Synera

2025 TRANSFORMATIONAL INNOVATION LEADER

Accelerating Innovation to Zero Across the Global Ecosystem

RECOGNIZED FOR BEST PRACTICES IN THE GLOBAL AI AGENTS FOR ENGINEERING 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. Synera excels in many of the criteria in the AI agents for engineering space.

Synera: Engineering-first, Open, and Transformative

Founded in 2018 and headquartered in Bremen, Germany, Synera offers a unique and transformative artificial intelligence (AI) agent platform for automation in engineering. The company redefines the role of skilled engineers and helps them focus on complex problems by streamlining manual, repetitive tasks and enabling fast, effective product development.

Trusted by more than 50 companies, including industry leaders (e.g., Volkswagen, Hyundai, EDAG, Brose, STIHL, Miele, Airbus, and NASA), Synera demonstrates broad applicability across automotive, aviation, aerospace, and advanced manufacturing. By pairing low-code automation with collaborative AI, the company positions itself at the forefront of engineering digitalization, setting new benchmarks for productivity, scalability, and innovation in product research and development (R&D).

Connected digital engineering platform

Synera's open ecosystem features over 1,000[1] built-in nodes—for computer-aided design (CAD), finite element (FE) analysis, optimization, reporting, and meshing—supporting seamless integration with

[1] https://www.synera.io/platform

existing computer-aided technologies (CAx) and productivity tools. This sets Synera apart in the industry, empowering engineers to automate entire product development processes through a single platform.

It enables organizations to scale automation without disrupting or replacing established workflows and tool stacks. Through its Connected Engineering methodology, Synera unifies stand-alone tools and siloed software into an automated ecosystem that enhances collaboration, removes manual chokepoints, and expands engineering capacity around the clock—all without a proportional cost increase. Synera implements a proactive approach by closely monitoring industry trends and shaping its solutions around engineering teams' most pressing challenges: talent shortages, global competitiveness, high productivity pressures, AI disruption risks, and expertise bottlenecks. The company has also identified growth restraints in the global automotive industry, with Europe facing the heaviest pressure.

> *"Synera's transformational innovation does not lie in simply improving existing tools but in reimagining engineering as an AI-native discipline where human creativity is amplified by autonomous digital teammates, changing how products are conceived, developed, and commercialized."*
>
> ***- Karthik Sundaram, Research Director, Industrial***

China Speed, the United States tariffs, and international market dynamics are contributing to an industry crisis. When automotive original equipment manufacturers (OEMs) experience reduced sales, their suppliers (often operating on thin margins) face declining orders that threaten business continuity unless they adopt innovative solutions. Furthermore, traditional engineering scaling is linear with headcount, driving up costs. Overreliance on individual experts leads to bottlenecks, with critical knowledge often staying with individuals, posing significant risks when these experts leave the workforce. Demographic shifts, including senior experts retiring, further intensify these constraints.

Synera Helps Engineers Build and Deploy AI Agents

To address these gaps, the company introduced its AI agents that think, decide, and execute like human experts, turning engineering teams into dynamic digital workforces. These digital coworkers augment engineers' functionality and break the cost-scale barrier.

Synera's AI agents integrate two capabilities:

1. Natural language communication and reasoning powered by a large language model, and
2. The ability to interact with any data through engineering tools.

This combination helps engineers tackle non-deterministic, ambiguous tasks that traditional automation cannot handle. Synera's AI agents offer 24/7 support, enabling teams to speed up R&D. They also run complex costing tasks (e.g., retrieving cost information for request for quotation or Design to Cost processes) that typically require multiple experts' input. By teaming up without friction, the agents remove communication bottlenecks and deliver results within minutes.

The company further differentiates itself in the AI-powered engineering automation space by addressing a key industry limitation—the fragmentation and rigidity of traditional scripting and point-to-point AI integrations. Instead of confining automation to isolated workflows, Synera harnesses its extensive

ecosystem of connectors that smoothly integrate with a wide range of engineering tools from vendors (like Siemens, Autodesk, and Hexagon). This approach allows automation to permeate customers' entire engineering infrastructure, empowering AI agents to understand and process engineering data in its native formats across users' full toolchain.

Synera's AI agent solution deploys on Amazon Web Services and Azure, facilitating enterprises with the flexibility, stability, and security necessary to embed automation at scale. The technology helps organizations achieve faster time-to-market, lower costs, higher productivity, and enhanced R&D operations, bolstering the company's competitive advantage.

Frost & Sullivan recognizes that Synera shows how AI can move beyond simple automation to become a true partner in engineering, creating unmatched value where other technologies fall short. The company sets a benchmark for automation that is seamless, adaptive, and focused on enriching human expertise rather than replacing it.

First-Mover Advantage in AI-Driven Engineering

Synera's platform reflects first-mover advantage and best practices in AI-driven engineering digitalization, lowering barriers to automation while extending functionality across the full design-to-simulation spectrum. The company strengthens this position by continuously evolving its technology in tandem with AI advancements and strategically investing in top-tier AI experts. It also co-develops features with customers, ensuring enterprise-grade fit and better alignment with customer pain points.

At the core of Synera's technology is a visual low-code language purpose-built for engineers. Alongside automating recurring tasks, the platform includes standardized visual language for all engineering work in an intuitive node editor and transparent process documentation to strengthen intellectual property retention. Real-time three-dimensional (3D) visualization allows engineers to monitor progress and view deliverables at any stage, overcoming the limitations of conventional scripting tools. Synera's integrated 3D viewer provides full visibility into automated processes.

Synera Agentic AI Empowers Engineers, Not Only Workflow Automation

The company extends automation beyond its core functionality by giving engineers the flexibility to build custom nodes and reusable templates. For more advanced requirements, customers can add Python scripts through the platform's editor. Alongside Python, Synera supports C#, MATLAB, and Tool Command Language scripts for computationally heavy workloads and customized pre- and post-processing of simulation setups.

Synera has built its automation editor with a strong focus on usability. Its visual, node-based interface lowers the barriers to engineering automation, helping engineers design and automate workflows without the complexity of coding. The company's game-changing technology lets engineers remotely control industry-leading CAD applications (e.g., NX, and SolidWorks) to generate, modify, and optimize geometries without manual intervention. Synera's portfolio entails six CAD tools, 32 imports, and 16 export formats, ensuring broad compatibility. The platform also turns geometries into FE meshes, assigns

load cases, and runs the resulting FE models with gold-standard solvers (like Hexagon, Hyperworks, ANSYS, and Abaqus)—supported by six solvers, 16 imports, and five export formats.[2]

Beyond simulation, Synera minimizes errors and saves time by processing result data, generating plots and screenshots, and consolidating them into reports. The platform supports various formats, including text files, images, comma-separated values, JavaScript Object Notation, Markdown, Excel, Word, and PowerPoint. In addition, the platform integrates with any representational state transfer application programming interface, enabling users to extend automation into tasks such as email notifications and leverage the latest AI tools. Synera's open ecosystem encompasses over 70 partner tools, all accessible through a single subscription model.[3]

Multi-Agent Capabilities Scale Teams Without Scaling Costs

Multi-agent systems (MAS) add to Synera's competitive edge, with each AI agent specializing in a specific engineering domain. The company simplifies deployment and eliminates the load of framework-heavy programming. Agentic systems operate through a chat interface for easy and safe rollout.

Unlike competitors who bolt AI onto existing CAD and computer-aided engineering tools, Synera has built the foundational infrastructure layer on top of its low-code environment for AI-powered engineering. This approach helps the company address customer challenges more effectively while continuing to build on the proven results of its platform. By helping engineers capture expertise in reusable workflows that AI agents can execute, the platform creates a self-reinforcing ecosystem where each workflow becomes a tool for future automation.

To boost technology adoption, Synera facilitates a flexible, token-based license system that eliminates the complexity of fragmented third-party licenses. Organizations draw tokens from a centralized token pool to access the full suite of nodes (built-in and partner add-ins).

Synera Platform Partner Ecosystem

Furthermore, CAx tool providers can partner with the company to expand their distribution platform and customer base with OEMs and engineering service providers while benefiting from Synera's established brand image and marketing efforts. The company enhances its value proposition by allowing unlimited users within an organization to run Synera automations through a user-friendly web interface. Additionally, automation experts can host their engineering workflows (accessible through a link) on an on-premise Synera Run server. Engineers can also upload input data, inspect and visualize results in 3D, and generate relevant data and reports, improving collaboration, consistency, and efficiency across teams.

The company has introduced several industry firsts—visual programming for engineering automation, MAS collaboration for technical workflows, and seamless integration across the complete CAx toolchain.

[2] https://www.synera.io/platform
[3] Frost & Sullivan Interview with Synera (September 2025)

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>
> ***- Iqra Azam,***
> ***Best Practices Research Analyst***

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Proven Transformational Impact Validates the ROI of Synera

Synera demonstrates technological leadership through measurable improvements in engineering efficiency, product performance, and cost savings, with customers achieving a return on investment (ROI) within 12 months. The platform consistently delivers outstanding results across multiple use cases. For example, Volkswagen achieved a 74% weight reduction for its Golf convertibles and 66% fewer parts for the A-pillar assembly through Synera's visual programming tool. EDAG automated FE simulations with Synera, cutting down the time spent by 95%. Moreover, Brose reduced production costs by 20% through process automation with Synera.[4]

Leading OEMs strategically integrate Synera to scale innovation. For instance, the BMW Group (BMW) optimizes its additive manufacturing processes through the company's process automation software, improving the design and use of its 3D-printed, customized robot grippers. With the company's capabilities, BMW extended robot operating life, reduced production time and costs, and lowered carbon dioxide emissions by 60%.[5]

Similarly, Synera's visual programming transforms Hyundai's bionic lightweight design process by merging connected engineering with additive manufacturing, delivering 47% weight reduction, 80% shorter development time, 20% performance improvement, and optimized material use.[6] Additionally, MAN Truck & Bus harnesses Synera to explore countless axle concepts, focusing on handling different passenger loads without failure. Notably, the platform helped the manufacturer cut down development time by 50%.[7]

Engineering service providers also amplify their operations through Synera. For instance, ARRK Engineering (ARRK) implements Synera to boost digitalization and automation of complex development processes, minimizing manual efforts, shortening project timelines, and magnifying ARRK's market responsiveness. RLE International uses Synera's automated FE analysis workflows to help CAD designers perform simulations and design studies independently, achieving 650% ROI within 12 months, increasing CAD team utilization by 30%, and shortening the project timeline by 20%.[8]

[4] Product Demo Presentation (Courtesy of Synera, September 2025)
[5] https://www.synera.io/extended-case-studies/bmw-group-enhances-3d-printed-gripper-design
[6] https://www.synera.io/extended-case-studies/revolutionizing-bionic-design-process-hyundai-b-pillar
[7] https://www.synera.io/review
[8] https://www.synera.io/extended-case-studies/rle-leap-towards-efficient-product-development

Customer testimonials also echo Synera's technological superiority:

"What fascinates me about this software solution is that we are breaking completely new ground - away from manual engineering and towards true computer-aided engineering."[9]

-Matthias Radny, Head of Digital Design Technology at Premium Aerotec (Airbus)

Synera's robust market potential is reinforced by $18.1 million[10] in total funding, including a €14.5 million[11] Series A led by Spark Capital with participation from BMW i Ventures, Cherry Ventures, UVC Partners, and Venture Stars. Having the support of these tier-1 venture capitalists highlights institutional confidence in the company's potential and technology in the rapidly shifting AI agents industry.

International expansion to the U.S.

As part of its go-to-market strategy, in August 2025, Synera opened its United States (US) headquarters in Boston to scale talent and customer acquisition. This development enables quicker response times with local resources and expertise. Geographically, Synera is focusing on growth in Europe and the US with plans to expand into the Asia-Pacific region over the next two to five years.

Frost & Sullivan acknowledges that Synera's upward trajectory reflects the qualities of a true market disruptor, delivering tangible outcomes, enabling rapid adoption, expanding reach, and earning investor trust.

Conclusion

Harnessing seven years of technological innovation and industry knowledge, Synera stands out for transforming expert engineering tasks into automated workflows that are reusable and scalable, which is the kind of operational maturity enterprises need. The company showcases how purpose-built artificial intelligence (AI) can enhance product engineering without disrupting existing ecosystems. By combining its low-code platform with intelligent AI agents, the company automates repetitive tasks and redefines the engineer's role, shifting focus from execution to innovation. Synera's ability to integrate seamlessly with existing toolchains while delivering rapid return on investment within the first year bolsters its competitive edge.

Synera's proven impact across many use cases demonstrates its technological versatility and capacity to solve systemic challenges in global industries under pressure. Backing from major investors further validates Synera's market credibility and future growth potential, while geographic expansion strengthens access to talent, customers, and capital.

With its strong overall performance, Synera earns Frost & Sullivan's 2025 Global Transformational Innovation Leadership Recognition in the AI agents for engineering industry.

[9] https://www.synera.io/review
[10] https://tracxn.com/d/companies/synera/__3Dcl2VfxLzu8U-V9k8VNKkdy5POjNW2WHM0M9Kw6rM8#about-the-company
[11] https://www.synera.io/news/series-a-funding

What You Need to Know about the Transformational Innovation Leadership Recognition

Frost & Sullivan's Transformational 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 Transformational Innovation Leadership Recognition, Frost & Sullivan analysts independently evaluated the criteria listed below.

Transformational Innovation

Market Disruption: Innovative new solutions have a genuine potential to disrupt the market, render current solutions obsolete, and shake up competition

Competitive Differentiation: Solutions or products articulate and display unique competitive advantages

Market Gaps: Solution satisfies the needs and opportunities that exist between customers' desired outcomes and their current market solutions

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

Passionate Persistence: Tenacity enables the pursuit and achievement of seemingly insurmountable industry obstacles

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

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 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)