BlackBerry Recognized for

2021

Technology Innovation Leadership
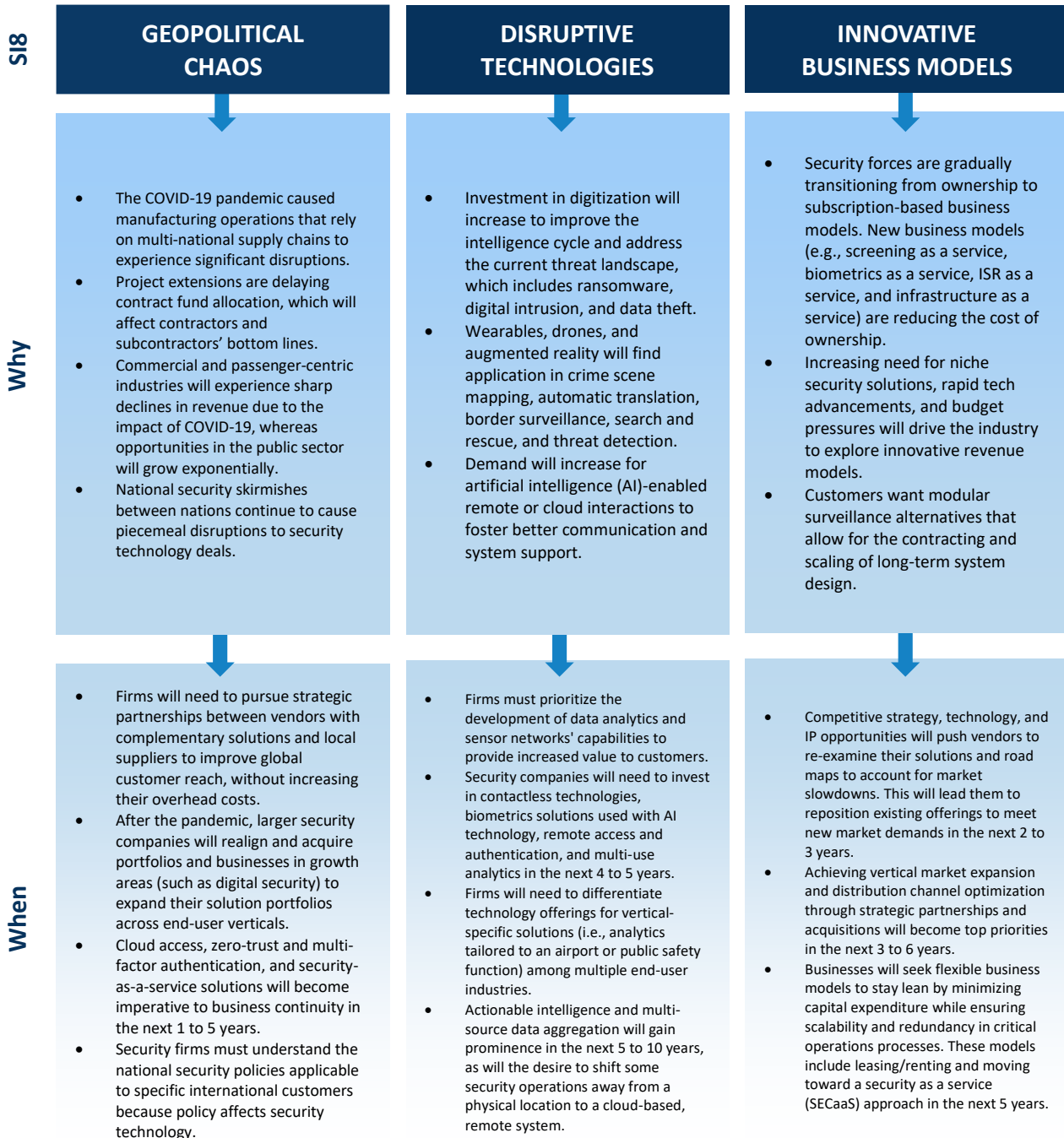
North American
Safe City Solutions Industry
Excellence in Best Practices

FROST & SULLIVAN

Strategic Imperatives

Frost & Sullivan identifies three key strategic imperatives that impact the security industry: geopolitical chaos, disruptive technologies, and innovative business models. Every company that is competing in the security space is obligated to address these imperatives proactively; failing to do so will almost certainly lead to stagnation or decline. Successful companies overcome the challenges posed by these imperatives and leverage them to drive innovation and growth. Frost & Sullivan's recognition of BlackBerry is a reflection of how well it is performing against the backdrop of these imperatives.

SI8

GEOPOLITICAL CHAOS	DISRUPTIVE TECHNOLOGIES	INNOVATIVE BUSINESS MODELS

Why

GEOPOLITICAL CHAOS	DISRUPTIVE TECHNOLOGIES	INNOVATIVE BUSINESS MODELS
• The COVID-19 pandemic caused manufacturing operations that rely on multi-national supply chains to experience significant disruptions. • Project extensions are delaying contract fund allocation, which will affect contractors and subcontractors' bottom lines. • Commercial and passenger-centric industries will experience sharp declines in revenue due to the impact of COVID-19, whereas opportunities in the public sector will grow exponentially. • National security skirmishes between nations continue to cause piecemeal disruptions to security technology deals.	• Investment in digitization will increase to improve the intelligence cycle and address the current threat landscape, which includes ransomware, digital intrusion, and data theft. • Wearables, drones, and augmented reality will find application in crime scene mapping, automatic translation, border surveillance, search and rescue, and threat detection. • Demand will increase for artificial intelligence (AI)-enabled remote or cloud interactions to foster better communication and system support.	• Security forces are gradually transitioning from ownership to subscription-based business models. New business models (e.g., screening as a service, biometrics as a service, ISR as a service, and infrastructure as a service) are reducing the cost of ownership. • Increasing need for niche security solutions, rapid tech advancements, and budget pressures will drive the industry to explore innovative revenue models. • Customers want modular surveillance alternatives that allow for the contracting and scaling of long-term system design.

When

GEOPOLITICAL CHAOS	DISRUPTIVE TECHNOLOGIES	INNOVATIVE BUSINESS MODELS
• Firms will need to pursue strategic partnerships between vendors with complementary solutions and local suppliers to improve global customer reach, without increasing their overhead costs. • After the pandemic, larger security companies will realign and acquire portfolios and businesses in growth areas (such as digital security) to expand their solution portfolios across end-user verticals. • Cloud access, zero-trust and multi-factor authentication, and security-as-a-service solutions will become imperative to business continuity in the next 1 to 5 years. • Security firms must understand the national security policies applicable to specific international customers because policy affects security technology.	• Firms must prioritize the development of data analytics and sensor networks' capabilities to provide increased value to customers. • Security companies will need to invest in contactless technologies, biometrics solutions used with AI technology, remote access and authentication, and multi-use analytics in the next 4 to 5 years. • Firms will need to differentiate technology offerings for vertical-specific solutions (i.e., analytics tailored to an airport or public safety function) among multiple end-user industries. • Actionable intelligence and multi-source data aggregation will gain prominence in the next 5 to 10 years, as will the desire to shift some security operations away from a physical location to a cloud-based, remote system.	• Competitive strategy, technology, and IP opportunities will push vendors to re-examine their solutions and road maps to account for market slowdowns. This will lead them to reposition existing offerings to meet new market demands in the next 2 to 3 years. • Achieving vertical market expansion and distribution channel optimization through strategic partnerships and acquisitions will become top priorities in the next 3 to 6 years. • Businesses will seek flexible business models to stay lean by minimizing capital expenditure while ensuring scalability and redundancy in critical operations processes. These models include leasing/renting and moving toward a security as a service (SECaaS) approach in the next 5 years.

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. BlackBerry excels in many of the criteria in the safe city solutions space.

AWARD CRITERIA

Technology Leverage	Business Impact
Commitment to Innovation	Financial Performance
Commitment to Creativity	Customer Acquisition
Technology Incubation	Operational Efficiency
Commercialization Success	Growth Potential
Application Diversity	Human Capital

Comprehensive Safe City Solution: BlackBerry® AtHoc®

BlackBerry®, a brand synonymous with security and communications, has leveraged its unmatched expertise and experience in the industry to develop the best-in-class critical event management solution. BlackBerry AtHoc offers an unparalleled level of situational awareness to organizations, enabling them to prepare for, respond to, and recover from all critical events, for their safety and security. BlackBerry AtHoc is the most secure critical event management solution in the market, which is a must-have feature to avoid bad actors being able to leverage this important tool to create or manage a critical event. BlackBerry AtHoc supports a myriad of sensors and systems, providing city agencies with a comprehensive collaboration and communications framework, allowing them to create a safe and secure environment for their employees and the public. Furthermore, BlackBerry Connect, a feature of BlackBerry AtHoc, allows agencies to collaborate and communicate with one another.

> *"BlackBerry equips its solutions with advanced security and communications capabilities to enhance its technology's' ability to detect anomalies and alert operators, enabling them to prevent or remediate incidents quickly."*
>
> *- Tara Semon, Best Practices Research Team Leader*

BlackBerry also offers an enterprise version of its critical event management solution, called BlackBerry Alert®. It enables business operators to manage employee safety, and planned and unplanned events, such as access and control system breaches and infrastructure cyberattacks, at a business' single campus

or multiple sites, locally or globally.

BlackBerry AtHoc offers superior incident, disaster, and crisis management capabilities that enable operators to have pre-determined response plans, message templates and playbooks, manage resources, send mass notifications to any endpoint, and initiate emergency response plans while securing systems with unparalleled cybersecurity. Organizations can customize BlackBerry's incident response plan templates to tailor them to their organization and specific use cases. It allows any security or operations employee to easily implement these pre-defined plans to secure people and property, and to reduce or prevent situations via proper event management and business continuity procedures. BlackBerry AtHoc offers real-time visibility into properties and assets as well as employee and citizen safety, enabling security and information technology teams to respond to incidents proactively and more quickly than they otherwise could have.

BlackBerry AtHoc intelligently gathers, correlates, analyzes, and displays data from various sources in a unified platform, including public or organization-specific applications, sensors, and systems. A BlackBerry AtHoc customer can incorporate data from almost any source, including camera or weather feeds, news broadcasts, or social media platforms. Operators can monitor keywords and phrases, such as "protest" or "storm the capitol," allowing them to see locations that employees and citizens should avoid due to standstill traffic, violence, or other activities that can be a safety concern. Moreover, operators can geo-fence areas and pre-define threat intelligence notifications to alert them to incidents that can affect their daily operations and the safety and security of employees, citizens, and physical and intellectual properties and assets. Furthermore, there are features allowing teams to view and analyze incidents post-event data, for a view of which response practices worked for their city or organization and which processes need adjustments.

> *"Demonstrating BlackBerry's unmatched innovation and customer-centric approach, the company invests 24% of its revenue back into research and development at its 18 development centers in seven countries."*
>
> **- Tara Semon, Best Practices Research Team Leader**

BlackBerry AtHoc enables operators to communicate with city employees, external partner agencies and the public via a broad range of systems, including text, email, phone calls, emergency sirens, and speaker systems, to ensure all relevant individuals receive notification regarding an incident. Communication can be two-way, allowing operators to target messages to specific groups, efficiently gather responses and account for people's safety. The pandemic has highlighted the value of being able to communicate quickly and effectively during an event with a large, targeted, group of people, giving operators the ability to share new public health measures and guidelines, in a well-coordinated manner.

Since BlackBerry AtHoc unifies sensors and systems, it ensures employees receive the same critical event information from a single, trusted source rather than from multiple siloed systems that do not communicate with each other. The solution's system unification capability saves personnel time by removing their need to read and respond to numerous communications from other sources that contain the same core message. Moreover, this feature eliminates mass communications that differ in content, thus confusing employees or the public on what actions they should take during an emergency, which

causes panic and chaos that can result in individuals harmed, lives lost, or business continuity impeded.

Operational Strategies Promoting Innovation and Customer-centric Support

Headquartered in Ontario, Canada, BlackBerry has offices around the world to serve clients in 30 countries through local professionals that assist customers with sales, technology deployment and configuration (in less than 48 hours in most cases), and 24/7 phone, text, and email support. Impressing Frost & Sullivan research analysts, the company hires individuals from the sectors it serves, allowing it to leverage professionals who have hands-on industry experience and expertise, enabling BlackBerry to overcome market challenges and develop superior solutions. Moreover, the company employs such professionals on its customer support teams to manage client relationships on a much higher level than competitors. Furthermore, these professionals collaborate with customers on requests for new features, capabilities, or technologies to ensure BlackBerry develops solutions that solve clients' real-world issues.

Due to COVID-19, global lockdowns and social distancing practices the company was required to shift its thousands of employees to work from home last year. Being a leader in the security and mobility industries, BlackBerry was uniquely positioned to rapidly convert its own employees (and its customers) into a remote workforce, while providing stellar communications platforms that allow employees to stay in touch regarding the company's business operations. Moreover, BlackBerry's position also enables it to relay COVID-19 information and practices, seamlessly and quickly to employees. It also adapted and was able to quickly implement processes to comply with regional government COVID-19 workplace regulations (e.g, monitoring of employee status and position in the case of an outbreak).

Conclusion

As organizations and cities turn to safe city solutions to ensure citizens, employees, property, and assets' safety and security, they must deploy technologies that provide superior situational awareness and actionable intelligence, while being secure and reliable. BlackBerry's AtHoc solution unifies a city's applications, sensors, and systems, e.g., social media platforms, cameras, and weather broadcasts, to deliver cyber and physical security that operators can view in a single platform that gathers, correlates, and helps analyze data. The company's critical event management platform allows operators, security teams, and first responders to prevent or remediate incidents quickly via a comprehensive real-time view of the city's agencies' operations. Moreover, clients can geofence areas-of-interest or search keywords to ensure they receive information pertinent to their operations to reduce or prevent downtime and citizen or employee harm. BlackBerry's AtHoc solution allows city agencies to notify citizens and employees of incidents via various communications platforms, including phone, email, text, emergency sirens, and speaker systems. Finally, the company hires employees from the industries it serves, which enables its research and development and customer support teams to connect better with customers and deliver solutions that solve real-world problems.

With its innovative technology, unmatched customer support, and strong overall performance, BlackBerry earns Frost & Sullivan's 2021 North America Technology Innovation Leadership Award in the safe city solutions industry.

What You Need to Know about the Technology Innovation Leadership Recognition

Frost & Sullivan's Technology Innovation Award recognizes the company that has introduced the best underlying technology for achieving remarkable product and customer success while driving future business value.

Best Practices Award Analysis

For the Technology Innovation Leadership Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Technology Leverage

Commitment to Innovation: Continuous emerging technology adoption and creation enables new product development and enhances product performance

Commitment to Creativity: Company leverages technology advancements to push the limits of form and function in the pursuit of white space innovation

Stage Gate Efficiency: Technology adoption enhances the stage gate process for launching new products and solutions

Commercialization Success: Company displays a proven track record of taking new technologies to market with a high success rate

Application Diversity: Company develops and/or integrates technology that serves multiple applications and multiple environments

Business Impact

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

Customer Acquisition: Customer-facing processes support efficient and consistent new customer acquisition while enhancing customer retention

Operational Efficiency: Company staff performs assigned tasks productively, quickly, and to a high-quality standard

Growth Potential: Growth is fostered by a strong customer focus that strengthens the brand and reinforces customer loyalty

Human Capital: Commitment to quality and to customers characterize the company culture, which in turn enhances employee morale and retention

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 on-going 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 six 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)**