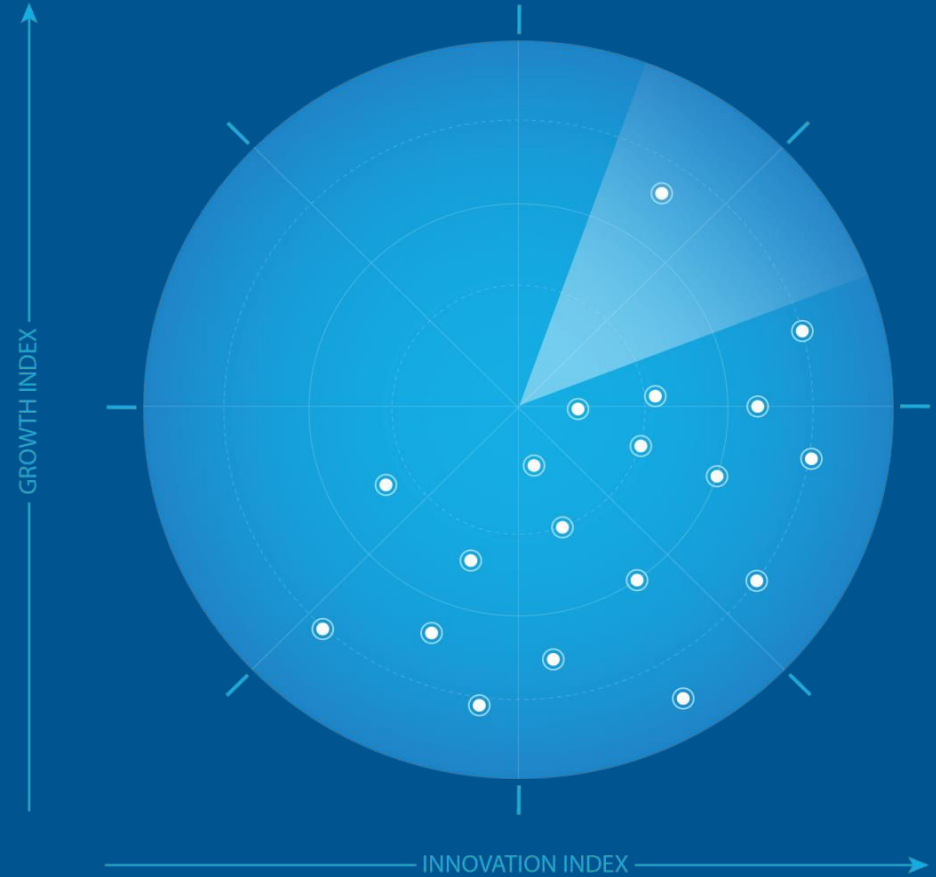


Frost Radar™: Breach and Attack Simulation, 2022

A Benchmarking System
to Spark Companies to
Action – Innovation That
Fuels New Deal Flow and
Growth Pipelines



November 2022

Strategic Imperative and Growth Environment



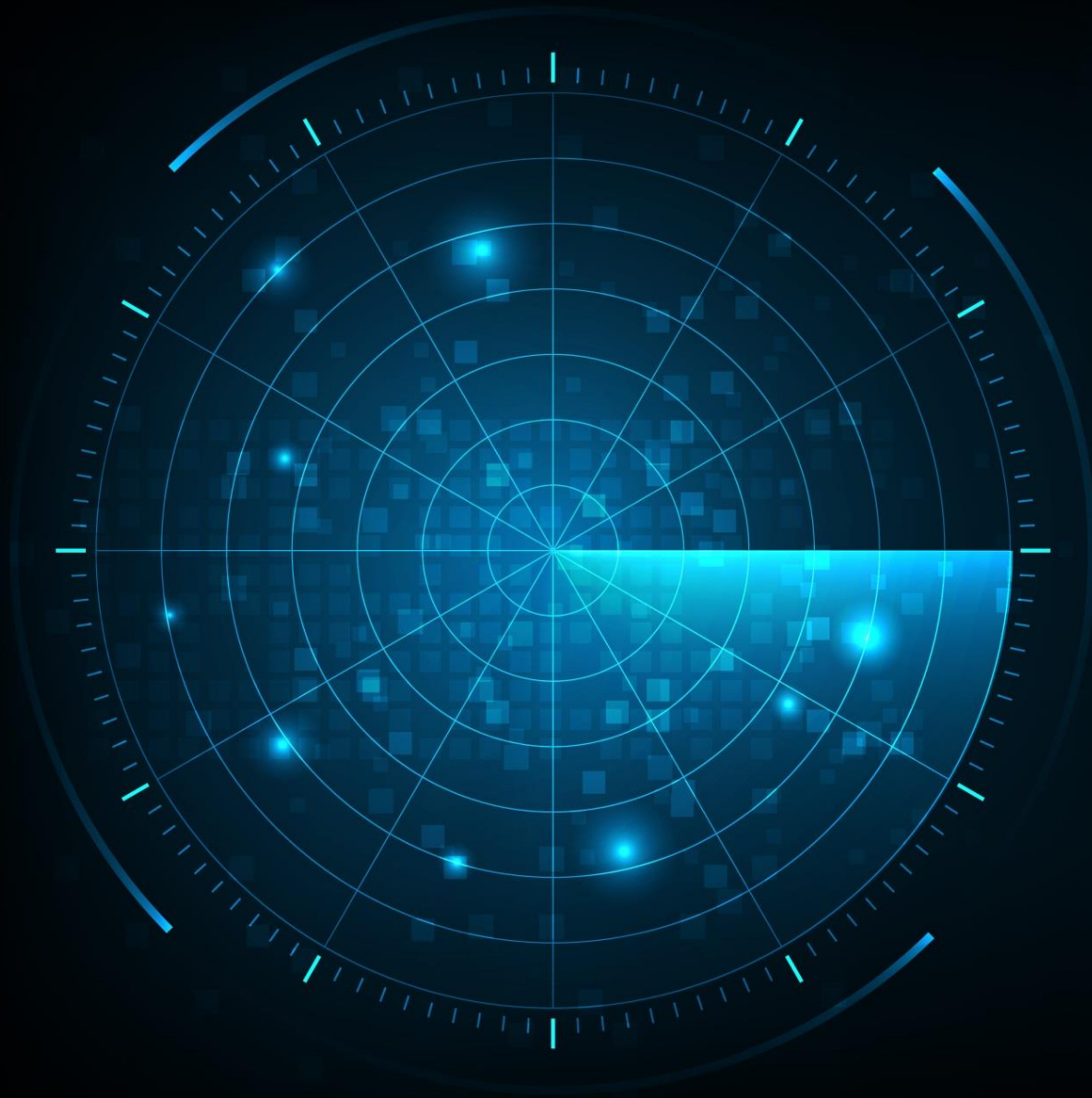
Strategic Imperative

- Enterprise-wide digital transformation initiatives result in more dynamic network environments, making it crucial for businesses to identify security vulnerabilities in real time. The growing volume and frequency of nation-state cyber attacks from global geopolitical tensions pose additional risks to organizations' digital sovereignty. However, existing security technologies provide only a snapshot of security risks in the network and are no longer effective in mitigating fast-evolving threats.
- In recognizing the need to prepare against these threats, businesses demand automated and continuous security testing techniques to stay ahead of cyber adversaries and reduce risk. Breach and attack simulation (BAS) technologies are advanced security tools that pinpoint vulnerabilities by mimicking potential attacks.
- Enterprise digitalization is a fundamental driver for adopting BAS technologies.
- BAS capabilities increasingly find applications in security operations (SecOps) tools such as VM, XDR, EDR, and SOAR. BAS vendors add these capabilities or integrate with SecOps tools to improve the remediation of cybersecurity challenges and ensure smoother workflows.
- Recent partnerships and acquisitions in the BAS industry, including the Randori-IBM acquisition, XM Cyber-Schwarz acquisition, Mastercard-Picus Security partnership, and SafeBreach-PayPal partnership, also indicate the possibility of VM, EDR, XDR, and BAS integrating as a single platform.
- The imminent risk of a global economic recession, rising raw material costs, soaring inflation rates, and talent shortages significantly impact cybersecurity costs and spending.
- The perception of BAS as a nice-to-have tool rather than a necessity combined with higher prices can negatively impact BAS adoption among businesses.

Growth Environment

- The growing volume of cyber threats and their devastating effects on business revenue, productivity, and reputation makes cybersecurity a top management concern. CISOs are tasked to ensure the efficiency and effectiveness of an organization's security architecture and clearly communicate the return on security investments (RoSI) to all stakeholders in the organization.
- Such requirements are prompting CISOs to invest in BAS tools that provide a quantitative measure of security posture in real time. This explains the massive surge in the adoption of BAS tools in 2021, especially in large organizations.
- Frost & Sullivan projects the global BAS market to increase at a CAGR of 38.5% between 2021 and 2026. Demand for BAS tools is forecast to assume a moderate growth rate throughout the forecast period.
- Geopolitical and economic turbulence will likely negatively impact cybersecurity spending as organizations cut budgets across all categories, including IT, cybersecurity, personnel, and operational expenses.
- Competitive pressures from the BAS market and adjacent markets will also have a moderate impact on the growth rate of BAS vendors.

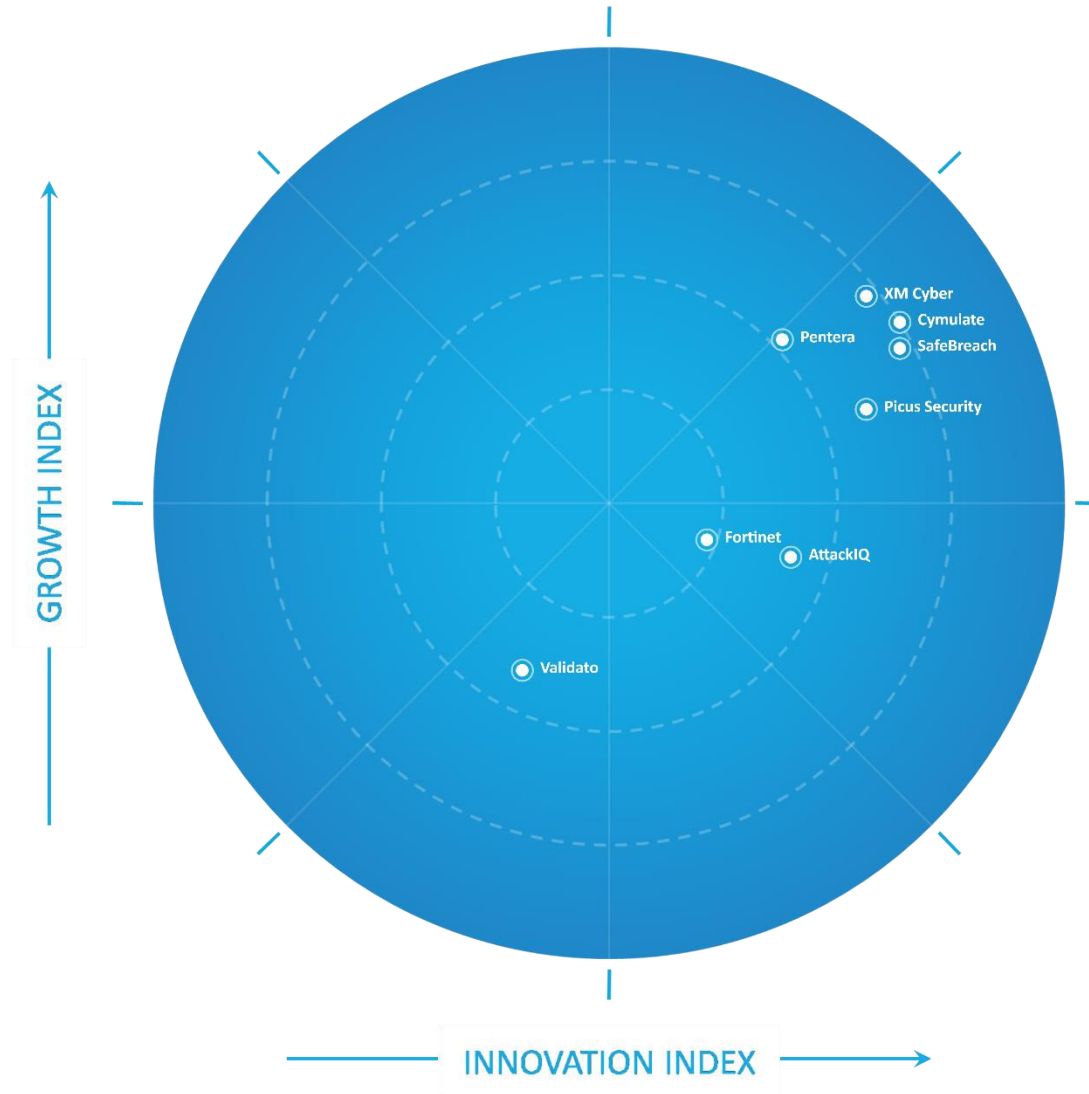
Source: Frost & Sullivan



Frost Radar™

**Global Breach and
Attack Simulation
Market**

Frost Radar™: Global Breach and Attack Simulation Market



Source: Frost & Sullivan

Frost Radar™

Competitive Environment

- In a field of more than 10 global industry participants, Frost & Sullivan independently plotted the top 8 companies in this Frost Radar™ analysis: AttackIQ, Cymulate, Fortinet, Pentera, Picus Security, SafeBreach, Validato, and XMCyber. Each display continuous efforts to grow its presence and innovate in the evolving market.
- The Frost Radar™ is a robust analytical tool that benchmarks BAS companies' innovation focus and growth performance.
- The global BAS market landscape is relatively fragmented, with the top 5 market participants accounting for 86.2% of the global revenue share in 2021. The market positions of leading market participants have changed significantly in the past year.
- XM Cyber, Cymulate, Pentera, and SafeBreach emerged as the top 4 Growth leaders on the Frost Radar™, each scoring a score of 3.9 points or higher on the 5-point scale. BAS providers with high Innovation scores of 4.7 are mainly Cymulate and SafeBreach. Both companies demonstrate a strong focus on building product capabilities that cater to customer needs.
- Pentera surpassed SafeBreach to become the global market leader, accounting for 27.3% of the revenue share in 2021. Despite being a young startup, the company is the only BAS vendor to become a unicorn with \$1.00 billion valuation.
- Cymulate follows in second place and holds 18.9% of the revenue share in the global BAS market. The company is capturing significant mind share by establishing itself as a thought leader in the BAS market.
- In the 2020 global BAS market analysis, Frost & Sullivan estimated SafeBreach's market share at 19.9%. The company maintained its market share in 2021, albeit with a slight dip, accounting for 14.4% of the revenue share. Its strong focus on the North American market is starting to pay off.
- XM Cyber and Picus Security closely contest for the fourth position with minor differences in their market shares. Both companies have moved up two positions compared to the previous year.
- AttackIQ is a notable BAS vendor that provides automated security validation capabilities. The company registers consistent YoY growth and has a strong growth pipeline.
- Validato and Fortinet are new entrants in the global BAS market, each pursuing a niche product value proposition. While Validato positions itself as an affordable BAS vendor for mid-market enterprises, Fortinet addresses the challenges of network and security operations players.

Source: Frost & Sullivan

Cymulate

INNOVATION

- Cymulate tops the Innovation index of the Frost Radar™. The company's vast breadth of BAS use cases that align with customer needs and innovation-centric company culture are key ingredients that distinguish Cymulate from other industry participants.
- The company's industry-leading Extended Security Posture Management (XSPM) platform combines attack-based vulnerability management, purple teaming, attack surface management, and security control validation to support the risk analysis needs of customers.
- As security becomes a business priority, Cymulate is stepping up product development efforts that empower enterprise stakeholders, including top management and business heads, to make risk-informed business decisions without overwhelming security teams or the CISO.

GROWTH

- Cymulate features among the top 5 vendors in the global BAS market in terms of its earnings in 2021. The company also leads the Asia-Pacific BAS market, accounting for 42.9% of the revenue share in 2021.
- The company adopts a multipronged go-to-market strategy that includes aggressive marketing initiatives, such as word-of-mouth marketing to create brand awareness and upsell opportunities, partnerships with distributors and resellers, and strengthening product capabilities. These factors have enabled Cymulate to surpass industry-average growth rates in the past 3 years.
- Cymulate envisions becoming the gold standard for security tools that help CISOs, security analysts, and top management to gain real-time visibility on their organization's security posture and easily translate the findings into action.

FROST PERSPECTIVE

- BAS vendors with a strong focus on innovation that align with customer pain points are well-positioned to maintain a healthy growth momentum over the long term. Cymulate ticks all the boxes in this regard.
- Cymulate should focus its efforts on broadening its footprint in EMEA and North America, which are key markets for BAS solutions.
- Increasing partnerships with MSPs and MSSPs will also help the company capture a larger revenue share among mid-size enterprises.

Source: Frost & Sullivan

Strategic Insights

1

Cloud adoption, the rise in ransomware attacks, and a heightened focus on security from the top management are key drivers for BAS adoption. However, the perceived “need” for BAS tools is low for most organizations in the SME and mid-market enterprise segments.

2

The YoY growth in the global BAS market soared in 2021. Frost & Sullivan expects the global BAS market to record a healthy 38.5% CAGR between 2021 and 2026, generating \$709.2 million in revenue. EMEA region surpassed North America to become the largest market in terms of revenue share in 2021.

3

Automated attack simulations and remediation workflows, insightful reports, and integration with SecOps tools are key innovation focus areas for most BAS vendors. VM and MDR service providers also increasingly partner with BAS vendors to augment detection and response capabilities.

Source: Frost & Sullivan

Frost Radar™ Analytics



Frost Radar™: Benchmarking Future Growth Potential

2 Major Indices, 10 Analytical Ingredients, 1 Platform

VERTICAL AXIS

Growth Index (GI) is a measure of a company's growth performance and track record, along with its ability to develop and execute a fully aligned growth strategy and vision; a robust growth pipeline system; and effective market, competitor, and end-user focused sales and marketing strategies.

GROWTH INDEX ELEMENTS

- **GI1: MARKET SHARE (PREVIOUS 3 YEARS)**
This is a comparison of a company's market share relative to its competitors in a given market space for the previous 3 years.
- **GI2: REVENUE GROWTH (PREVIOUS 3 YEARS)**
This is a look at a company's revenue growth rate for the previous 3 years in the market/industry/category that forms the context for the given Frost Radar™.
- **GI3: GROWTH PIPELINE**
This is an evaluation of the strength and leverage of a company's growth pipeline system to continuously capture, analyze, and prioritize its universe of growth opportunities.
- **GI4: VISION AND STRATEGY**
This is an assessment of how well a company's growth strategy is aligned with its vision. Are the investments that a company is making in new products and markets consistent with the stated vision?
- **GI5: SALES AND MARKETING**
This is a measure of the effectiveness of a company's sales and marketing efforts in helping it drive demand and achieve its growth objectives.

Frost Radar™: Benchmarking Future Growth Potential

2 Major Indices, 10 Analytical Ingredients, 1 Platform

INNOVATION INDEX ELEMENTS

HORIZONTAL AXIS

Innovation Index (II) is a measure of a company's ability to develop products/services/solutions (with a clear understanding of disruptive Mega Trends) that are globally applicable, are able to evolve and expand to serve multiple markets, and are aligned to customers' changing needs.

- **II1: INNOVATION SCALABILITY**

This determines whether an organization's innovations are globally scalable and applicable in both developing and mature markets, and also in adjacent and non-adjacent industry verticals.

- **II2: RESEARCH AND DEVELOPMENT**

This is a measure of the efficacy of a company's R&D strategy, as determined by the size of its R&D investment and how it feeds the innovation pipeline.

- **II3: PRODUCT PORTFOLIO**

This is a measure of a company's product portfolio, focusing on the relative contribution of new products to its annual revenue.

- **II4: MEGA TRENDS LEVERAGE**

This is an assessment of a company's proactive leverage of evolving, long-term opportunities and new business models, as the foundation of its innovation pipeline. An explanation of Mega Trends can be found [here](#).

- **II5: CUSTOMER ALIGNMENT**

This evaluates the applicability of a company's products/services/solutions to current and potential customers, as well as how its innovation strategy is influenced by evolving customer needs.

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