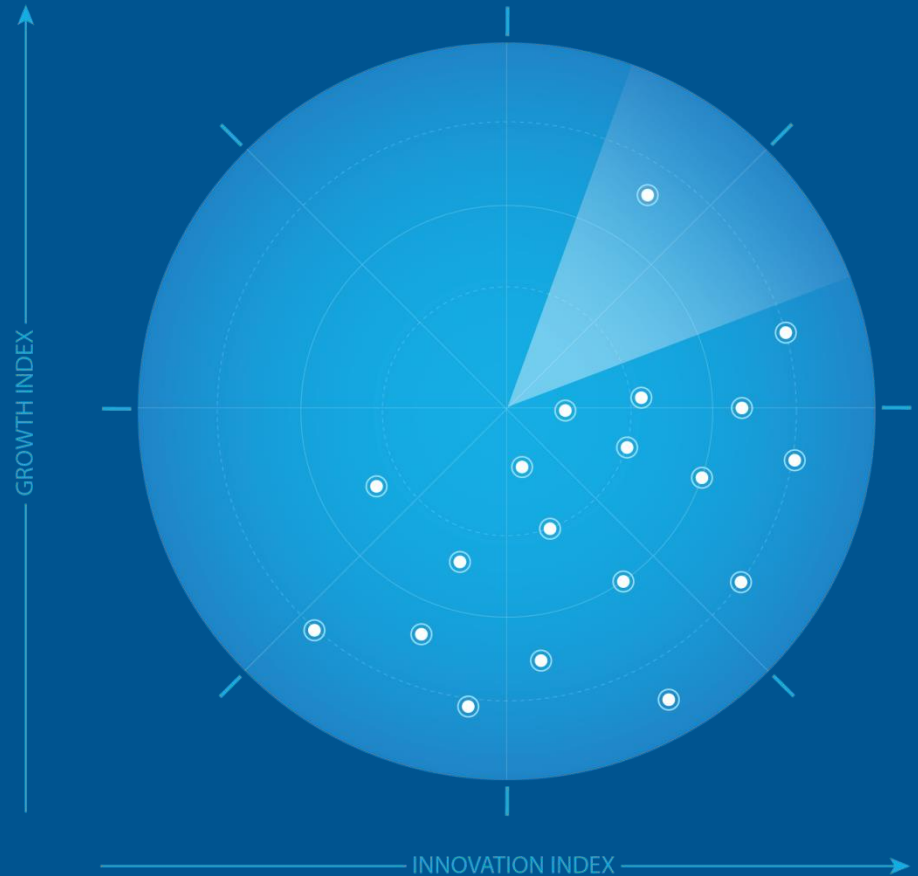# FROST & SULLIVAN

# Frost Radar™: Access Control Solutions, 2022

A Benchmarking System to Spark Companies to Action - Innovation that Fuels New Deal Flow and Growth Pipelines

Global Security Research Team at Frost & Sullivan



GROWTH INDEX

INNOVATION INDEX

K77C-23

July 2022

# Contents

# Contents (continued)

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# Strategic Imperative and Growth Environment

# Strategic Imperative

- Access control systems have always been an organization's first major line of defense against intruders or potential threats into their physical facilities and perimeters. As such, these systems have remained a core tenet of an organization's overall physical security strategy by securing all access points and controlling who is able to move through them.

- Because of the long-standing need for facility protection, many organizations have operated some sort of access control system for years, if not decades. Traditionally, all that these systems required were a power source for an electronic access reader or lock and some hardware token, such as key or fob, that allowed an individual to gain access through their given credentials.

- With digitalization swiftly moving throughout the security ecosystem and shifting many traditional security systems to more digitized models, the access control solutions industry proved to be a slow mover in embracing these trends. While the addition of electronic keycards and access readers did add new digital elements, many access control systems remained as they were before digitalization impacted the industry: closed-loop, reliant on hardware tokens and components for functionality, and little (if any) ability to integrate with a larger security ecosystem or tap into system data held within the access control solution.

Source: Frost & Sullivan

# Strategic Imperative (continued)

- The COVID-19 pandemic had a significant impact on the access control market as many organizations quickly moved to fully remote or hybrid work to comply with lockdowns and other public health policies. It changed the way organizations conducted their business and expanded the definition of an organization's "perimeter," affecting how access control systems must operate to protect both physical and digital access points.

- New technologies also have affected the way access control systems can be used within security operations and overall business processes, and even assist with customer-focused experiences. The perfect storm of new technology capabilities, changing operational models, environmental factors, and shifting views on security technologies has led to a resurgent interest in updated access control solutions and how to completely modernize these systems to work in a more converged security landscape.

Source: Frost & Sullivan

# Growth Environment

- After many years of slower spending growth, the advent of new technologies and integration of more digital, mobile, and biometric capabilities revived the access control solutions industry despite the pandemic. In 2021, spending on access control solutions globally totaled $65.42 billion. Frost & Sullivan projects this to increase to $129.69 billion by 2030, achieving a compound annual growth rate of 7.9%.

- Many organizations want solutions that can help them to modernize their access control system and offer more convenience, system data access, and improved connectivity. Solutions that can build upon existing infrastructure rather than rip and replace the entire system will be in high demand.

- Capabilities or functions that security operations teams will be looking for in a new access control solution include.

  o Easy-to-deploy hardware solutions, such as readers and entry barriers, in addition to management software that provides single- and multi-site operational access and can be integrated within a broader security operation;

  o Flexible system deployment options that allow for on-premises, cloud, or hybrid design and operations;

  o Multiple integration options for access credentials, including hardware tokens, PIN codes, mobile credentials, biometric credentials, or a combination of these;

  o Remote monitoring, connectivity, and system control for security operations, easy on- and off-boarding of users, and the ability to create specified user tiers based on special access privileges; and

  o Legacy integration capabilities, allowing organizations to update and expand their systems rather than completely start over.

Source: Frost & Sullivan

# Growth Environment (continued)

- Vendors seeking to enter the access control solutions market must understand the range of needs that different customer industries have for physical access programs. Cost has always been a significant barrier for many small- and midsized organizations, so the flexible systems that can deploy without significant upfront costs, offer more as-a-service options, and use multiple types of access verification and authentication means will especially be of interest.

- Frost & Sullivan studies related to this independent analysis:

  o Global Access Control Solutions Growth Opportunities

  o Global Demand for Biometrics in Security, Forecast to 2025
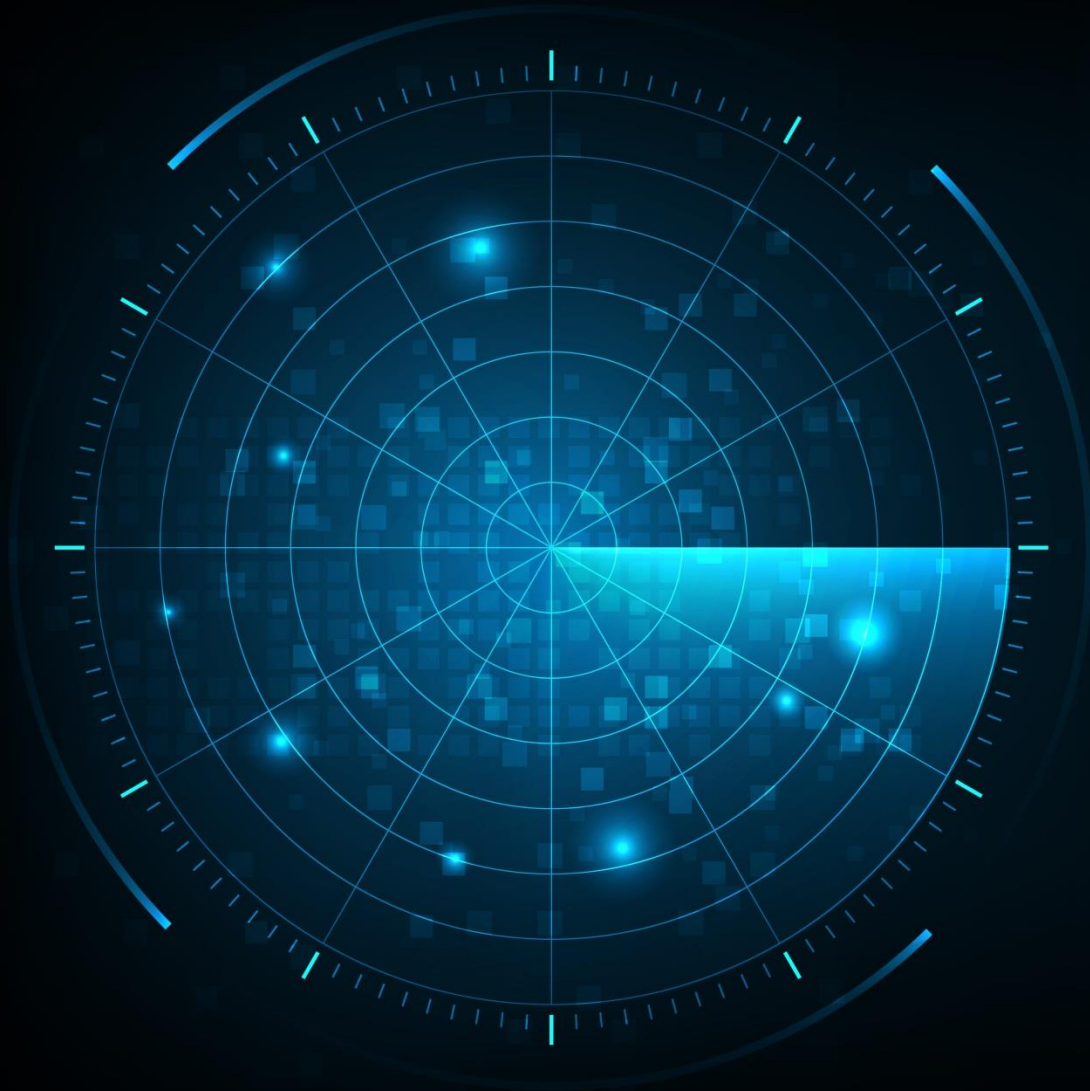
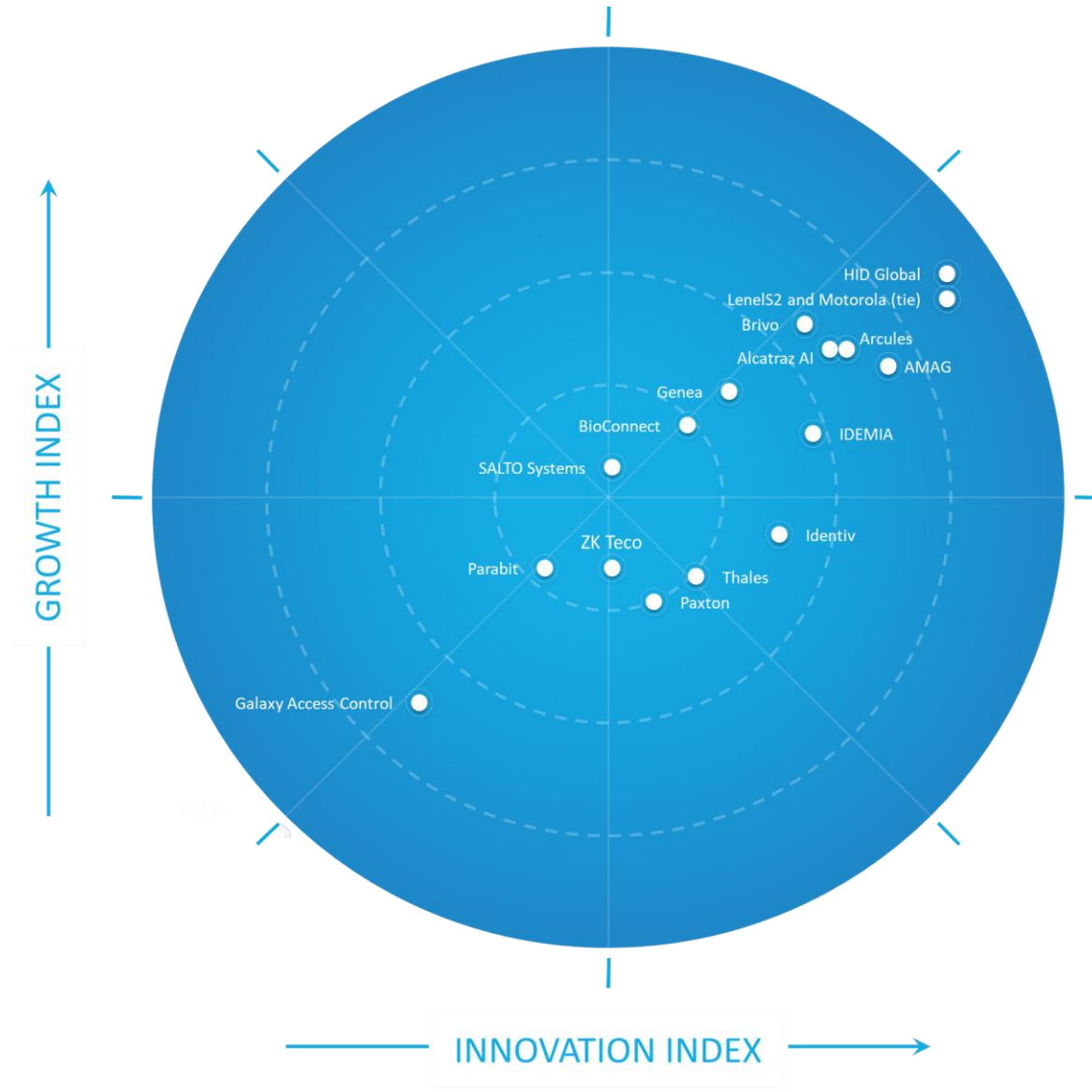# FROST & SULLIVAN

# Frost Radar™

# Access Control Solutions

# Frost Radar™: Access Control Solutions

# Frost Radar™: Competitive Environment

- Because of the proliferation of vendors of access control hardware such as lock-and-key systems, deadbolts, networking switches and controllers, and electronic readers, the access control industry vendor ecosystem can seem vast. However, many of the latest market innovations come as the result of comprehensive access control solutions that offer the hardware mechanisms to secure and monitor entry points and include some type of digital dashboard or platform that enables security teams to have full awareness of the physical environment.

- When looking at the industry from this perspective, 17 vendors stand out as offering solutions that include both the advanced hardware needed to secure physical spaces and the software platforms to offer insight and live awareness. Competitors in this group range from long-standing industry leaders to newer entrants that have claimed market share because of their digital solutions, cloud-native technologies, and rapid embrace of biometric and mobile credentialing methods.

- HID Global earns the top spot for Growth and Innovation leadership. It remains the vendor to chase for customers that are seeking access control solutions for the first time because of its embrace of digital identity and biometric capabilities, though it also maintains long-standing relationships with legacy access control customers that want to modernize their systems to fit the hybrid workplace or create a more integrated security operation that includes access control data points and management.

# Frost Radar™: Competitive Environment (continued)

- In a tie for Innovation leadership, LenelS2 is a legacy vendor that has successfully pivoted to embrace mobile and biometric authentication and digital access capabilities and is assisting legacy access control clients in modernizing their systems.

- Sharing in Innovation leadership, Motorola Solutions is a newer entrant into the access control solutions industry through its acquisition of Openpath in mid-2021. A cloud-native access control system and an embrace of new credentialing methods has enabled Motorola to quickly capture market share and compete for multiple customer groups.

- Beyond the top 3 vendors, Brivo captures a Growth leadership position in this analysis as the result of its service to commercial realty and multitenant customers that sought access control solutions for multiple facilities. It manages high-credential turnover while offering a seamless end-user experience, all at a more affordable price point than traditional access control vendors.

- Scoring well in both Innovation and Growth, Alcatraz AI, AMAG, and Arcules offer incredibly feature-rich, end-to-end access control solutions that can fit multiple use cases. It would be a matter of a few significant customer contracts for these companies to easily challenge any of the current leaders in this analysis.

- Genea and BioConnect are start-up-level vendors that are impressively challenging many entrenched vendors with digital-first, cloud-native offerings that can appeal to customers that previously felt locked out of access control solutions because of high upfront costs.

Source: Frost & Sullivan

# Frost Radar™: Competitive Environment (continued)

- SALTO Systems, IDEMIA, and Thales are established vendors that are currently only offering end-to-end access control solutions for specific use cases. These companies are well-positioned to do more in this industry and can quickly improve their rankings through new project wins and new feature additions to expand their use cases as access control systems rather than just security or authentication.

- Identiv, ZK Teco, Paxton, Parabit, and Galaxy Access Control's rankings reflect how these more legacy vendors are remaining true to their hardware-centric system design, which can dissuade new customers that do not want significant upfront installation costs. While some have introduced access control dashboards and mobile credential capability, their system designs remain hardware-focused and can appear dated to a customer.

FROST & SULLIVAN

# Companies to Action
## Companies to Be Considered First for Investment, Partnerships, or Benchmarking

# Alcatraz AI

## INNOVATION

- With an Innovation score of 4.30, Alcatraz AI is one of the newer start-up companies that is shaking up the access control industry through its Alcatraz Rock solution. Offering customers the ability to integrate new facial biometrics as an entry point authentication measure in addition to what they may already have in place, Alcatraz is able to build upon existing solutions and bring customers into the next phase of access control via integrated biometrics and multi-factor authentication.

- The Rock operates as a stand-alone biometric reader and offers customers multiple new security capabilities, including tailgating detection, a move to multifactor identity authentication, accurate verification via multisensor technology, and autonomous enrollment and enhanced AI algorithms to create a seamless authentication experience.

## GROWTH

- Alcatraz AI has seen impressive year-over-year growth despite the pandemic, earning its 3.90 score for Growth. With customers leaning more toward contactless, multifactor authentication measures, the company was ideally positioned to capture market share during the pandemic.

- The company's more established presence in private sector industries such as commercial enterprise and real estate, retail, and banking showcases the Rock solution's versatility to meet the demands of high-traffic, high-regulation, and public-facing organizations without sacrificing user privacy or overall customer experience.

## FROST PERSPECTIVE

- The Alcatraz Rock solution presents a challenge to the more established access control vendors in the industry that traditionally hold market share through long-term contracts, entrenched hardware, and closed-loop system design. Demonstrations about how the Rock can be used to build upon foundational access control technologies while still taking advantage of cutting-edge technologies will present a compelling customer argument.

- The deep integration of AI into the company's Rock solution and the company's focus on multifactor security coupled with seamless authentication distinguish Alcatraz AI from more entrenched market vendors.

Source: Frost & Sullivan

# AMAG

## INNOVATION

- AMAG's Symmetry portfolio includes access control, business intelligence, mobile, identity management, incident management, command and control, visitor management, and video management capabilities. This comprehensive portfolio earns an impressive 4.65 score for Innovation on the Frost Radar™.

- The rapid release of both business intelligence and mobile capabilities for the Symmetry solution came directly in response to the COVID-19 pandemic and the customer need for comprehensive management and data on their facilities from a hybrid work environment.

- The company's active embrace of mobile credentials and mobile onboarding for access control privileges capitalizes on the digitalization overtaking the industry while also maintaining better real-time awareness of the users within their facilities.

## GROWTH

- Earning a 3.80 score in Growth, AMAG continues to see good year-over-year revenue growth despite potential spending slowdowns as a result of the pandemic.

- AMAG's success in multiple industries including law enforcement, utilities, enterprise, airports, and banking comes from its long-term industry presence and successful pivot from hardware-centric solutions.

- Many of Symmetry's latest solution updates, including mobile credentials and business intelligence, were the result of customer feedback and AMAG's own understanding of the industry's pivot to more data-centric, insight-driven access control offerings.

## FROST PERSPECTIVE

- Remote monitoring remains an upcoming feature for the Symmetry solution; with other top vendors in the access control space already offering this capability, AMAG could lose out on a new project or client without this feature.

- Biometric credentialing is another area where AMAG currently does not offer solution options. While mobile credentials are a high-demand function, without biometric options AMAG's solution can appear incomplete when compared with some competitors that offer these capabilities.

- AMAG's brand recognition remains high because of its long history in the access control market. Emphasis on the company's expertise and ongoing portfolio updates in line with market preferences will be powerful to a potential client.

Source: Frost & Sullivan

# Arcules

## INNOVATION

- Earning its 4.40 score for Innovation on the Frost Radar™, Arcules' Access Control as a Service solution builds upon the company's mission of cloud-based, easily integrated security solutions that power mission-critical operations. The Arcules solution provides integration access control with enabled cloud video, unified security management, and simple configuration capabilities for door access and user scheduling.

- Arcules appeals to customers seeking to implement more converged security operations by allowing more visibility into their entire physical security posture, the setup of automatic workflows and processes (including proactive alerts according to policy), and schedules for specific users or entry points, all while allowing one-click integrations so customers can scale out their platform as their business grows.

## GROWTH

- With an impressive score of 3.90 in Growth, Arcules showcases its ability to compete in the relatively mature access control industry and still reach an untapped customer space. By focusing on small to midsized businesses, retail organizations, and small- to medium-tier airport customers, Arcules provides the technically sophisticated security solution these customers want without significant upfront costs.

- Building upon its cloud foundation, Arcules also provides future scalability for customers in a resource-efficient manner and via open integrations with a multitude of security solution partners across the technology value chain.

## FROST PERSPECTIVE

- Arcules' cloud-based approach to surveillance solutions has already enabled the company to make a name for itself in that industry. The company is excelling at making this same strategy come to pass in the access control industry. Its paired surveillance and access control options will entice organizations that may have felt priced out of some advanced security systems.

- Integrations with biometric authentication and verification vendors should be a key partnership focus for Arcules as it seeks to continue growing its access control customer line. Its open architecture already makes this an easy step for the company to take as mobile and biometric access becomes a core focus for many customers.

Source: Frost & Sullivan

# BioConnect

## INNOVATION

- With an Innovation score of 3.45 for its BioConnect Trust Platform, BioConnect is able to unify all access control systems, biometric readers, mobile authenticators, and smaller-scale access systems into one solution.

- BioConnect is one of the few biometric solution providers that is actively seeking an expansion in the access control solutions space. The company's active role in pushing traditionally hardware-centric industries (such as energy utilities and critical infrastructure) to embrace digital security systems remains a focus of much of its product portfolio planning.

- BioConnect also ensures that technical support remains at the core of its offerings, allowing it to partner closely with customers on their technical needs.

## GROWTH

- While BioConnect's Growth Index score of 3.45 is lower than some access control solution vendors in this analysis, the score is impressive for the company overall because of its core focus on biometric access control, which remains a niche in the broader industry.

- BioConnect's success throughout the pandemic is attributed to the rapid focus shift toward biometric security systems to better manage hybrid access, health and safety, and contact tracing needs.

- BioConnect's broad appeal to customer groups more entrenched in legacy systems, such as utilities, as well as fast-scaling retail or commercial security verticals will enable the company to win additional projects.

## FROST PERSPECTIVE

- BioConnect continues to advocate for the convergence of physical and digital identities through biometric authentication means, a major trend in identity markets. In addition to showcasing how its solutions can modernize and integrate new digital verification capabilities, the company is well-positioned to operate as a bridge between physical and digital identity solutions.

- While BioConnect provides one of the few access control solutions centered on biometric credentials, the company remains a smaller player in the industry. Its partnership network offers plenty of opportunities to provide paired solutions to new customers or to expand existing capabilities. Additional customer wins through this method may be the best route to market.

Source: Frost & Sullivan

# Brivo

| INNOVATION | GROWTH | FROST PERSPECTIVE |
|---|---|---|
| • Brivo's impressive score of 4.15 for Innovation is earned through its innovative approach to access control solutions and its broader identity portfolio. Brivo Access, a truly cloud-based access control solution, is a core piece of Brivo's product portfolio that spans visitor management, smart home access, video integration, and integrated AI and analytics geared toward ensuring secure access. | • Earning a score of 4.05 for Growth, Brivo has witnessed increasing year-over-year revenue growth even during the pandemic. Much of this success came via the Brivo Access launch in 2020 and its ability to capitalize on many of the rising needs for touchless, contactless, and remote access control solutions via a hybrid or cloud-first approach. | • While Brivo is viewed more as a newer entrant in the access control solutions market, the company has shown its ability to capture market share and meet the renewed technology demands of this industry. Name recognition versus some of the more entrenched access control vendors, particularly among large enterprise customers, may be a slight hurdle, but the Brivo Access platform's scalability will be a key differentiator. |
| • Brivo Access focuses on centralized security management augmented via rich data analysis to better protect organizations, no matter their size or foot traffic. The company offers the full feature-rich platform in 3 different editions tailored to the operational and size demands of a customer organization. | • While Brivo is focusing its customer retention and growth strategies throughout the enterprise sector (reaching smaller businesses and large multinational corporations), the company also is seeing success in multitenant real estate (both commercial and residential). Success in these areas, with their variety of customer sizes and solution needs, will illustrate Brivo's inherent solution flexibility. | • Brivo Access already has inherent near-field communication and mobile access credentials, in addition to its own branded smart readers. However, integration with biometric readers or vendors to integrate that capability into the portfolio will be a next step forward for the solution. |

Source: Frost & Sullivan

# Galaxy Access Control

## INNOVATION

- Galaxy Access Control's score of 1.85 for Innovation is the result of the company's laggard embrace of software-centric access control systems and continued push for hardware components and on-premises systems. While the company had been offering ongoing updates to its flagship Galaxy System and Cloud Concierge Access Panel, updates have not been consistent since 2020 and focused more on the components rather than expanding the portfolio.

- The company does offer mobile access via its DoorPoint and PersonPoint applications, enabling security teams to monitor entry points remotely and introduce an additional credential option for users.

## GROWTH

- With a score of 1.80 for Growth, Galaxy Access Control is at risk of stagnation in this recently revived technology market. While the company offers cloud-enabled systems, mobile credentials, and remote monitoring for security teams, its hardware-centric strategy does not allow for easy integration outside of its components.

- From 2016 to 2018, Galaxy Access Control made a series of partnership announcements across the security ecosystem to enhance its product capabilities. However, there has been little news on any new arrangements since the start of the COVID-19 pandemic, seeming to indicate little forward activity on any new or even expansion of previously announced agreements.

## FROST PERSPECTIVE

- Pre-pandemic, Galaxy Access Control appeared to be strategically positioned as a global player in the maturing access control market, offering the few key technologies that would allow it to maintain longstanding customer usage. However, the company does not appear to have adjusted any of its business strategies to meet the new challenges of the hybrid security landscape or to include more software-centric solutions, leaving the company at risk of stagnation in the market.

- Galaxy Access Control continues to have a presence at trade shows and industry events, but its messaging continues to focus on hardware components and not a total solution, leaving it lost in a sea of more end-to-end access control vendors.

Source: Frost & Sullivan

# Genea

## INNOVATION

- As one of the key start-ups in the access control solutions industry, Genea scores an impressive 3.70 against newer and long-tenured competitors. As a cloud-native solution, Genea offers a fully digitized system that can easily integrate with existing access hardware to enable seamless, mobile credentialing for end users, all while offering the security data and remote monitoring and alerting functions that customers demand.

- Genea offers multiple functions that appeal to customers throughout the enterprise market, including those with multitenant and multisite commercial operations. Centralized monitoring, data access, and control via a platform interface lowers the upfront cost for these clients to get new access technologies and offers complete operational control over their entire physical infrastructure.

## GROWTH

- Earning an impressive 3.65 score for Growth, Genea holds its own in the access control industry on a global level, despite the fact that the company mainly focuses on North American operations.

- Genea has sought to target specific parts on the enterprise vertical that traditionally have been underserved by access control solutions, priced out of the market entirely, or not offered the required flexibility and functionality.

- Genea's cloud-first approach appeals to customers that traditionally shunned access control solutions and is a price-conscious means for new customers to secure their facilities more effectively.

## FROST PERSPECTIVE

- In Genea's solution portfolio, biometric credentials remains a gap. For current customers, mobile credentials and existing reader hardware may work in the short term, but for long-term planning purposes, integration with biometric readers will be a key capability.

- Genea's digital-first offering and appeal to customers that did not view access control systems as an option will present significant opportunities among small- and midsize enterprises and smaller banking or retail environments that do not have the resources to update their access systems. Embracing this market niche will allow Genea to grow its regional market share and seek out expansion to other regions.

Source: Frost & Sullivan

# HID Global

| INNOVATION | GROWTH | FROST PERSPECTIVE |
|---|---|---|

**INNOVATION**

- Scoring a perfect 5.00 on the Frost Radar™ Innovation Index, HID Global has demonstrated a significant focus on digitalization trends, biometrics, automation, and analysis, and a data-centric approach to physical security. Since 2018, the company has sought to create a complete digital identity and access control ecosystem across its product portfolio.

- Offering end-to-end access control solutions, particularly with a range of hardware readers, credential options, and digital platforms for remote and multisite operations, HID Global's solutions can fit any type of operational design.

- With easy-to-integrate components, multiple purchasing options, and a broad partner ecosystem, HID Global is able to create a solution that can fit specific business cases and offer scalability over time but does not consume security budgets.

**GROWTH**

- Under its parent company, ASSA ABLOY, HID Global has continued to experience good year-over-year revenue growth through new project wins and customer acquisition, earning the company's 4.35 score for Growth.

- HID Global's acquisition of Crossmatch in late 2018 allowed it to add biometric credentialing capabilities to its extensive access control and identity portfolio. At the same time, the company was in the midst of digitizing its access control portfolio to include mobile credentialing, remote monitoring and control via access control platform dashboards, and expansion of its partner network across the security ecosystem. These actions have enabled the company to remain a leader across multiple larger verticals including airports, enterprise, utilities, law enforcement, and banking.

**FROST PERSPECTIVE**

- While HID Global successfully pivoted its complete identity and access control portfolio to a more digital-focused solution, some customers do not view its access control solutions as a true digital alternative. The company would be best served to showcase how its access control products offer the same multiple credential types, remote capabilities, and data-centric views that newer access control vendors tout.

- With such significant presence in legacy access control, transitioning many of these customers to more modern systems (especially as many firms enact new return-to-work strategies) can offer HID Global a huge opportunity to continue its long-established customer relationships.

- Pushing COVID-safe access via its mobile and biometric credentials will be a significant differentiator for the company.

Source: Frost & Sullivan

# IDEMIA

## INNOVATION

- Viewed as a top-tier vendor for digital identity solutions, IDEMIA's score of 4.20 for Innovation in the physical access control industry illustrates just how digitized this space has become. IDEMIA offers 3 significant product lines for customers' physical access control needs: VisionPass, for customers wanting facial biometrics as key access credentials; MorphoManager, offering enterprise-sized access systems built on multifactor biometric access; and the SIGMA family fingerprint access solutions for entry point access.

- All IDEMIA solutions provide tiered integration capabilities with additional biometrics, mobile credentials, and existing smartcards or PINs, allowing customers to build atop what they already have while introducing more individualized and secure access credentials.

## GROWTH

- With much of IDEMIA's customer growth ongoing throughout the airport industry, the COVID-19 pandemic and its effects on travel and enterprises contributed to the company's overall Growth score of 3.40. The company did experience a slight downturn in revenue lost from travel shutdowns and project delays but it has found itself recovering.

- IDEMIA's biometric expertise and the multitude of access control options will present significant growth opportunities for the company among enterprises as return-to-work policies and upgraded access systems are brought online.

## FROST PERSPECTIVE

- While IDEMIA is an undisputed leader for digital identity solutions, it does not focus much on its physical access control solutions. Customers may remove it from consideration when discussing new access control solutions simply because they do not know that digitized physical access control systems are an option in IDEMIA's broad portfolio. The company should highlight these systems in order to break back into to this resurging market.

- IDEMIA's biometric credential options are slightly limited. With a core focus on fingerprint capabilities and VisionPass as the only facial recognition option, customers that want more access points via multiple touchless biometrics (e.g., face and iris, or palm vein) may seek other vendors that do not require individuals to touch shared readers.

Source: Frost & Sullivan

# Identiv

## INNOVATION

- Identiv's core focus on identity and secure access earns the company a respectable 4.00 score for Innovation because of its multiple access control solutions tailored to various customer needs. Two of the company's most relevant products for this analysis were its Mobile Access solutions that enabling frictionless access control without a physical credential and its Access Control as a Service solutions that enable security management via any environment.

- With a broad portfolio of traditional access control hardware and software systems as well as physical credentials and tokens, Identiv meets the needs of existing customers and maintains the technical innovation that customers now expect.

## GROWTH

- Despite Identiv's extensive portfolio and solution offerings designed to meet the new customer needs brought about by the pandemic, the company did witness a slight revenue decline early in this period, pushing its Growth score to a 2.80. Revenue for 2021 has indicated some return to pre-pandemic growth levels, so it is likely that the company will maintain this growth trajectory through its new offerings.

- Identiv remains strong with traditional access control customers, particularly those that have significant security requirements, such as governments, banking, utilities, law enforcement, and airports. The company's latest portfolio additions are seeing new opportunities flourish among enterprise and retail customers, areas in which Identiv does not have significant exposure.

## FROST PERSPECTIVE

- Because of Identiv's Access Control as a Service and Mobile Access solution offerings, it already is gaining new customers in previously untapped markets for the company. Capitalizing on its portfolio strength and its ability to perform in highly secure environments, Identiv is well-positioned to regain any lost footing from the pandemic and capture new opportunities.

- Biometric access integration continues to be one of the major gaps in Identiv's portfolio despite its ongoing product line expansion. Whether this capability comes via a partnership or capabilities developed in-house, Identiv needs to bring this feature to market quickly before losing ground in the more competitive private sector industries.

Source: Frost & Sullivan

# LenelS2

## INNOVATION

- LenelS2 easily earns its perfect score of 5.0 for Innovation on the Frost Radar™ in part because of its comprehensive portfolio of 4 separate access control solutions: OnGuard, as a feature-rich system that integrates with business systems in complex enterprise environments; NetBox, a browser-based access control solution and event monitoring tool; Elements, for a unified access control and video management solution; and, BlueDiamond, a next-generation mobile-centric access control solution for all industries.

- Each of LenelS2's solutions offer full access control system management, monitoring, and control via an intuitive interface, and the range of solutions ensures that there is an option that can meet the demands of any customer regardless of their industry or technical sophistication.

## GROWTH

- With an impressive Growth score of 4.20, LenelS2 has achieved continuous year-over-year revenue growth even during the pandemic because of its broad solution suite and ability to adapt its access control solutions to solve the new problems that customers faced in more hybrid work environments.

- The BlueDiamond solution set is a direct result of customer feedback, emphasizing mobile credentials, touchless access points, and a modern access control solution that could openly integrate with existing hardware or other systems and that would not require significant upfront costs.

## FROST PERSPECTIVE

- LenelS2 is a superb example of how long-tenured access control providers can quickly pivot their solution offerings to meet the demands of this resurgent market. The company also is able to compete with or even outshine some of the newer market entrants through its technical agility and ability to adapt its solutions to customer demands.

- Albeit a minor shortcoming, LenelS2 currently does not emphasize the use of biometric credentials for access privileges. While it can be reasoned that the company's open integration capabilities would allow it to utilize biometric readers already in use or use biometric credentials from a mobile device for access privileges, this is an area in which LenelS2 could clarify its capabilities or seek to expand its functionality.

Source: Frost & Sullivan

# Motorola Solutions

| INNOVATION | GROWTH | FROST PERSPECTIVE |
|---|---|---|
| • Motorola Solutions' focus on expanding its unified security ecosystem to include traditional on-premises access control systems and newer, more cloud-based access control solutions earned it a perfect 5.00 score for Innovation. | • Motorola Solutions earns an impressive score of 4.20 for Growth on the Frost Radar™, albeit all the credit for the consistent year-over-year revenue growth comes for Openpath's organic growth before the acquisition in late 2021. This performance, coupled with Motorola Solutions' ongoing product development plans for its unified security solutions, was likely one of the many reasons that Openpath proved to be an attractive acquisition candidate. | • Motorola Solutions made multiple acquisitions in 2020 and 2021 in order to build out its unified security management solutions. The acquisition of Openpath and integration of its solutions into the product portfolio introduced Motorola Solutions into the access control space and enabled it to gain customers in industries that are typically outside of its reach. Continued expansion efforts in these new verticals, as well as upselling to existing customers, will reap success. |
| • The company's acquisition of Openpath enabled it to immediately deploy Openpath's range of solutions and integrate them with its existing solution suite. | | |
| • As the company's most innovative access control suite, the Openpath Cloud-Based Access Control system provides an open architecture for customers to ensure long-term system scalability, the flexibility to integrate new readers or controller hardware, and unlimited onboarding for different users, devices, and security systems. | • While Motorola Solutions has such an entrenched reputation among the law enforcement customer base, Openpath's use cases for retail, commercial enterprise, and banking customers offer Motorola an immediate contact point in these industries that it can then seek to expand. | • Considering how innovative the Openpath solution is, biometric access and user grouping are capability gaps that Motorola will have to fill either through acquisitions or expanding its already impressive partner network. |

Source: Frost & Sullivan

# Parabit

| INNOVATION | GROWTH | FROST PERSPECTIVE |
|---|---|---|
| • Parabit's score of 2.60 for Innovation comes mostly as a result of its core focus on hardware readers, controllers, and sensors that help to physically fortify banking facilities. While Parabit does offer software options to enable alarms and alerting to security operators, these are not the most prominent technologies that it features when it comes to new product announcements.<br><br>• Parabit's use of sensor technology and contactless access means takes into account banking customers' preferences in the COVID-19 landscape. However, the more basic functionality of Parabit's software solutions does not offer many avenues for access control system data. | • With a score of 2.60 for Growth, Parabit demonstrates reliable year-over-year revenue growth ahead of the slight declines felt throughout the rest of the security industry. By managing to keep steady growth during this period, Parabit illustrated some resiliency in the face of changing economic conditions.<br><br>• Parabit's explicit focus on retail and consumer banks, as well as ATMs and night lobbies throughout the banking industry, enabled it to play a key role in helping customers fortify their bank facilities in response to health and safety concerns. These additional access control systems can be utilized further and even expanded as branches reopen and customers begin to return to these facilities. | • Parabit's singular focus on access control solutions for banking has allowed it to carve out a niche in the access control industry and find ongoing success during the pandemic. While this did reap some rewards, it will not allow for long-term returns in growth. The company needs to look outward in order to maintain its growth.<br><br>• Retail seems like the logical next area for Parabit to explore for customer acquisition because of its focus on high-traffic locations. However, the company's hardware-centric design and laggard software capabilities could hinder its ability to break through in this fast-growing space. |

Source: Frost & Sullivan

# Paxton

## INNOVATION

- Earning a score of 3.25 for Innovation, Paxton has shown flexibility in its established product line through the introduction of its Paxton 10 access control solution. Through this platform, customers can manage their integrated network of hardware, locks, and entry point sensors in order to understand potential vulnerabilities and view access data.

- The Paxton 10 solution finally introduces cloud connectivity to the Paxton portfolio, albeit still relying on Paxton's range of hardware solutions and integrated hardware partners. The platform's additional integration options create new partnership opportunities and introduce new functionality to the Paxton offering, including biometric credentials and improved remote connectivity.

## GROWTH

- Paxton's revenue track before and during the pandemic, with revenue declining and recovering in an almost cyclical pattern historically, factored into a 2.40 Growth score. It is likely that the hardware-centric nature of Paxton's solutions left it vulnerable to hardware replacement cycles and limited new project wins.

- New opportunities in the enterprise space, particularly through multitenant real estate firms, will grow with a continued push of the Paxton 10 platform, in addition to the company's hardware solutions. The additional partnership announcements that Paxton continues to make across the security ecosystem also will create growth opportunities.

## FROST PERSPECTIVE

- While Paxton has embraced its switch to the Paxton 10 solution and more software-based access control offerings, the company is slightly late to the game when it comes to offering a more data-centric solution. Paxton is making a laudable effort in informing customers of these new offerings, but it may have lost a first-mover advantage by waiting so long to debut the platform.

- A slower embrace of biometric verification credentials or more advanced access control solutions has drastically affected Paxton's market share and reputation in the access control industry. Pivoting marketing to reflect more of its end-to-end offerings and software solutions in addition to hardware components will be essential for the company to surge back into the market.

Source: Frost & Sullivan

# SALTO Systems

| INNOVATION | GROWTH | FROST PERSPECTIVE |
|---|---|---|

**INNOVATION**

- SALTO Systems' score of 3.00 for Innovation comes from its ongoing reliance on hardware-centric lock-and-key access systems. The company has expanded its portfolio to include more access platforms via its SALTO Space and SALTO KS offerings, in addition to mobile access credentials done via near-field communication or Bluetooth connectivity.

- The company's acquisition of Cognitec in March 2022 will enable it to introduce facial recognition, verification, and biometric credentials throughout its portfolio.

- SALTO Systems' continued focus on mobile and touchless access capabilities will be crucial to ongoing product development regarding the electronic locks business and the broader access control platform systems.

**GROWTH**

- With a score of 3.20 for Growth, SALTO Systems has been able to maintain steady year-over-year revenue growth and geographic market penetration despite the effects of the COVID-19 pandemic.

- Throughout the pandemic, SALTO Systems made immense strides with its partnership strategy throughout the electronic access and platform-based access control ecosystem, in addition to securing multiple funding agreements from capital investments.

- The company also greatly expanded its Asia-Pacific footprint, including the appointment of country-level executives and new localized sales teams.

**FROST PERSPECTIVE**

- While SALTO Systems' product portfolio remains more hardware-centric, the company can almost be viewed as a dark horse vendor capable of capturing additional market share throughout the access control industry unexpectedly. SALTO Space, SALTO KS, and the additional capabilities likely to be pushed forward because of the Cognitec acquisition showcase a solid technical roadmap toward more platform-centric access solutions alongside state-of-the-art hardware components.

- The investment community obviously sees the same potential in SALTO Systems because of these expansion efforts. The next steps for the company, alongside its technical advancements, will be implementing a solid go-to-market strategy highlighting the end-to-end solution options they hold.

# Thales

## INNOVATION

- Thales' Facial Recognition Platform (FRP), while mainly utilized as a biometric authentication solution, has also been successfully implemented as a biometric access control solution, earning the company a score of 3.50 for Innovation.

- The FRP solution's open integration capabilities enable the platform to be implemented in a variety of identity authentication activities, including authenticating individuals seeking physical access.

- With price no longer being viewed as a major hindrance to biometric access solutions, Thales is able to showcase the flexibility of its FRP solution to meet customers' demand for a more secure credentialing process when seeking access to a facility.

## GROWTH

- With a score of 2.55 for Growth, Thales benefits from steady year-over-year revenue growth even during the pandemic. However, the airports segment (which offers the most use of the FRP solution in an access control capacity) suffered substantial spending shortfalls in this period.

- With travel still recovering and tight security budgets focused on other operational technologies, growth proved to be stunted over the previous few years.

- Despite its capability fit as an access control solution, the Thales FRP solution is only prominent in airports for access control means. With Thales' extensive customer network in law enforcement, enterprise, and utilities, the opportunity for more customer use cases is apparent.

## FROST PERSPECTIVE

- From a technological standpoint, the Thales FRP solution is a standout among biometric access control solutions because of its precision, accuracy, and open platform design. However, the use cases for this solution as an access control measure remain low and there is not much appetite currently to attempt to capture more market share for this technology segment.

- One option for Thales could be to become the vendor of choice for any access control solution vendor that does not have its own biometric capabilities. With the successful use case of the FRP with Thales' airport clients, this pitch could prove enticing to other market vendors and enable Thales to maintain presence in the access control space.

Source: Frost & Sullivan

# ZK Teco

## INNOVATION

- ZK Teco's score of 3.00 for Innovation comes from its core of biometric verification tools, hardware readers and terminals, and associated access control solutions.

- Since the COVID-19 pandemic began in early 2020, ZK Teco has consistently released new access control system components, including readers, locks, terminals, and other hardware, in addition to the ProFace X facial recognition control, its Smart Entrance Control, and Green Label hardware solutions. With all these new product additions, ZK Teco maintains a focus on biometric solutions, which are the core of its research and development efforts throughout its product roadmap.

## GROWTH

- With a score of 2.60 for Growth, ZK Teco has seen some revenue impacts from the pandemic. While the company had been seeing modest year-over-year growth figures, many of the lockdowns and supply chain shortages affected ZK Teco's manufacturing and development facilities and slowed new project completion times.

- Partnerships throughout the access control ecosystem have been a consummate focus for ZK Teco since 2018. The company has entered into multiple geographic distribution partnerships, including in Thailand, Serbia, Iberia, and the United States. In addition, the company is offering paired solutions alongside local partners to provide both access control and additional time and attendance solution offerings.

## FROST PERSPECTIVE

- While ZK Teco has made partnerships with global and regional distributors a focus of its go-to-market strategies, the company still does not have a significant presence in North America or Latin America, leaving a huge, competitive market almost untouched.

- Some of the company's lacking presence in these regions could be attributed to its significant research and development activity in China. While ZK Teco has not seen a negative impact on its brand reputation or growth in the global market, this could become an issue without the clear transparency guidelines that some Western governments require before implementing such systems.

Source: Frost & Sullivan

# Strategic Insights

# Strategic Insights

**1** Mobile tokens or biometric scans utilize a more personalized access credential tied to individuals and offer a more hardened security credential that cannot be easily lost, stolen, or borrowed. By using these more individualized credentials in tandem with existing hardware tokens, keys, or PIN codes, organizations can easily create a multifactor access approach without adding significant authentication steps or costs.

**2** As physical access control solutions create a more holistic picture of an individual user and become more widely integrated with the broader security operations ecosystem, the user identity profiles held within the physical access control and digital identity access systems will continue to converge, offering security teams a more robust view of users' behavior and activity in their physical and digital boundaries.

**3** Remote connectivity and open access between access control solutions and other security operations systems will provide an additional data stream for security teams to access and monitor for potential threats or anomalies, enabling them to improve their situational awareness, react more swiftly to a potential incident, and offer additional data points to access for security investigations and compliance reporting.

Source: Frost & Sullivan

# Next Steps: Leveraging the Frost Radar™ to Empower Key Stakeholders

# Significance of Being on the Frost Radar™

Companies plotted on the Frost Radar™ are the leaders in the industry for growth, innovation, or both. They are instrumental in advancing the industry into the future.

**GROWTH POTENTIAL**

Your organization has significant future growth potential, which makes it a Company to Action.

**BEST PRACTICES**

Your organization is well positioned to shape Growth Pipeline™ best practices in your industry.

**COMPETITIVE INTENSITY**

Your organization is one of the key drivers of competitive intensity in the growth environment.

**CUSTOMER VALUE**

Your organization has demonstrated the ability to significantly enhance its customer value proposition.

**PARTNER POTENTIAL**

Your organization is top of mind for customers, investors, value chain partners, and future talent as a significant value provider.

Source: Frost & Sullivan

# Frost Radar™ Empowers the CEO's Growth Team

## STRATEGIC IMPERATIVE

- Growth is increasingly difficult to achieve.

- Competitive intensity is high.

- More collaboration, teamwork, and focus are needed.

- The growth environment is complex.

## LEVERAGING THE FROST RADAR™

- The Growth Team has the tools needed to foster a collaborative environment among the entire management team to drive best practices.

- The Growth Team has a measurement platform to assess future growth potential.

- The Growth Team has the ability to support the CEO with a powerful Growth Pipeline™.

## NEXT STEPS

- **Growth Pipeline Audit™**

- **Growth Pipeline as a Service™**

- **Growth Pipeline™ Dialogue with Team Frost**

Source: Frost & Sullivan

# Frost Radar™ Empowers Investors

| STRATEGIC IMPERATIVE | LEVERAGING THE FROST RADAR™ | NEXT STEPS |
|---|---|---|

**STRATEGIC IMPERATIVE**

- Deal flow is low and competition is high.

- Due diligence is hampered by industry complexity.

- Portfolio management is not effective.

**LEVERAGING THE FROST RADAR™**

- Investors can focus on future growth potential by creating a powerful pipeline of Companies to Action for high-potential investments.

- Investors can perform due diligence that improves accuracy and accelerates the deal process.

- Investors can realize the maximum internal rate of return and ensure long-term success for shareholders.

- Investors can continually benchmark performance with best practices for optimal portfolio management.

**NEXT STEPS**

- **Growth Pipeline™ Dialogue**

- **Opportunity Universe Workshop**

- **Growth Pipeline Audit™ as Mandated Due Diligence**

Source: Frost & Sullivan

# Frost Radar™ Empowers Customers

## STRATEGIC IMPERATIVE

- Solutions are increasingly complex and have long-term implications.

- Vendor solutions can be confusing.

- Vendor volatility adds to the uncertainty.

## LEVERAGING THE FROST RADAR™

- Customers have an analytical framework to benchmark potential vendors and identify partners that will provide powerful, long-term solutions.

- Customers can evaluate the most innovative solutions and understand how different solutions would meet their needs.

- Customers gain a long-term perspective on vendor partnerships.

## NEXT STEPS

- **Growth Pipeline™ Dialogue**

- **Growth Pipeline™ Diagnostic**

- **Frost Radar™ Benchmarking System**

Source: Frost & Sullivan

# Frost Radar™ Empowers the Board of Directors

## STRATEGIC IMPERATIVE

- Growth is increasingly difficult; CEOs require guidance.

- The Growth Environment requires complex navigational skills.

- The customer value chain is changing.

## LEVERAGING THE FROST RADAR™

- The Board of Directors has a unique measurement system to ensure oversight of the company's long-term success.

- The Board of Directors has a discussion platform that centers on the driving issues, benchmarks, and best practices that will protect shareholder investment.

- The Board of Directors can ensure skillful mentoring, support, and governance of the CEO to maximize future growth potential.

## NEXT STEPS

- **Growth Pipeline Audit™**

- **Growth Pipeline as a Service™**

Source: Frost & Sullivan

**Frost Radar™ Analytics**

# Frost Radar™: Benchmarking Future Growth Potential
## 2 Major Indices, 10 Analytical Ingredients, 1 Platform

**GROWTH INDEX ELEMENTS**

### 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.

- **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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