup> "Frost & Sullivan Discussion with Composabl." Recording. 17 September 2024.

## Conclusion

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Novel solutions that leverage innovative tools, such as artificial intelligence (AI) and machine learning (ML), are transforming the technological landscape. Specifically, the rise in autonomous AI represents a critical evolution. However, the industry struggles with integrating legacy systems, managing complex environments, and ensuring safety. Moreover, regulatory hurdles, cybersecurity risks, and high costs also impede adoption.

Overall, Composabl addresses these unmet needs with a strong leadership focus that incorporates customer-centric strategies and exemplifies best practice implementation. The company's industrial automation AI agents are ushering in a new era in industrial automation. By empowering engineers to create intelligent, adaptable agents without extensive coding, the company democratizes AI in the industrial space and paves the way for unprecedented operational efficiency. Moreover, its platform integrates ML, reinforcement learning, and large language models to develop intelligent agents for real-time decision-making. By combining advanced AI with deep industry knowledge, Composabl aims to lead in industrial automation and operational efficiency.

Composabl earns Frost & Sullivan's 2024 Global Company of the Year Award for its strong overall performance in the autonomous AI market.



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

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Frost & Sullivan's Company of the Year Award is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

### Best Practices Award Analysis

For the Company of the Year Award, 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 by a robust solution development process

**Visionary Scenarios Through Mega Trends:** Long-range, macro-level scenarios are incorporated into the innovation strategy through the use of Mega Trends, thereby enabling first-to-market solutions and new growth opportunities

**Leadership Focus:** Company focuses on building a leadership position in core markets and on creating stiff barriers to entry for new competitors

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

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

#### *Customer Impact*

**Price/Performance Value:** Products or services provide the best value for the price compared to similar market offerings

**Customer Purchase Experience:** Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

**Customer Ownership Experience:** Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

**Customer Service Experience:** Customer service is accessible, fast, stress-free, and high quality

**Brand Equity:** Customers perceive the brand positively and exhibit high brand loyalty

## 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 Engine™

Frost & Sullivan's proprietary model to systematically create ongoing growth opportunities and strategies for our clients is fuelled 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:

- **Mega Trend (MT)**
- **Business Model (BM)**
- **Technology (TE)**
- **Industries (IN)**
- **Customer (CU)**
- **Geographies (GE)**

