FROST & SULLIVAN

2024 COMPETITIVE STRATEGY LEADER

IN THE GLOBAL APPLICATION SECURITY POSTURE MANAGEMENT INDUSTRY

Checkmarx

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. Checkmarx excels in many of the criteria in the application security posture management space.

Market Trends and Challenges in Application Security Posture Management

The application security posture management (ASPM) market is evolving rapidly as software development complexities increase and cloud technologies become more prevalent. With more businesses adopting cloud-first strategies, the demand for innovative security solutions rises. As of 2023, organizations host 56% of their applications in cloud environments, with approximately 23% of companies projected to migrate most their legacy applications to the cloud by 2025.[1] This shift demonstrates the need for effective application security measures that address cloud-native architectures' unique vulnerabilities while protecting sensitive data and ensuring compliance with regulatory standards.

The complexity of modern software development stems from several factors, including the increased use of applications in multi-cloud environments, the integration of artificial intelligence (AI)-generated code, and the siloed deployment of various application security tools. These complications make it difficult for enterprises to acquire consistent visibility and control over their security posture. Maintaining unified visibility into vulnerability assessment, prioritization, and remediation throughout the software development lifecycle (SDLC) is also becoming more difficult. As applications remain primary targets for cyberattacks, businesses are compelled to focus on application risk remediation, prioritizing the resolution of vulnerabilities that pose the greatest risk to their operations.

[1] Application Security Posture Management (ASPM) Sector, Global, 2024–2029 (Frost & Sullivan, September 2024)

The adoption of developer security operations (DevSecOps) approaches is becoming more common as a means of navigating these challenges effectively, emphasizing integration of security within the development process. ASPM solutions play a critical role in providing visibility into application vulnerabilities and facilitating a proactive stance on security throughout the SDLC. Integrating runtime context into ASPM solutions is a developing trend in this field, allowing enterprises to gain a more comprehensive view of their security posture from development and runtime environments. Furthermore, the quality and depth of integration between ASPM platforms and third-party tools are crucial for ensuring data standardization, accuracy, and quality of scan results. Relying on various security tools often causes excessive alerts, complicating issue prioritization and remediation.

"[…] Frost & Sullivan acknowledges Checkmarx's position as a leader that continuously meets customer needs and industry trends, highlighting its commitment to innovation and excellence in application security solutions. Through its continuous proactive updates, the company equips organizations with the necessary tools to navigate future complexities and challenges effectively."

- Ain Sarah Aishah
Best Practices Research Analyst

Regional factors shape the ASPM market further and influence its adoption. In North America, compliance with strict local and international regulatory frameworks drives organizations to prioritize risk management, particularly in sectors with established cybersecurity protocols. The Asia Pacific region has seen a surge in demand for robust security solutions due to rapid digital transformation and cloud implementation, especially in countries like China, India, and Japan. In contrast, economic challenges and cybersecurity policies in Latin America have decelerated ASPM adoption, with more stable countries like Brazil and Mexico leading the region. Western Europe benefits from regulatory pressures and greater economic capacity, resulting in higher adoption rates. Meanwhile, slower cloud technology implementation in certain countries, such as France, necessitates hybrid security solutions that support cloud and on-premises applications. The Middle East and Africa are advancing gradually, driven by new regulations and an increasing focus on risk management.[2]

Looking ahead, the ASPM market is poised for significant growth, with a predicted compound annual growth rate of 30.1% from 2024 to 2029.[3] As organizations continue to emphasize a developer-first approach, there is a rising expectation for ASPM vendors to consolidate various application security tools into a single, unified platform. Key features that customers prioritize include risk-based prioritization, user-friendly interfaces, and continuous monitoring to ensure compliance with evolving regulatory landscapes.

As the industry continues to evolve, organizations must navigate various vendor offerings and different approaches to application security. Checkmarx's commitment to innovation and customer-centric solutions positions it as a leading player, helping organizations manage their security posture effectively in an increasingly complex digital setting.

[2] Discussion Guide Written Response (Checkmarx, August 2024)

[3] Application Security Posture Management (ASPM) Sector, Global, 2024–2029 (Frost & Sullivan, September 2024)

Checkmarx: Pioneering Application Security Posture Management

Founded in 2006 and headquartered in New Jersey, United States, Checkmarx is a trailblazer with its innovative Checkmarx One platform. The platform embeds ASPM to address the security challenges faced by modern enterprises. As organizations transition to digital-first models, application security plays an important role in protecting data, maintaining business continuity, and supporting digital transformation goals. Checkmarx One integrates security throughout the entire SDLC, providing scalable and comprehensive solutions to meet the increasing complexity of security needs. In 2022, Frost & Sullivan applauded Checkmarx's exceptional business performance and remains impressed with the company's strong vision to achieve continued growth.

> "*Checkmarx One definitely checks all my boxes from a security standpoint and has a great interface that's engaging and easy to use. Some of the solutions we considered were more complicated. With Checkmarx One, it's easy to get right to the problem with little to no learning curve*."[4]
>
> - Joel Godbout, Cybersecurity and Networking Manager at PCL Construction

PCL Construction's use of Checkmarx One serves as an example of the platform's performance in practical settings. PCL strengthens its security posture by automating scans across 4.4 million lines of code weekly for more than 21 applications.[5] This enables the company to detect and remediate flaws efficiently. By integrating security at every stage of the SDLC, PCL addresses potential vulnerabilities early, automates scans, and reduces manual intervention, demonstrating Checkmarx One's value.

Checkmarx One includes ASPM as a built-in capability across all tiers, which has led to significant adoption globally. As of 2023, the platform has acquired over 504 customers.[6] Its risk-based prioritization and advanced correlation features enable organizations to focus on critical vulnerabilities, reducing alert noise and improving remediation efforts. While more than 1,700 customers continue to migrate to the platform, Checkmarx expects the number to grow.[7]

Use Cases[8]

Checkmarx serves various industries, providing solutions to common challenges in application security such as overwhelming alert volumes, difficulty prioritizing vulnerabilities, and issues with developers. One of Checkmarx One's primary use cases is code-to-cloud visibility, enabling businesses to monitor and manage vulnerabilities throughout the SDLC. The platform consolidates security data into a single interface, simplifying security management and reducing complexity.

Additionally, Checkmarx's correlation and prioritization features reduce noise alerts, allowing security teams to focus on addressing the most critical vulnerabilities. This ensures that businesses optimize their resources, even with a shortage of security personnel or high alert levels.

---

[4] https://checkmarx.com/company/about-checkmarx/#customers

[5] https://checkmarx.com/case-study-highlights-pcl-construction/

[6] Discussion Guide Written Response (Checkmarx, August 2024)

[7] Ibid.

[8] Ibid.

Another important use case involves connecting security vulnerabilities to business risks. Organizations can gain a better understanding of the impact of security problems on their overall company performance by linking technical weaknesses to operational risks. This capability improves security posture and provides a framework for tracking progress in reducing risks over time.

These use cases underscore Checkmarx's dedication to addressing the challenges of modern application security and providing customers with the necessary tools to navigate a developing industry securely.

Enhancing Application Security with Checkmarx One

Checkmarx One stands out in the market by leveraging innovative correlation capabilities powered by technologies such as Fusion (introduced in 2022). This feature connects findings from various security tools, including Static Application Security Testing (SAST) and Software Composition Analysis (SCA), to detect issues in open-source libraries that impact codes. By correlating the results, remediation efforts focus on critical threats rather than all vulnerabilities, substantially improving efficiency and security outcomes. The platform's 2023 update includes the Application Risk Management feature which enhances this ability further. This capability improves how organizations handle vulnerabilities, enabling them to allocate resources better.

> *"With its seamless integrations, developer-first approach, and proven metrics, Frost & Sullivan recognizes Checkmarx as a standout player in the market. Its comprehensive security solution strengthens security outcomes, mitigating business risks while enhancing efficiency."*
>
> ***- Vivien Pua***
> ***Senior Industry Analyst***

Checkmarx's innovation extends to its code-to-cloud visibility, providing comprehensive coverage throughout the application lifecycle. This ability automatically aggregates and organizes security data from development to runtime. The security configuration management integrations enhance early detection further, scanning uncompiled code during check-ins and pull requests, and embedding security into developers' workflows. Moreover, the Cloud Insights tool correlates static analysis data with runtime data from cloud environments (e.g., AWS), allowing businesses to prioritize actively exposed weaknesses.

Additionally, functions such as the Executive Dashboard and Analytics Module enable customers to track and assess their application security programs. These features provide insight into key performance indicators and real-time security data analysis, enhancing decision-making that aligns with the growing industry emphasis on business risk management. Checkmarx ensures its platform remains updated through the introduction of Bring Your Own Results in 2024. This feature integrates third-party findings into Checkmarx One, providing thorough coverage across security environments. By supporting industry-standard formats like Static Analysis Results Interchange Format and Open Cybersecurity Schema Framework, the platform expands to include use cases such as mobile application security and penetration testing. With this solution, customers can consolidate open-source, homegrown, and other application security tools within a single solution.

AI-driven capabilities also play a crucial role in remediation. The AI Security Champion, which includes AI-guided remediation provides developers with human-readable guidance and suggestions, as well as auto-remediation capabilities, generating code directly within the development workflow. The platform's real-

time scanning in Integrated Development Environments (IDE) shifts AppSec, allowing developers to detect vulnerabilities as they write code. Checkmarx GPT integrates these scanning capabilities with generative AI tools like ChatGPT and GitHub Copilot, enabling real-time remediation during development. The AI Query Builder assists security teams further in customizing analysis queries, improving security and development efficiency.

As the ASPM market evolves, Frost & Sullivan acknowledges Checkmarx's position as a leader that continuously meets customer needs and industry trends, highlighting its commitment to innovation and excellence in application security solutions. Through its continuous proactive updates, the company equips organizations with the necessary tools to navigate future complexities and challenges effectively.

Maximizing Value and Efficiency in Application Security

Checkmarx delivers unmatched value by including ASPM as part of its Checkmarx One platform, an approach that contrasts with competitors who often charge separately for similar services. It bundles key security features, such as SAST, SCA, Malicious Package Protection, Container Security, and ASPM, under a scalable pricing model based on the number of contributing developers. This pricing structure maximizes security coverage while delivering a high return on investment, making it a cost-effective choice for organizations seeking robust application security. Its exceptional value is proven further through its ability to reduce the risk of data breaches by 35%, improve developer productivity by up to 50%, and minimize false positives by 50% to 70%.[9]

Expanding its risk management capabilities to include runtime environments and real-time monitoring, Checkmarx integrates with leading cloud-native application protection platforms such as Sysdig and Wiz. By prioritizing vulnerabilities actively exploited in production, its platform enables more efficient remediation efforts, lowering operational overhead and improving security. Through this solution, the company delivers tangible value that impacts the bottom line directly.

Furthermore, the platform's integration with cloud and runtime protection services (e.g., AWS, Sysdig, and Wiz), provides end-to-end security coverage, from code creation to cloud and runtime deployment, helping organizations secure their applications across various environments. This focus on seamless integration positions Checkmarx as a customer-first leader in the ASPM market, strengthening security outcomes while ensuring all parts of an organization's technical environment remain secure.

Checkmarx also emphasizes IDE integration, supporting tools like VS Code, JetBrains, Visual Studio, and Eclipse, enabling developers to identify and fix vulnerabilities within their workflow. This approach prevents delays in the development cycle by enabling real-time vulnerability detection. The Best-Fix Location guides developers to the line of code that resolves multiple vulnerabilities with a single action, optimizing remediation efforts and improving developer efficiency.

Checkmarx's integration of feedback tools streamlines vulnerability management by automating ticket creation, assigning tasks to developers, and tracking progress in real time. By embedding security into the DevSecOps pipeline, its platform allows for faster and more secure application development. The AppSec Program Methodology and Assessment provides tailored recommendations, helping organizations scale

[9] https://info.checkmarx.com/tei-report-2024#form

their security efforts effectively. Backed by world-class technical services and personalized customer support, these solutions drive a seamless process to secure optimal use of the platform, empowering organizations to continuously improve their security posture.

With its seamless integrations, developer-first approach, and proven metrics, Frost & Sullivan recognizes Checkmarx as a standout player in the market. Its comprehensive security solution strengthens security outcomes, mitigating business risks while enhancing efficiency.

Customer-Centric Approach and Financial Growth

Checkmarx's dedication to customer satisfaction is exemplified by its quick deployment process. For instance, PCL Construction's Checkmarx One onboarding took only four hours, showcasing its easy integration into existing workflows. This rapid process offers instant security advantages without disrupting operations. The company's flexible region-specific strategy, coupled with fast employment, ensures that its platform remains relevant and beneficial to customers globally.

Checkmarx also emphasizes long-term customer relationships through continuous support and reliable managed services. This customer-focused approach extends to its Global Partner Program, which empowers partners to grow and retain their own customer bases while addressing the increasing demand for application security testing solutions. By providing partners with essential tools, resources, and incentives, the company strengthens these relationships, fostering loyalty and trust that contribute directly to its success.

"Customers want to consolidate, and we see Checkmarx One as the one integration point which we can lean into and further refine, rather than trying to do that with a disjointed suite of disconnected tools."[10]

- Alex Babar, Vice President, Marketing at Brinqa

As a result of its comprehensive strategic initiatives, Checkmarx experiences exceptional business performance, with projected growth of 15% to 25% in 2024 as more customers transition to Checkmarx One.[11] The platform's holistic, code-to-cloud security approach positions it as a critical solution for businesses navigating complex and evolving security challenges. The company continues to expand its market presence through innovative features and strategic partnerships, strengthening its reputation in the ASPM space.

[10] https://checkmarx.com/company/about-checkmarx/#customers

[11] Discussion Guide Written Response (Checkmarx, August 2024)

Conclusion

Checkmarx demonstrates a strong commitment to continuous innovation, flexibility and a deep understanding of the evolving security environment. Its integrated application security posture management (ASPM) solution, which is implemented throughout all development phases, ensures efficient and optimized security. By embedding security across the software development lifecycle, the platform enables businesses to manage vulnerabilities effectively and streamline remediation. As cloud adoption and digital transformation accelerate, the company's unified approach positions it as a critical partner for businesses seeking robust security solutions. Its comprehensive innovative and customer-centric strategy reinforces Checkmarx One's significance in an era with complex and varied vulnerabilities. Through continuous enhancements, Checkmarx solidifies its position at the forefront, leading the future of secure and efficient application development.

With its strong overall performance, Checkmarx earns Frost & Sullivan's 2024 Global Competitive Strategy Leadership Award in the ASPM industry.

What You Need to Know about the Competitive Strategy Leadership Recognition

Frost & Sullivan's Competitive Strategy Leadership Award recognizes the company with a stand-out approach to achieving top-line growth and a superior customer experience.

Best Practices Award Analysis

For the Competitive Strategy Leadership Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Strategy Innovation

Strategy Effectiveness: Effective strategy balances short-term performance needs with long-term aspirations and overall company vision

Strategy Execution: Company strategy utilizes Best Practices to support consistent and efficient processes

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

Executive Team Alignment: Executive team focuses on staying ahead of key competitors via a unified execution of its organization's mission, vision, and strategy

Stakeholder Integration: Company strategy reflects the needs or circumstances of all industry stakeholders, including competitors, customers, investors, and employees

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™

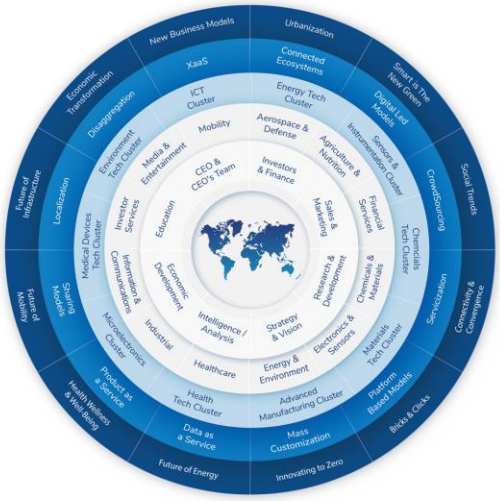
Frost & Sullivan's proprietary model to systematically create ongoing growth opportunities and strategies for our clients is fuelled by the Innovation Generator™.
Learn more.

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:

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