Volume #11: Areas of Interest within the Theme of Escalating Conflicts

In the previous Strategy Report, 3RC explored the most relevant areas of interest that arose from the manifestations of *Shifting Demographics*. This report is the second installment in the Areas of Interest segment, where 3RC will focus in on specific industries and sectors with the most favorable dynamics surfacing from the manifestations of *Escalating Conflicts*. Following this investigation, 3RC will be left with an enhanced perspective that will further guide 3RC's investment strategy and outbound sourcing efforts.

The table below serves as a visual outline of the key areas of interest that we will discuss throughout the following pages of this report. 3RC is tracking several sub-verticals that will continue to shape our thematic lens and will lead 3RC's search to uncover the most compelling investment opportunities for us to explore.

A summary of the manifestations and the areas of interest stemming from our last report are summarized in the table below:

Factor of Influence	Manifestations	Areas of Interest
Escalating Conflicts	• Increased defense spending • Increased domestic demand for safety and protection in response to fears of domestic terrorism	• Patrol services • Non-technology law enforcement products & services • Additional securities services and related products & services • Self-protection products & services
	• Increased transportation safety requirements	• Specialized/value-added storage/warehousing & transportation
	• Continued reduction of immigrant workforce leading to a unskilled -labor shortage • Advances in agricultural technology	• Agricultural automation • Lighting system design and implementation

Following the investigation into the *Areas of Interest* brought by the *Manifestations* of *Escalating Conflicts*, 3RC has sifted out a few specific industries which fit our investment lens and offer promise when considering returns for investors. However, many of the manifestations have now led to dead ends with regards to specific investment spaces, often due to high valuations and the lack of available M&A opportunities. As a result, there are specific sectors that 3RC initially thought might be interesting that have now been eliminated, such as the security/alarms and aerospace industries. It is important to have a strong understanding of the opportunity before a methodical search is conducted. This is important when thinking about investing, as eliminating areas is often equally or more valuable than deciding which industries are most appealing.

For example, 3RC's initial investigation into the *Manifestations* of *Escalating Conflicts* prompted an examination of the security services and alarms industry. The positive trends indicated that enticing returns were available, but after conducting a deep dive into the space, it became apparent that most of the opportunity had already been captured. Instead of viewing this as a complete dead end, 3RC is continuing to dig into spaces like patrol services, delving more deeply while also carefully considering investor returns. Even though the security services and alarms industry is the obvious answer arising from the search, it is not the correct answer for 3RC.

In addition to the security services and alarms industry, 3RC examined the aerospace industry as part of our initial research. The project-based dynamic, along with the notion that the recurring revenue only transpires during the term of a contract, contrasted with 3RC's larger strategy of consistent and valuable business relationships. Moreover, the fact that there are only three large end-users in the space brings the risk of having high customer concentration, with many firms having no logical acquirer, making it difficult to picture an exit scenario. While we thought that it could have been a worthy area to invest initially, the risks of the competitive dynamics, potential for delay, and even the loss of a large bid removing the recurring nature of the business outweighed the potential for outsized returns.

Finally, 3RC also made a clear delineation between domestic and international products and services as a broader component of market analysis during the search process surrounding *Escalating Conflicts*. While global firms have the benefit of a more robust and diverse customer base, the customers on the international stage are generally countries and their defense budgets. As evidenced by the United States' defense program, there is considerable difficulty in the process of maintaining this revenue stream during each bid cycle and often this revenue is far from guaranteed beyond the span of the contract. 3RC has drawn the conclusion that the international market is filled with issues that would make it a concerning space for our investors and will further emphasize the domestic market as a result.

Instead, 3RC has uncovered different specific industries that were less obvious at first glance which, in turn, is the reward for undergoing an objective and analytical search process. One of the findings was the patrol services industry, which has exposure to sectors beyond defense and is positioned to capture growth related to many of the trends 3RC discovered. This industry, alongside sectors like specialized/value-added storage and transportation, are valuable opportunities for 3RC and will be discussed in greater detail in the following pages of this report.

Patrol Services

While the security alarm services industry was initially interesting to 3RC, the consolidation that has already occurred and high valuations make it difficult to justify an investment. Instead, the patrol services that utilize security alarm capabilities appear to be a more compelling investment opportunity. Firms within the patrol services space focus on providing staff that function to protect critical real estate, high-value equipment, and even employees from potential harm brought by crime. This includes guard, guard dog, parking security, personal protection, and protective guard services. Standing security officer and vehicle patrol services account for approximately 75% of the total contracted security market.

Companies choose to contract this security to third-party service providers as the assembly of an in-house security staff includes factors that they often do not have expertise in, including procedures, preferences, training, and a robust hiring process. Another notable issue is the burden that is placed on administration, which requires the time and diligence of senior executives, and HR for tasks such as payroll. As security becomes a larger concern for society, equipment and security patrol services will become widely used as a solution for the maintenance and function of military installations and government buildings that operate the defense systems in the United States.

An additional value-add brought by contractors is an assessment of security needs, implementation of unique security policies, and detection of specific employees that meet certain qualifications. This leads to a key success factor in this industry, which is maintaining a strong arsenal of qualified and talented patrol staff. Regulatory mandates, along with specific requirements brought forth by each contract, are often in place and require training in order to educate staff to the required level.[i] Moreover, by handling the administrative and HR functions themselves, contractors remove a burden from their customers and provide them with an enhanced, seamless experience.

One of the most pressing trends in the patrol services industry is the implementation of cutting-edge security technologies within service offerings, including technology platforms that reduce the necessity for record management administration and physical processing offices. An example is the use of tactical CCTV jackets which can be worn over security vests that provide a control room with live footage as the guards wearing the jackets traverses a perimeter or the building itself.

A technological advancement that has specifically impacted the energy patrol services industry are patrol robots. While robotics has been used in the military setting for years, implementation within the commercial sector has only recently begun. These security robots are designed to detect anomalous behavior, such as someone walking through a building at night, and report back to a remote security center. Projections for the global security robots market indicate that the market size will reach $3.8 billion by 2025, growing at a CAGR of 8.0%.[ii] Within this industry, the North American segment accounted for 30% of the global market share in 2016.

Another area of interest is the monitoring of critical infrastructure, where security officers employed at these locations are part of specialized teams, creating a level of defensibility. The Department of Homeland Security (DHS) has already identified 18 critical infrastructure sectors that, if compromised, would negatively impact national security, the economy, or public health and safety. A few of these sectors include agriculture, food, emergency services, and cyber-networks. The patrol teams working at these locations are required to undergo specific training and exercises enforced by regulation. One example is chemical plants, which have to ensure compliance with Chemical Facility Anti-Terrorism Standards, enforced by the DHS.

The trade and commerce sector also requires enhanced security teams, and many security firms in this space perform specialized security activities for clients that participate in the U.S. Customs and Border Patrol's Customs Trade Partnership Against Terrorism (C-TPAT) program. Furthermore, certain customers operate within the U.S. Department of Commerce-designated Foreign Trade Zones, further regulating security. As exports become more prominent, moreover, security officers at ports, airports, and rail systems must follow Port Facility Security Plans (PFSPs), enforced by the Coast Guard, and meet the requirements to carry the Transportation Security Administration's Transportation Worker Identification Credential (TWIC).

An additional unique market is the medical facilities market. Patrol services employees have to be well-versed in Health Insurance Portability and Accountability Act (HIPAA) requirements, which relate to the security and privacy of health data and information. This includes the need to ensure that patients are provided with a safe and secure environment, incorporating the training of staff. 3RC will continue to probe for patrol services companies that have unique exposure to verticals such as healthcare and are uniquely positioned to optimize the positive upside brought by strong teams that align with regulations.

The patrol services industry has approximately 8,000 companies, 7,714 of which are within the $0-5 million EBITDA range. Notably, most companies at the lower end of the market are experiencing difficulty in differentiating themselves from the competition given the large number of providers. This, combined with the fact that companies with revenue of up to $10 million having a gross margin of 16% compared to 13% for companies with revenue over $100 million, provides a strong opportunity set for 3RC. In the coming months, 3RC will explore patrol service companies that show the potential for differentiation and accelerated growth.

The end markets for the patrol services industry include the Department of Defense (25.21%), Department of State (24.57%), energy storage (13.96%), Department of Homeland Security (13.79%), and independent companies (1.83%).[iii] Companies impacted positively by the increased defense spending trend are certified by military, defense, or government contractors, particularly those that are certified for high-profile security services of military installation and government buildings. This trend also is true for any company that provides products to any government patrol or law enforcement agency, which already have established contracts with various municipalities. When examining companies in this space, 3RC will place less of an emphasis on companies that are highly saturated with government contracts, focusing instead on companies that are commercial in nature.

The M&A market has been strong for patrol services in the past few years, with recent investments by financial buyers centering around the theme of technology-enabled security contracting. Within this space, wider margins, increased defensibility, and decreased liability are all available for firms. This emphasis on technology-enabled providers has decreased the focus on the traditional guard services space, which has experienced a slowdown in investment activity. An increasingly common occurrence is for strategic acquirers to search for technology-enabled products and services to add to their own patrol service offerings, which increases efficiency, broadens their product suite, and increases overall efficiency.

EBITDA multiples over the past 15 years have ranged from 8.0-9.0x, though multiples for smaller contractors have increased 50% since 2012. Three serial buyers in the space, which have each acquired several companies in the past few years, are Apollo Global Management, AlliedBarton, and Universal Services of America. Despite this, the shift toward technology-enabled services has created an opportunity for 3RC within the traditional space, allowing 3RC to acquire a more traditional company with the capability to implement technology or provide an additional defensible value-add.

Non-Technology Law Enforcement Products & Services

The United States Department of Defense has always been on the cutting edge of technology, often applying new developments in novel ways. While 3RC is willing and able to capitalize on the increased use of technology's business applications and will further investigate these trends in the *Areas of Interest* arising from the *Modernization of Things* in an upcoming report, 3RC also recognizes that the nature of the defense and law enforcement industries makes technology an even riskier factor. With the Department of Defense consistently purchasing and upgrading new components to ensure that their equipment is state-of-the-art, contractors can lose a large portion of their business if their technology is not superior to a new competitor in the market. As a result, 3RC is focusing on the areas that are less subject to drastic technological advancement in relation to defense spending, though certain context-dependent applications may be valuable.

In an effort to ameliorate the risk caused by high customer concentration by the government through project-based business opportunities, 3RC has decided to focus more on the products and services that include the government as part of a diversified customer base. The advanced materials sector continues to be an area that is able to capture strong growth while limiting concentration from the DoD, specifically flame retardants. The various applications of flame retardants in particular results in lower customer concentration, often with defense contractors as a smaller percentage of the customer base and positioned as the growth portion of the business.

One area that 3RC is exploring in further detail is body armor manufacturing, which supplies protective equipment that includes soft and hard body armor, shields, and headwear. While the industry is primarily supported through military and law enforcement demand and the preceding government spending, this spending has historically been fairly consistent. Notably, the federal government generally either supplies or subsidizes domestic police agencies, solidifying the importance of federal relations for contractors. The industry currently has a revenue of $464.6 million and is projected to grow at a rate of 4.4% through the coming five years.[iv] Growth is primarily being driven within the domestic law enforcement segment, with more drug-related investigations, potential terrorist calamities, and mass shootings factoring into overall demand increase. One aspect that could make companies in this industry even more interesting is if they also have exposure to transportation armor for specialty vehicles, an industry that is explored later in this report.

An additional segment that has showed initial promise is alarm, and traffic control equipment manufacturing, driven by the fragile infrastructure and transportation trends. The industry currently has a revenue of $4.9 billion and is projected to experience fairly stagnant growth over the next five years, though specific sub-verticals offer various growth rates.[v] The primary issue that has made increased profitability in this industry difficult is the increasingly large amount of import competition at more favorable prices, with reduced international manufacturing expenses accounting for the majority of the difference. This has led to a strong M&A market in recent years in an effort to improve margins through economies of scale and will continue in the coming years alongside increased foreign competition. As 3RC dives deeper into our investigation of the space, 3RC will emphasize companies that are uniquely prepared to capture the portion of growth brought by the positive trends of infrastructure spending and real estate investments that the import market is unable to fulfill.

Another market that is positioned to capitalize on *Escalating Conflicts*, specifically relating to patrol services, is the training and certification market. This sector also includes background check companies and even those that provide self-defense training or apprehension. Often these companies are exposed to areas beyond patrol services, including law enforcement and arms handling, though the industry is fragmented due to the regional nature of many of the end markets. Some firms even extend to certifications for fire alarms, arms handling, technical, non-lethal weapons, bomb detection, and airport security.

This trend can be approached with a broader stance as well, as there is a strong need for less-lethal weapons like rubber bullets, ball grenades, and CS gas due to the increased scrutiny of police actions. The segment also includes 40mm round reduced-lethality bullets, chemical irritant sprays, batons, radio communications and electronic equipment, and leather belts. One example of this is the border patrol's recent purchase of armor for boats and vehicles used to patrol rivers and roads along the U.S.-Mexico border, as well as personal body armor.

Additional Securities Services and Related Products & Services

The securities services market currently accounts for $33.8 billion in revenue and is expected to grow at a rate of 1.4% over the next five years to reach $36.2 billion in 2022.[vi] Over 70% of this number, or $24.5 billion currently, is security that is contracted to third-parties. While there are specific segments that 3RC has discovered that are currently pertinent and of interest in our search process, others have yet to be discovered and will be investigated later on as their trends appear more prevalent.

Due to the fact that heavy consolidation has already occurred which has made valuations exceedingly high in the securities products and services space, it is difficult to conclude that an attractive investment option exists in this space for 3RC. Despite this, it is important to keep options open when considering investment opportunities, particularly when considering the positive trends that the securities products and services sector has been displaying. While there may not be a specific area of focus resulting from this segment, 3RC is still looking for and investigating the sector for companies that fit our investment strategy.

The distribution side may be a good way of gaining exposure to overall growth, with safety equipment and supplies distributors having revenue of $13.2 billion and growing at 1.3% through 2022. Similar to other industries, these distributors function by purchasing equipment at a discount and selling at a premium. One advantageous difference with safety equipment and supplies, however, is a more predictable revenue stream, which is an effect of regulations and mandates at the federal and company level for specific items in work environments. Moreover, these distributors are not solely tied to conflict-oriented expenditure because manufacturing and construction account for a large portion of industry revenue.

An industry that may be of interest to 3RC is the metal detectors market, which is expected to reach an estimated $1.6 billion by 2022 and is forecasted to grow at a 5.1% CAGR from 2017 to 2022.[vii] The primary driver of this market, which was discussed heavily in the *Manifestations of Escalating Conflicts* report is the rise in terrorist activities, expansion of infrastructure, and increasing stringency of government compliance in various sectors to maintain high levels of security and safety.

Another sector, which intersects with metal detectors, is the x-ray machines industry. Revenue is expected to extend to $13.0 billion by 2021, growing at a rate of 2.3% over the next five years.[viii] While exports are projected to remain at a level close to $3.6 billion through 2021, domestic demand for irradiation devices is projected to rise. The x-ray machine industry is currently in a growth stage, which precedes heavy consolidation, with approximately 164 businesses in the industry. Domestic companies often experience competition from overseas producers, but the strong demand from the medical sector in the United States has supported significant industry growth.

It is important to note that, with companies in industries like metal detectors and x-ray machines, 3RC will steer away from investing in the manufacturers of these machines and will tend toward the companies that install, maintain, and monitor their performance. This reduces the risk associated with new advancements in machine technology as these companies will be able to offer a broader suite of machines to their customers. Additionally, service companies have the ability to obtain recurring revenue by selling into REITs and gaining national contracts serving projects like high-rise and corporate parks.

Cabling and electrical products and services will experience a growth in revenue due to the robustness of cabling and other products needed to implement new security initiatives. For example, with the fire prevention, surveillance, evacuation, access control, intrusion deterrence, and checkpoint monitoring sectors, there is a strong need to install the proper electrical components before the systems themselves. The derivation of this is that cabling and electrical products, along with the services that install and maintain these systems, serve as pre-requisites for the critical systems that are increasing in prominence as a result of security concerns. Moreover, these structures and services are often used in other industries as well, allowing 3RC to acquire a company in this space that has exposure to *Escalating Conflicts* as a smaller, growth-oriented portion of their revenue.

Self-Protection Products & Services

Several positive trends are present which make the self-protection products and services market an interesting area for 3RC to consider investments. As highlighted during the *Manifestations of Escalating Conflicts*, insurance companies have recognized the value of self-protection products and services and offer discounts of up to 30% for specific security applications. The increasing consumer-friendly nature of these products and services has accelerated their adoption and increased growth rates across the industry. As a result, valuations tend to be high in certain areas of the industry where significant consolidation has already occurred. 3RC is aware of the risks attached to the acquisition of targets at high multiples and will avoid these opportunities when considering investments.

While this trend and others, specific to each sub-vertical, have made the self-protection products and services vertical appealing to 3RC, many companies within the space are uniquely specialized and do not fit within a single sub-vertical. As a result, companies may arise as the search process is conducted which are capitalizing on the broader market trends and can achieve outsized returns. During this report and investigation, 3RC has identified the success factors and relevant market dynamics that will facilitate and guide the search process moving forward, allowing 3RC to uncover the most promising companies by taking a broader initial approach.

The personal protective equipment manufacturing industry may be of interest to 3RC. Revenue for the industry is at $4.3 billion and is projected to grow at 1.7% through 2022.[ix] One driver of growth is safety regulations, which are often mandated by the Occupational Safety and Health Administration (OSHA) with the goal of protecting workers. This has appeared in the construction industry, among others, as the hazardous nature of their work necessitates personal protection equipment to reduce risks. As a result, revenue is contingent upon the industrial and construction sectors because the primary customers of personal protection equipment manufacturers are in these spaces.

Specialized Storage & Transportation

One specific sector within specialized transportation is armored transportation services, which has a revenue of $2.6 billion. Companies within this industry transport valuables, which include currency and defense products, for the companies that require increased security during transportation.

Often, companies that are unable to justify purchasing specialized vehicles in certain localities rely on specialized transportation firms to lease out their vehicles. The applications for this are far-reaching and can extend to conflict-oriented sectors like disaster relief while also maintaining exposure to nuclear, explosives, air-controlled vehicles, and high-value deliveries like pharmaceuticals and artwork.

A key note is that 3RC is not aiming to invest in businesses that own the trucks themselves but are approaching the retrofitting and logistical support of specialized transportation. Firms that own trucks often require significant capital expenditure to maintain and replace old trucks, and the purchase of these vehicles is often risky. Despite this, the margins in this industry can be high and defensible as there are only a few companies that are able to provide this unique value-add. One example of an application is the transportation of a trade show, where valuable components need to be moved during a specific time period, creating demand for these ancillary companies. 3RC will stay open to opportunities in this sector in order to capture outsized returns.

The market may be posed for further growth as well, and Stifel analysts noted that "2018 will not represent the 'peak' of this cycle, which has become a concern among investors."[x] Interestingly, this industry has only grown with the increased use of technology, specifically fleet tracking software, which has helped the government ensure that truckers are staying under their maximum hour counts. The increased stringency means that routes of 500-750 miles "might take two days instead of one, forcing companies needing next-day delivery to hire more expensive team drivers."[xi]

Specialized storage and warehousing also appears interesting to 3RC. Revenue is currently at $7.2 billion and is expected to grow at a stable 2.4% through 2022. In addition to defense products, companies in this space store petroleum, chemicals, lumber, whiskey and various other products that require enhanced storage solutions. While many of the energy trends will be discussed in the following report, which goes through the *Areas of Interest* in relation to *Lower Domestic Energy Prices*, the wide capabilities of this industry provide limited risk exposure to the defense space. 3RC will continue to explore the potential applications of this space in order to uncover the most compelling opportunities for investors.

Agricultural Automation

While the *Manifestations of Escalating Conflicts* has been the primary driver of the conclusions thus far in this report, it is important to understand the intersection with *Shifting Demographics* when considering the agricultural automation industry. If a border closure were to occur, studies indicate that 61% of fruit production would shift overseas as immigrants make up a large percentage of the agricultural labor force.[xii] With an increasing portion of American children continuing their education in college, fewer individuals are available to work in the agricultural industry, though the need to maintain or increase food supply is still pressing. The solution that takes this trend into account is agricultural automation, which provides this labor in an economically viable fashion.

Hydroponic crop farming is one example, which is a $848.1 million industry.[xiii] Increasing vegetable prices and damage caused by weather events have propped up growth in the space in recent years and may continue in the future as it is difficult to predict extreme weather conditions. One notable advantage of this sector is that consumers are putting more emphasis on locally-sourcing their produce, leading to the conclusion that imports will be little threat to domestic firms.

Overall growth in the farming automation space is being driven by increasing demand for produce and a desire to reduce costs, which has also increased demand for companies that provide tangential products and services to these facilities, including lighting, water systems, and containment structures. In order to ensure that the end product is healthy, organic, and clean, more lighting, fans, and conveyors will be required. This creates an opportunity for 3RC as the construction of new, technology-enabled agricultural facilities will be the answer to filling the supply gap that is arising from these demographic themes.

The fact that the farming automation sector is incredibly new is advantageous because of the strong growth projections, but the fact that it is evolving so rapidly makes defining an investment lens difficult without speculation. While 3RC is still unsure of where they will invest in the agricultural automation space, they are aware of the positive trends and are going to continue to investigate the industry as it evolves. In general, however, the areas that appear most appropriate are the building, implementation, monitoring, and maintenance of automated facilities.

The manifestations of the *Escalating Conflicts* Factor of Influence have created a few specific Areas of Interest for 3RC. Following the investigation and analysis conducted in this report, 3RC is prepared to continue uncovering the most promising investment opportunities that relate to these trends. In the next volume of the Strategy Report series, 3RC will examine and discuss the most relevant Areas of Interest arising from the manifestations of *Lower Domestic Energy Prices*.

[i] Andrews International
[ii] TMR
[iii] Epipeline
[iv] IBISWorld
[v] IBISWorld
[vi] IBISWorld
[vii] IBISWorld
[viii] IBISWorld
[ix] IBISWorld
[x] Stifel
[xi] Echo Global Logistics Inc.
[xii] Bloomberg
[xiii] IBISWorld