



Industrial Automation & IoT

in the Age of Industry 4.0

Introduction

3RC is pleased to present you our investment strategy report on the Industrial Automation and Internet of Things (IoT) industry – comprehensively known as Industrial Digitization – with focus on the United States. In this report we provide an overview of the trends driving growth and our strategy to enter this sector.

Industry Evolution

To understand the winds of change in our world and its impact on commerce, industry, and the economy is to understand the inertia of technological change over the last 300 years (Exhibit 1). The Industrial Revolution (Industry 1.0) began in the 1700s with the mechanization of the workforce and the introduction of steam power, shifting the economy from agricultural-centric to manufacturing-centric. The second evolution (Industry 2.0) came in the 1800s with the introduction of electricity, gas, and oil power, prompting the creation of the internal combustion engine and the first automobile. The third evolution (Industry 3.0) began in the 1900s, which saw the introduction of nuclear power and the proliferation of electronics, telecommunications, and computers and robotics. We are now amid another industrial evolution: Industry 4.0.

Industry 4.0

Industry 4.0 combines the hardware developed during Industry 3.0 and connects it through communications networks to new analytics and applications made possible by the Internet (Exhibit 2). Artificial intelligence (AI), machine learning (ML), and the Internet of Things (IoT), the hyper, persistent connection of all assets and devices, can now be harnessed to sense, monitor, and manage industrial output to drive quantifiable return on investment (ROI) results (Exhibit 3). The combination of connected hard and soft assets drives productive efficiency by augmenting what humans can do and in many cases reducing the need for human intervention. Industry 4.0’s impact can be felt across the entire value chain from raw materials to product and service delivery. Two of the largest areas impacting Industry 4.0 are Industrial Automation and Industrial IoT.

Exhibit 1: Industrial Evolution

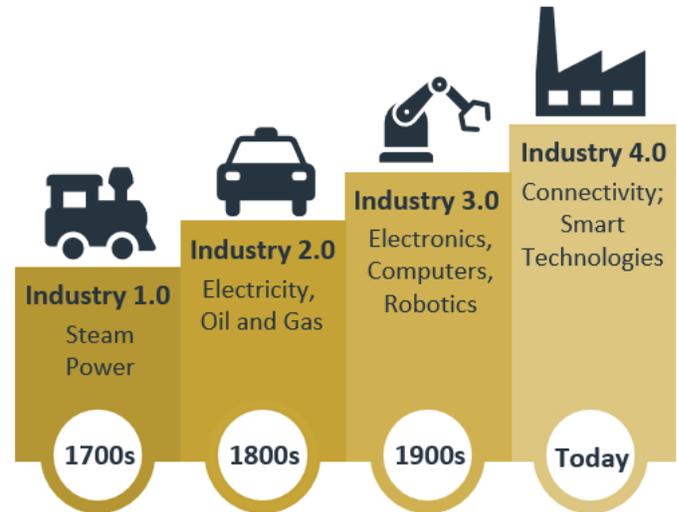
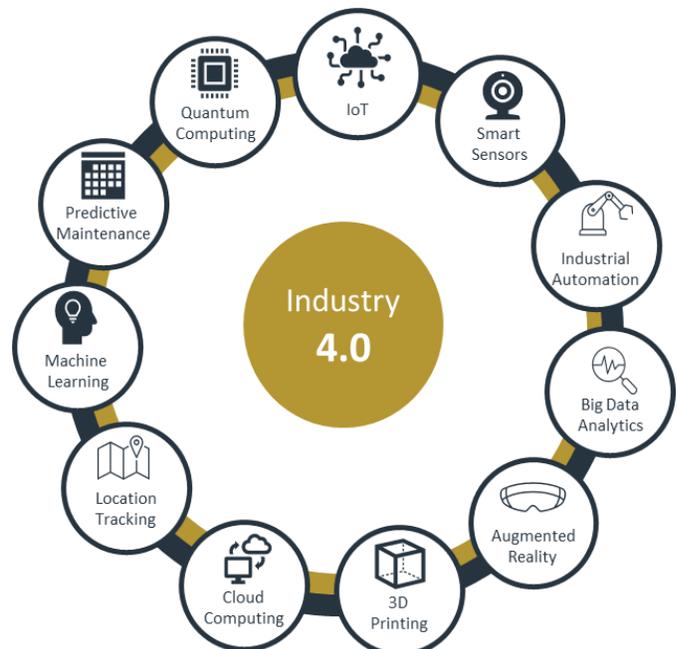


Exhibit 2: Industry 4.0’s Becoming



Exhibit 3: Core Components of Industry 4.0



Industrial Automation

Fully enabled by Industry 4.0, industrial automation links operating technology (OT) like computers, sensors, machines, devices and/or robots to information technology (IT) systems that monitor and manage assets to complement and, in some cases, replace humans in business and industrial processes and production settings. Industrial automation has its roots in “control” and machine controllers, but today, industrial automation utilizes multiple asset categories, each operating separately, yet harmoniously across the industrial ecosystem. Industrial automation assets can be classified into three broad categories: automated equipment and robotic devices that execute work processes; networks that connect devices and application platforms; and analytics and application platforms that drive automation and collect and analyze data. Together, we call these assets DNA. (Exhibit 4)

The global market value of this sector, also referred to as Smart Factory or Smart Manufacturing, is large and estimated to be \$154B globally.¹

Exhibit 4: The DNA Construct



Industrial IoT

The implementation of AI and IoT processes within factories and across operating infrastructure outside the plant is also proliferating rapidly, with a broad array of industrial companies finding these solutions to be ideal for reducing production costs and improving margins. Similarly, outside of the factory, these technologies are applied to operating infrastructure like oil & gas pipelines, utility lines, mining, water, and waste management processing, amongst many others. Enabling these physical assets are software applications and analytics that provide the actionable intelligence to make decisions and effect change. Bridging the gap between software analytics and hardware is a network of connections and clouds that create an intelligence “field of view” of assets, process, and infrastructure. This is being done through both private and public networks and today is being enhanced by fast and sophisticated 5G networks that will connect these once disparate components and create unprecedented speed and resilience.

¹CapGemini

Deploying industrial automation and intelligent infrastructure assets has multiple advantages including higher productivity, quality, flexibility, information accuracy, and safety. But up to now widespread adoption of automated assets, particularly in small to mid-size manufacturing (SMM) firms, has been mixed across the globe and across industries.

Adoption of Industrial Digitization

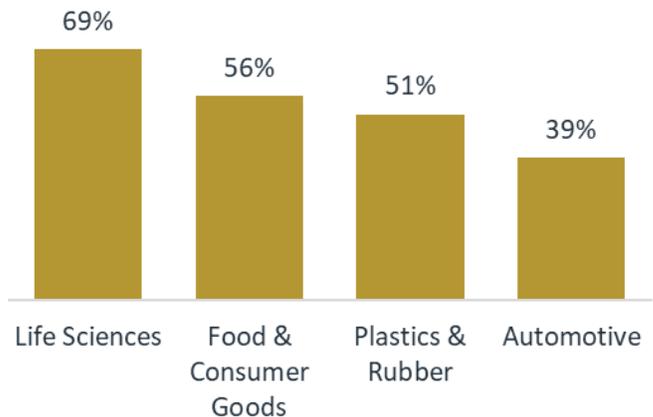
In general, global adoption of Industry 4.0 principles and automated robot technology has been varied and fragmented by sector, size of company, and region. The automotive industry was one of the first movers and have perfected the automated manufacturing of automobiles. For many years, the automotive sector has been the predominant consumer of robotic equipment and services; however, in 2020, for the first time in history, adoption by non-automotive sectors increased above the automotive sector (Exhibit 5).²

The use of automation technology has also been limited to the largest manufacturers in the U.S., yet more than 75% of the manufacturing companies in the U.S. are SMM firms that have fewer than 20 employees.³ This segment has not yet seen widespread adoption of automation technology.

From a geographical perspective the United States lags in robot density among countries tracked by the International Federation of Robotics. The US. ranks 9th in terms of robot density, which is measured as the number of robots installed per 10,000 employees (Exhibit 6).⁴

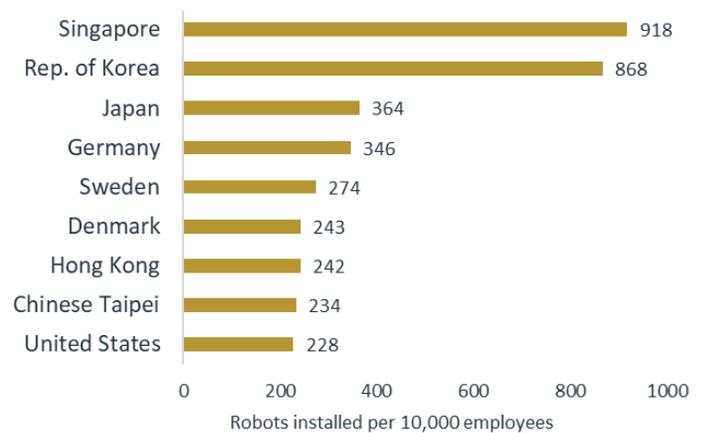
This leads to an odd contradiction. While the United States has consistently been an incubator of global technological innovation, the U.S. has lagged the developed world in industrial technology adoption and implementation. Cultural and generational challenges, capital expenditures and labor costs, required technical expertise, and labor imbalances have driven the gap between innovation and implementation. However, tailwinds and trends for closing this gap are driving an opportunity for explosive growth across the industrial automation spaces.

Exhibit 5: 2020 Annual YOY Growth in Robotics Purchases by Select Sectors



Source: Association for Advancing Automation

Exhibit 6: Robot Density in the Manufacturing Industry (2019)



Source: International Federation of Robotics

²Association for Advancing Automation

³Small Business Administration

⁴International Federation of Robotics

Trends and Tailwinds

As mentioned, adoption of Industry 4.0 strategies in the U.S. has lagged global competition; however, these trends are reversing and the IoT for factory and industrial automation market is estimated to grow at a 22.8% compound annual growth rate (CAGR) through 2026, while GDP is projected to grow 2.5% (Exhibit 7).^{5,6}

There are five key trends driving the growth in industrial digitization in the future:

1. Increased adoption and manufacturing expansion
2. Cost competitiveness
3. Generational and cultural shifts
4. Labor rebalancing
5. COVID-19

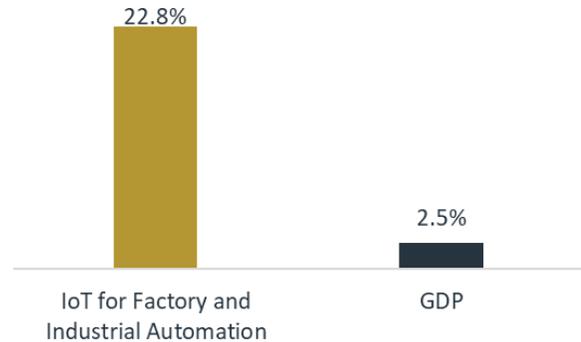
Increased Adoption & Manufacturing Expansion

Large manufacturers and infrastructure owners have understood the potential of automated, intelligent devices, and robotic assets. They are leveraging Industry 4.0 to capture the benefits of IoT, sensors and industrial automation capabilities. Now SMM firms are poised to experience the benefits of Industry 4.0 architecture. Further, interest from other industries will continue to grow at outsized rates –the chemicals, and the food and beverage industries are rapidly making investments into digital technologies for industrial equipment (Exhibit 8).⁷ It is not just the growing number of firms and industries interested in industrial automation assets, it is the growing number of things that can be automated, which has been borne out of the continued evolution of devices, networks, and applications and analytics.

Additionally, survey results show investments in U.S. manufacturing and automation are expected to increase. In a recent survey 500 executives of companies with more than \$500 million in annual revenue were surveyed about the health of manufacturing in the United States. Seventy-five percent of those executives reported that “their companies are likely to expand manufacturing efforts in the U.S.” (Exhibit 9).⁸ Further, in a Deloitte survey 66% of SMM firms expect to automate in the future (Exhibit 9).⁹ Much of this new investment is expected to be in the form of

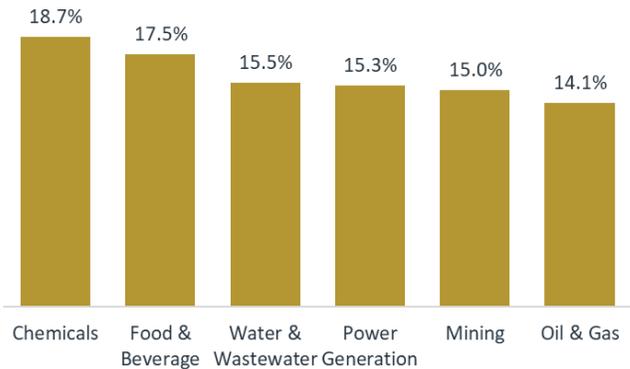
implementing recent technological developments to maintain or increase margins while also expanding capacity necessary to grow revenues. Based on the survey results, the domestic companies that develop, implement, and maintain these innovative industrial applications could see incredible growth in the coming years.

Exhibit 7: Projected CAGRs (2021-2026)



Source: Frost & Sullivan, Congressional Budget Office

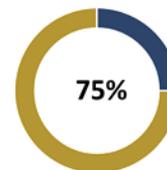
Exhibit 8: Projected Growth Rates for Digital Technologies in Industrial Equipment



Source: Frost & Sullivan

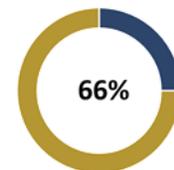
Exhibit 9: Surveys Say...

75% of executive's likely to expand U.S. manufacturing



Source: Wall Street Journal

66% of companies expect to automate



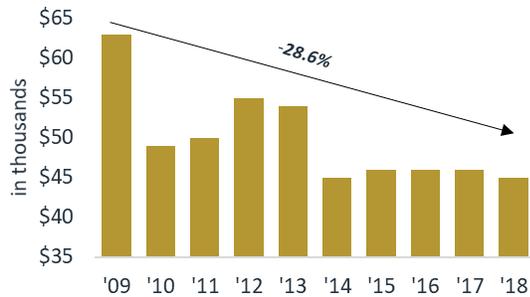
Source: Deloitte

⁵Frost and Sullivan
⁶Congressional Budget Office
⁷Frost and Sullivan
⁸The Wall Street Journal
⁹Deloitte

Cost Competitiveness

Upfront capital cost has arguably been the number one reason why more companies have not invested in industrial automation and intelligent assets; but this impediment is no longer as large as it once was. According to Deloitte, the average price of industrial robots has declined over recent history (Exhibit 10).¹⁰ Pair the decline in price of industrial robots with the roll-out of collaborative robots (“cobots”) that typically have a lower price point, and the interest from SMM firms accelerates (Exhibit 11).¹¹

Exhibit 10: Average Price of Industrial Robots



Source: Deloitte

Exhibit 11: Projected CAGR in Cobot Sales through 2025



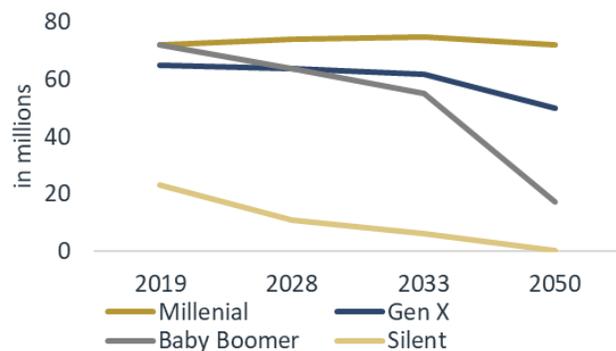
Source: BIS Research

Robotic products are not only less expensive, but companies are emerging that make deploying robots more capital efficient through automation-as-a-service (AaaS) business models, which essentially shifts traditionally large capital expenditures to more affordable (on an annual basis) operating expenditures and come complete with equipment maintenance, support, and monitoring. By accessing these new business models, companies can deploy industrial automation assets fast, and at a relatively low cost, allowing their businesses to transition to a more reliable and productive lower-labor operating model.

Generational and Cultural Shifts

Generational shifts are reducing the friction to technological change and culture is rapidly evolving to a technology-first approach to solving problems. Baby Boomers are aging out of the workforce and Millennials, who grew up with omnipresent technology, have become the largest proportion of the population. (Exhibit 12).¹² This generational shift is driving the technology-first approach to solving problems. Additionally, as many family-owned businesses with no obvious successor in the family sell to private equity or larger manufacturing organizations, there could be significant investment in industrial automation and technology capabilities as new owners look to evolve, grow, and control costs.

Exhibit 12: Population Projections by Generation



Source: Pew Research Center

Labor Rebalancing

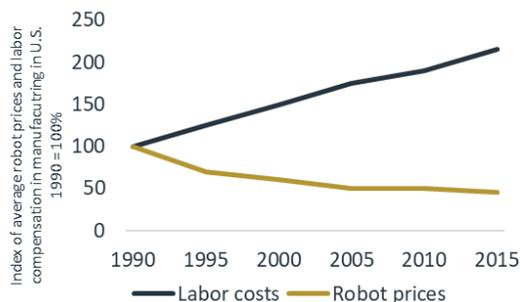
The supply side of labor (people looking for work) and the demand side of labor (companies looking for workers) are going through a period of rebalancing.

¹⁰Deloitte
¹¹BIS Research
¹²Pew Research Center

On the supply side, fewer workers are entering perceived dirty and dangerous fields. For example, the American Welding Society predicts a shortage of 400,000 welders in the U.S. by 2024.¹³ This flight from certain blue-collar jobs has left a growing gap to fill. On the flip side, more workers are choosing training in technology fields like computer science. According to data from the U.S. Department of Education, the number of bachelor’s degrees conferred for computer and information sciences has grown at a faster rate than any other field of study since 1970.¹⁴

The demand side is evolving as well. Wall Street Journal research found that manufacturing jobs requiring the most complex skill sets grew by 10% from 2012-2018, while less complex jobs declined by 3%.¹⁵ The reduction in supply of lower skilled workers and increase in higher skilled workers has created a situation of rising labor costs but falling automation/robotics costs (Exhibit 13).¹⁶ This environment should yield substantial new investment in Industrial Digitization.

Exhibit 13: Labor Costs vs Robot Prices



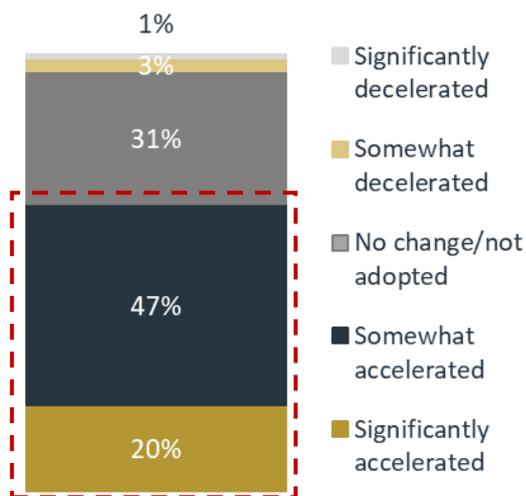
Source: McKinsey & Company

Additionally, while estimates indicate that less than 5% of occupations can be fully automated in the near-term, the roles that will be automated are those that are highly structured, dangerous and dirty, and/or repetitive, which are “most prevalent in manufacturing, accommodation and food service, and retail trade.”¹⁷ In fact, it is estimated that 60% of manufacturing activities are susceptible to automation.¹⁸ The firms leading the charge on this front are likely to be more profitable in the near and long-term. Because of the increased use of these systems, the companies that install, maintain, and service these components are experiencing growth.

COVID-19

In many ways, COVID-19 exacerbated problems caused by the technology investment gap at SMM firms. Over the last year, those companies faced many challenges in sourcing, logistics, and operations. COVID-infected workers caused plant closures and supply chain disruptions, and re-shoring became top of mind as the global pandemic exposed international dependencies that may be unsustainable in the future, especially in a world where foreign labor and logistics costs have skyrocketed. Remote monitoring accelerated and workers and companies got comfortable with working-from-home. Companies that are dependent on lower skilled workers are still struggling with production issues as they compete for labor with government unemployment subsidies. There is much discussion around the “new normal”, and according to a recent McKinsey survey, automation and artificial intelligence will be a part of it as investments in new technology accelerate (Exhibit 14).¹⁹

Exhibit 14: A Recent McKinsey Survey Shows..
67% of companies have accelerated automation and AI strategies as a result of COVID-19



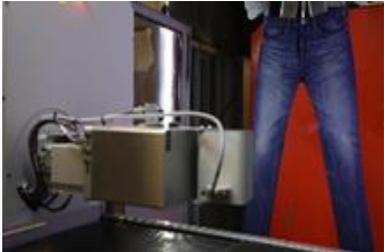
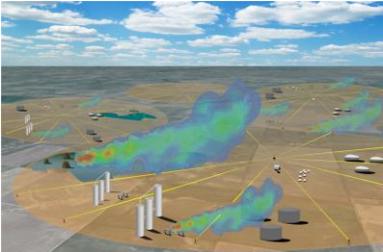
Source: McKinsey & Company

¹³American Welding Society
¹⁴U.S. Department of Education
¹⁵The Wall Street Journal
^{16,17,18,19}McKinsey & Company

In summary, it is not just the fact that previous impediments to technological change are being removed, it is also the fact that industrial automation makes business sense. Industry 4.0 enables owners and managers to measure quantifiable ROI that is driven by:

ROI Driver	Example(s)
Higher Productivity	<ul style="list-style-type: none"> - Machines do not fatigue – reduced downtime - 24/7/365 “lights out” plant operations – more units per hour
Better Quality	<ul style="list-style-type: none"> - Reduced errors through better inspection - More precise applications
More Flexibility	<ul style="list-style-type: none"> - Easily programmed and trained robots - Reconstitute for other applications
Increased Accuracy	<ul style="list-style-type: none"> - Reduced waste - More consistent data
Safer	<ul style="list-style-type: none"> - Reduced exposure to dangerous activities - Fewer injuries; less liability

The following case studies highlight some of the benefits of industrial automation and only demonstrate the tip of the iceberg.^{20,21,22}

Exhibit 15: Levi’s	Exhibit 16: ExxonMobil	Exhibit 17: Ford
		
<p>Problem</p> <p><i>Levi’s workers spent countless hours cutting, fraying, and fading jeans</i></p>	<p>Problem</p> <p><i>ExxonMobil faces regulatory risks associated with methane emissions</i></p>	<p>Problem</p> <p><i>Ford workers had to manually deliver manufacturing and welding materials to robot stations</i></p>
<p>Solution</p> <p><i>Levi’s deploys automated lasers that cut holes and frays</i></p>	<p>Solution</p> <p><i>Exxon is utilizing satellite and aerial surveillance monitoring, drones, and sensors to detect methane leaks</i></p>	<p>Solution</p> <p><i>Ford deployed mobile collaborative robots from Mobile Industrial Robot to support safe material transfer</i></p>
<p>Outcome</p> <p><i>Reduced time to finish a pair of jeans from up to 20 minutes for hand finishing to 90 seconds</i></p>	<p>Outcome</p> <p><i>Reduced emissions by 20% since 2016</i></p>	<p>Outcome</p> <p><i>Freed up 40-man hours per day</i></p>

²⁰Levi Strauss & Company

²¹Exxon Mobil

²²Ford Motor Company

DNA Ecosystem

The broad industrial automation market and ecosystem is one comprised of man, management, machine, sensors, devices, connections, the cloud, data, data science, data analytics, AI, ML, and a great deal of enabling technology. The aim of this ecosystem is ROI creation and realization – with the power to be precisely quantitative – as the three previous case studies highlight.

To fully appreciate and simplify the understanding of this very complex ecosystem, 3RC has adopted the DNA construct to look at how industrial automation and IoT is ultimately deployed, where D = Device, N = Network, A = Analytics & Applications (Exhibit 18). The DNA construct gives us the context within which industrial automation operators and investors can understand strategy, product development, go-to-market, and investment for the available business models for creating value. Characteristics of DNA includes:

Device (*Machines, sensors robots, hand-helds*)

- Specialized industry verticals
- Can be commodity, one-time, non-recurring
- One-time device sales, await repeat purchase
- Usable life of 7,10,15 years
- Stable, unless unique IP or material attributes

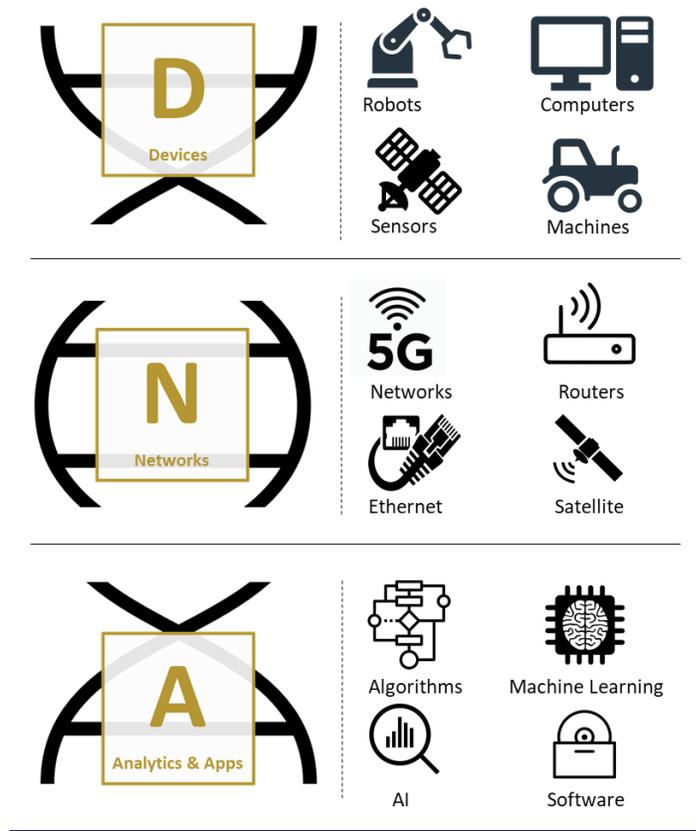
Network (*Communications, connectivity, & cloud*)

- Horizontal market, vertically agnostic
- Multi-modal, mobile and fixed, volume-driven
- Omnichannel connectivity
- Cloud platforms
- Infrastructure-heavy, higher fixed capital

Analytics & Applications (*Software*)

- Big data, AI/ML, visualization, and analytics
- Hyper-specialized and customized vertically
- Software is foundational
- Fragmented with sticky revenue streams
- Barriers to entry can be low

Exhibit 18: The DNA Ecosystem



The DNA construct helps us understand and interpret the broad market trends, demand drivers and suppressors, technology attributes and risk, business model opportunities, along with prioritization and avoidance strategies.

Screening Process

Having grounded ourselves in this DNA model, we began to analyze the market through that framework to screen down to a short list of actionable segments to pursue. Our disciplined approach involved a three-step screening process. In the first screen, we considered market size, historical and projected growth rates, level of fragmentation, and the inelasticity of demand were evaluated. After this first screen, 3RC scored each of an initial 80 sub-segments on a weighted scale based on the factors analyzed in the first screen, yielding 30 potential investable segments. Finally, for each sub-sector, we determined red light, green light features of the business

such as avoiding cutting edge technology, bias towards fragmented markets, and avoiding capitially intensive businesses.

Segments

From this screening and prioritization process 3RC arrived at the following three (3) main segments of focus with large and attractive addressable markets (Exhibit 19).

Sensing Devices, Equipment, and Machines

Defined at the highest level as all types of equipment that sense surroundings or gather data for operational performance. These equipment or devices can be fixed or mobile. This segment will include the machine, equipment, device, or a sensor itself or the components that are manufactured and/or integrated within. Sensing equipment could also be elements that enable, surround, connect, control, or protect the machine, equipment, device, or sensor. End products that sensors are connected to (e.g., wearables) that provide sensing and monitoring capabilities of numerous kinds, including location, state, change state, safety, vision, and other adjacent elements would also be considered.

Robotic Assets

Defined as all types *automated or autonomous* robotic devices, machines, equipment, and systems, whether fixed or mobile. This segment includes the robot itself, components that are manufactured and/or integrated into a robot, the end-products robots are connected to the robotic asset, and other adjacent elements to be further identified.

Industrial Automation and IoT Infrastructure

The infrastructure and systems needed to enable and maintain myriad connected devices and assets is substantial and vital. This infrastructure is a natural space for 3RC to play and will offer several adjacent opportunities. There are countless elements that will enable the full DNA functionality of Industrial IoT, intelligence, and automation. These elements will include equipment, physical infrastructure, protective infrastructure, protective products, indoor equipment, outdoor equipment, components, radios, vertical sector-specific components (e.g., O&G, Renewables, Transportation, Mining, etc.), small cells, and antennas.

Exhibit 19: 3RC Focus Segments

Sensing Device Examples		
Air Temp.	Light	Proximity
		
Distance	Pressure	Sound
		

Robotic Assets Examples		
Tool changer	Gearbox	Wrist
		
Arm	Mobile	Control box
		

Automation & IoT Infrastructure Examples		
Radio	Router	Cables
		
Small cell	Antenna	Server
		

Business Models

Having distilled our markets down to these three segments of focus, business models and types were evaluated. Four (4) unique business models in the Industrial Automation and IoT industry emerged:

1. Manufacturing of Components
 - Companies that manufacture the components or end-products that address automation needs and deliver the features & functionality required for operation.
2. Systems Integration / Value Add Distribution
 - Companies that aggregate, integrate, and/or distribute sensing, robotic, and automation products.
3. Automation-as-a-Service
 - Companies that integrate device-level products and provide a service designed to relieve capital expenditures and operating expenditures from the balance sheet.
4. Automation Analytics
 - Companies that focus on networks, data science, and intelligence services with high reliance on software.

The last step was to collate target sectors and business models to prioritize our investment focus and deal sourcing approach.

By cross-comparing sectors with business models, we have been able to prioritize our strategy and plan into areas of focus and avoidance. In the table below (Exhibit 20), “Core” areas are those that will be our primary focus for deal-sourcing. Automation-as-a-Service businesses trade for more than 15x and are difficult to find at our size range. But this is a business model that we view as something that can be built rather than purchased. Automation Analytics carries significant technology risk due to heavy software reliance. Anything involving pure-play software analytics and pure AI/ML data science companies will be avoided, for investment. But it is expected that AI/ML and software will indeed play an important role in the business development and market opportunities of the core segment companies.

Exhibit 20: 3RC Focus Segments

Segment	Sensing Devices, Equipment, and Machines	Robotic Assets	Automation & IoT Infrastructure	Revenue Model	Estimated EBITDA Multiple
Manufacturing of Components	Core	Core	Adjacent to Core	Product Recurring, PO’s, Contracted Production	Mid-to-High Single Digits
Systems Integration	Core	Core	Adjacent to Core	Product Recurring & Project Based	High Single – Low Double Digits
Automation-as-a-Service	Adjacent to Core	Adjacent to Core	Adjacent to Core	Monthly Recurring & Subscription	Mid-to-High Double Digits
Automation Analytics	Avoid	Avoid	Avoid	Monthly Recurring & Subscription	High Double Digits

Strategy Illustration

After identifying the types of companies to pursue in our sourcing efforts, we turn our attention to our investment strategy.

We believe we can deploy a minimum of \$50M of equity across various small, and synergistic family-owned businesses to consolidate into a professionally run automation company valued in excess of \$500M based on today’s trading multiples for automation businesses of that size. One of the biggest obstacles when searching for opportunities in this market are valuations. By rolling up smaller assets in the \$2-4M EBITDA range, we can acquire our platform(s) at more reasonable multiples with the end goal of attaining multiple expansion on exit through professionalization of the business, reducing customer concentration, and/or transitioning to an automation-as-a-service biased platform.

Based on our research, smaller regional integrators do trade for acceptable multiples due to customer concentration and a larger base of project-oriented revenue models. Additionally, component manufacturers that supply large robotic and sensor OEMs trade for acceptable multiples due to similar customer concentration issues and limited product offering. While customer concentration does not meet our traditional investment criteria, a grouping of either of the above would diversify the customer base and reduce risk. To best capitalize on current market dynamics, we plan to build a platform from approximately 3-5 businesses over a 2-year period. (Exhibit 21)

3RC is not the only private equity firm that has or is pursuing investments in the industrial automation space. While automation is still in its early innings, certain segments, like Automated Material Handling, have already been successfully consolidated. Rather than discarding this space entirely, we have elected to include it as a guide for building an automation platform.

The above represents a high-level summary of our general investment strategy for the industrial automation and IoT industries. Other investment models do exist (Exhibit 22) and we will pursue them as our sourcing efforts kick-off and our understanding of the market evolves.

Exhibit 21: String of Pearls Concept Illustration

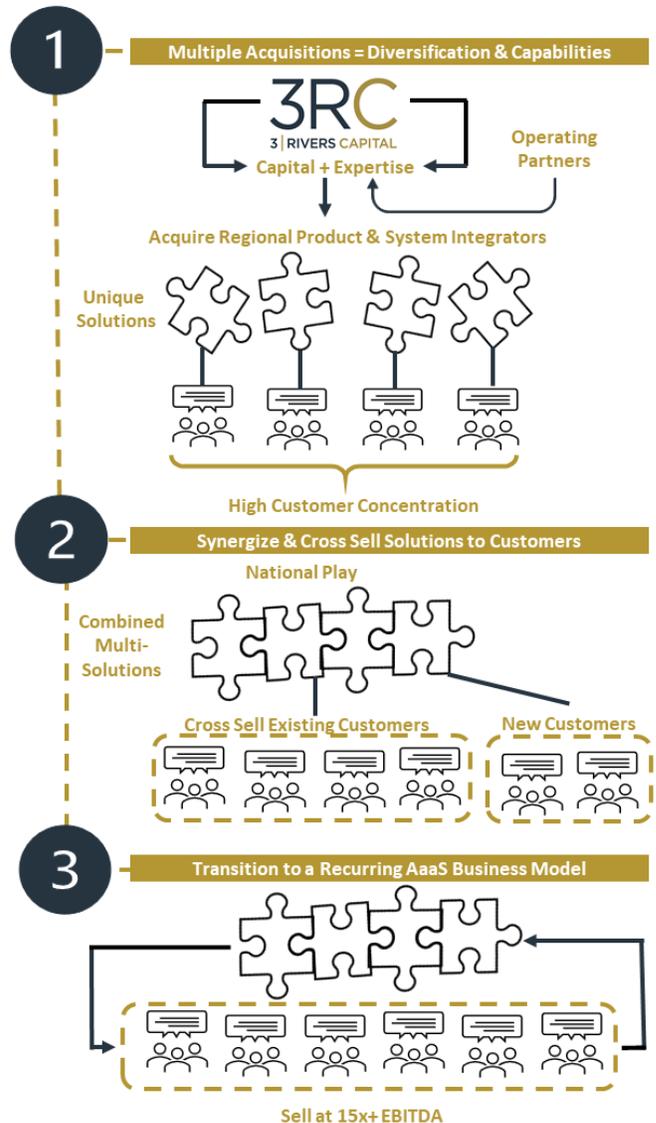


Exhibit 22: Other Potential Investment Models

- National Platform Acquisition
- Regional Roll-Up
- Product Manufacturer to AaaS
- Vertical Specific Roll-Up

Exhibit 23: Risks / Mitigants

Theme	Risk	Mitigant
Technology	Technology evolution is happening fast, being on the wrong side of technology trends as seen in other industries can have disastrous consequences	Avoiding software and data analytics and robotic assets undergoing rapid change will reduce our exposure to problematic business cycles and technology risk
Labor Expertise	Lack of technological expertise at the SMM level can constrain demand	Utilize operating partners with an expertise in automation. Create demand for new and innovative models such as automation-as-a-service.
Competition	Competition is fierce in the industrial automation market	Acquire businesses with demonstratable ROI's, competitive moats, and unique positions and relationships in the market
Regulatory – OSHA, ISO	Changing regulations in the manufacturing space can have significant impacts on investing and upgrading plant assets	There is risk in the evolving regulatory landscape, but industrial automation is on the right side of risk considering the increased employee safety associated with automation
Concentration /Regional Risk	Targets may be focused regionally and exhibit more customer/product concentration than other fields	Buy diversification by acquiring businesses in multiple geographies and with multiple end-markets
Data Security	As the integration of industrial automation and IOT occurs, which will drive up data transfer, security in the ecosystem will constantly be at risk of hackers	Leverage advanced information security technologies are being developed to fight sophisticated cyber-attacks on data

Industrial Automation and IoT Investment Team

The automation investment effort is led by 3RC Co-Founder and Partner Dale Buckwalter. Dale has a deep background in transactional and leveraged finance, executive management, origination, and operational process analysis that has been developed over a 30-year career. Along with Dale’s executive leadership experience, he brings a passion for partnering with and growing family-owned businesses. Joining 3RC’s industrial automation and IoT effort is industry executive Jon Kirchner.

Jon Kirchner has a 25-year track record of helping companies reimagine strategy and evolve business operations. He cut his teeth early in his career as a banker, then turned to technology in the form of data analytics and business intelligence. He then spent 20 years in satellite and space-based infrastructure services including 10 years at Loral Skynet, (\$500M Loral Space subsidiary), where he directed worldwide corporate strategy, sales, marketing, product management and business operations. Since then, he has been a sponsor-backed CEO for a PTFE manufacturer and has served as an advisor assisting industrial businesses with corporate strategy and commercial and business operations for a variety of industrial companies. These have included remote sensing technology start-ups, an Asia-Pacific Smart Manufacturing technology company, a \$2B public aerospace company, and a sponsor-backed systems integrator seeking guidance on large scale digital transformation across their products, markets, and organization.

Jon has been instrumental in developing and refining 3RC’s strategy around industrial automation and IoT. He will remain with 3RC as a diligence resource through the sourcing process and ultimately will be installed as the CEO of 3RC’s industrial automation and IoT platform.

Jon will be joined by a long-time C-Suite veteran, Kevin Horner. Kevin has more than two decades of experience, first as the CIO of Alcoa and most recently as the CEO of Mastech, a publicly traded IT staffing business. He is well rounded with experience across a multitude of business units including manufacturing, sales, finance, HR, marketing and particularly IT and communications.

Kevin will act as support to Jon as our operating partner, a role that Kevin has filled for 3RC successfully in the past. He will assist Jon and 3RC in strategy development and will serve as the liaison between the company and 3RC.

Supporting the automation strategy investment effort with execution and research will be 3RC’s Vice President Greg Martin, Associate Nick Conti, and Research Analyst Alec Gizzie.

Industrial Automation and IoT Investment Strategy Team

<p>Dale Buckwalter</p>  <p><i>3RC Partner / Board Representation</i></p>	<p>Greg Martin</p>  <p><i>3RC Vice President / Execution</i></p>	<p>Jon Kirchner</p>  <p><i>3RC Operating Partner / Industry Executive</i></p>	<p>Kevin Horner</p>  <p><i>3RC Operating Partner / Industry Executive</i></p>	<p>Nick Conti</p>  <p><i>3RC Associate / Execution & Research</i></p>	<p>Alec Gizzie</p>  <p><i>3RC Research Analyst</i></p>
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Investment Model

Beyond 3RC’s automation investment criteria, 3RC has well established investment principles, which are noted in the table below.

Our investment model is driven by 3RC’s well established, five-step investment process. Beginning with research, 3RC looks for burgeoning industries, applying many of the methods used to identify investable automation businesses described above. Next, outbound, and inbound sourcing efforts fill the pipeline with actionable opportunities. After an opportunity is identified, 3RC conducts deep due diligence that includes identifying consultants and researchers to help us fully understand an investment. After diligence, if the investment is still attractive, 3RC executes the transaction. Throughout the process, value creation is paramount and by the time 3RC closes an acquisition, a 5-year strategic roadmap has been developed to limit risk and ensure success.

During the investment process, 3RC keeps in close contact with investors and ensures transparency during the transaction. We pride ourselves in partnership and collaboration with investors and business owners and consistently look for ways to add value.

Investment Strategy Criteria		Investment Process Framework	
EBITDA Between \$2-\$10M	U.S. Based		
Founder / Management Owned	Growth Prospects >10%		
EBITDA Margins >10%	Strong Management Team		
Avoid Significant Technology Risk	Thematic Fit		

Conclusion

We could not be more excited about the opportunities that lay before us. Our examinations of the industrial automation and IoT industries has revealed unique markets being impacted by multiple positive tailwinds and total addressable markets that are growing faster than the broader economy. With our core investment team now partnering with industry executives, our ability to execute our strategy and create value is paramount. The next step in the process will be kicking off omni-channel sourcing efforts to identify actionable opportunities that satisfy our investment criteria. We look forward to keeping in touch throughout the process and working with you on an actionable transaction.

Please contact us if you would like to discuss 3RC’s industrial automation and IoT investment strategy in greater detail.

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