

IoT Community

Industrial Automation Equipment

Areas of Innovation Included:

Industrial Communication

Inventory Management

Robotics in Industry 4.0

Industrial Process Control

Advanced Manufacturing

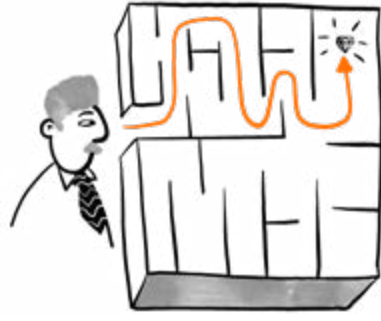


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(Corporate Gold Member of the IoT Community)	
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Market Opportunities

Industrial automation systems optimize manufacturing while increasing production

Industrial automation is the process of digitalizing traditional manufacturing processes with novel technologies, aiming to reduce repetitive tasks and improve workflow efficiency. Industrial automation systems can range from small independent units to various interlinked large-scale devices that operate across company locations. Implementing these systems can result in cost reduction, better operations quality, increased operator safety, and enhanced production. Additionally, the proliferation of IoT technology in factory automation influences manufacturing companies to adopt the advantages of internet connectivity.

According to McKinsey, Industry 4.0 can unlock benefits across various industrial settings. Reportedly, it has been shown to contribute to a 30-50% machine downtime reduction, a 10-30% throughput increase, and a 15-30% labor productivity increase.

The global industrial automation market is set to surpass \$172 billion by 2030

The companies featured in this report operate in various global markets due to their extensive portfolios, while the most prominent one is the global industrial

automation market. According to Grand View Research, the market is projected to reach \$377.25 billion by 2030, rising from \$172.26 billion in 2022, registering a CAGR of 10.3% over the forecast period.

The market is primarily influenced by the upsurge in investment and ongoing development in the manufacturing sector. Moreover, automotive, aerospace, and heavy engineering industries are increasingly digitalizing and transforming manufacturing processes with AI, machine learning, and cloud computing technologies. Furthermore, the automation sector is expected to witness a surge in the forecast period due to the growing awareness of cloud computing platforms and technological developments in semiconductors and electronic devices.

The industrial robots component type segment is expected to dominate the market and is projected to account for the largest revenue share of over 12% during the forecast period. In addition, the sensors component type segment showcased the largest revenue of over \$35 billion in 2021 owing to its use and need in automation and control system processes and operations. Notable market players include ABB, Emerson Electric, Honeywell International, Kawasaki Heavy Industries, Mitsubishi Electric Corporation, etc.

Industrial Communication

Industrial communication is an integral part of each automation system architecture, providing a real-time and reliable exchange of large amounts of data and data integrity across large installations.

Companies leverage industrial communication technologies to improve machine control, plant operation, and power distribution. In addition, the systems harness industrial communications protocols developed to interconnect the systems, interfaces, and instruments that make up an industrial control system.

Data from Valuer:

Average Funding of Industrial Communication companies:

\$11,574,488

Technology Trends:

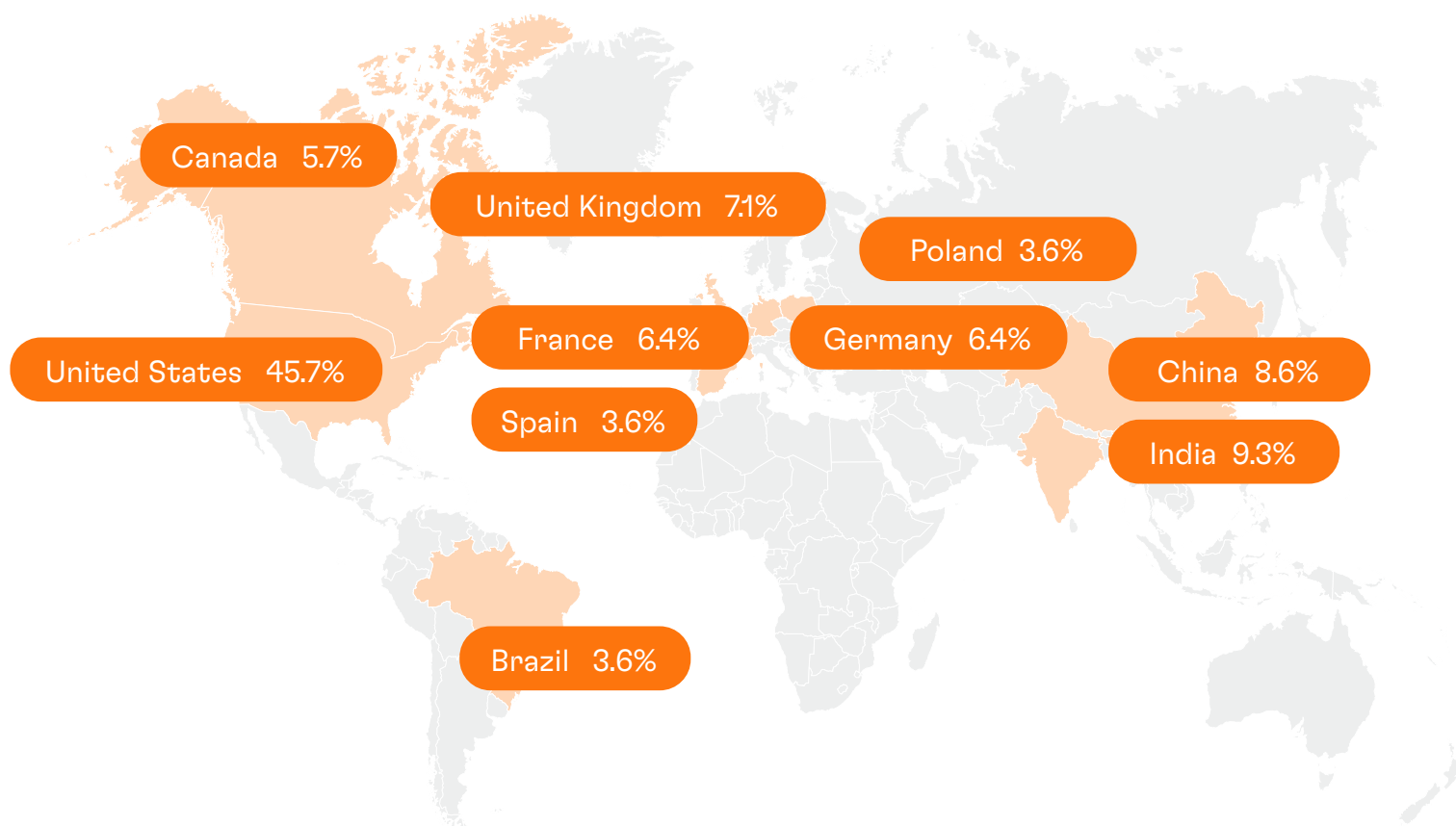
Distributed Control System:

A distributed control system (DCS) is a customized automated control system that consists of distributed control elements placed at different locations across the manufacturing plant. Each control element/machine or group of machines is managed by a dedicated controller connected via a high-speed communication network.

5G Technologies:

5G is the fifth and latest generation mobile network and global wireless standard after 4G. It promises to deliver higher speed, lower latency, and massive network capacity, essentially opening new industry applications.

10 countries with the largest number of Industrial Communication companies on Valuer:





Company Highlight:

Phoenix Contact Group

Corporate Gold Member of the IoT Community

Year of inception:
1923

Company stage:
Established

Team size:
20,300

Country:
Germany

Funding:
N/A

Website:
phoenixcontact.com/en-pc/

The Phoenix Contact Group specializes in products, solutions, and services for electrification, networking, and automation. Its offering encompasses a diverse portfolio of connection technology, electrical engineering components, electronics, and industry-specific automation equipment, including cables, controllers, relay modules, terminal blocks, power supplies, and more.

EMC filters, 24V supply systems, and engineering software for control cabinet manufacturing are some of the products that the corporation has identified as offerings in high demand for 2022. Headquartered in Blomberg (Germany), Phoenix Contact Group comprises 15 German and four international subsidiaries, complemented by an extensive network of 55 globally-dispersed sales offices.

Customers:

This company has not disclosed information for its client list.

Business Model

The Group's business model is centered around the following characteristics:

- Phoenix Contact employs a B2B model, providing product expertise, professional advice, and a broad logistics network to clients operating across a range of industries, including e-mobility, energy, infrastructure, systems and device manufacturing, and the process industry, among others.
- Its portfolio features customer-specific solutions which can be delivered as a product, application, system, or service, via a configuration that can entail assembly, an adaptation of standard items, new product

development, or solution concept creation.

- Phoenix Contact collaborates with a network of distributors, system integrators, building automation partners, and suppliers to ensure prompt and efficient service to clients across the United States, expanding across all 50 states.
- The Group generates revenue on a SaaS-based model and via D2C wholesale, complemented by consultation and service fees.

Value Proposition

The Group communicates the following as its main value propositions:

- Phoenix Contact maintains a presence in over 100 countries to ensure greater proximity and access to its international clients.
- The Group advocates for the "All Electric Society" to support clients in adopting sustainable practices through its comprehensive offer of electrification, networking, and automation solutions.
- Moreover, Phoenix Contact seeks to empower the implementation of digital transformation and electrification in an effort toward greater corporate

responsibility. In that regard, it has endorsed several principles, including the Global Compact of the United Nations and the Code of Conduct of the ZVEI.

- As of 2021, Phoenix Contact became a supporting business for Stiftung KlimaWirtschaft (Climate Economy Foundation), a private sector association of enterprises that pursue corporate dialogue toward higher engagement in climate protection.

Phoenix Contact has built an extensive suite of hardware, software, and service offerings, segmented into five categories:

- Automation equipment
- Connection supplies
- Products for marking, assembly, and installation
- Chargers, protection technology, and power supplies
- Solutions for switching, measuring, and monitoring

Automation Suite

The automation suite encompasses a selection of hardware and software solutions aimed at accelerating and easing clients' digital transformation, i.e., shifting from manual to smart, automatic operations. This suite features five groupings tailored to empower automation-related undertakings.

1. Cloud Computing

The cloud computing portfolio is centered around Proficloud.io, a plug-and-play IIoT platform. It grants access to smart SaaS services (device management, EMMA service, impulse analytics, and time series data) for managing devices, mitigating downtimes and enabling networking of systems, plants, products, machines, and companies. The platform is tailored for SMEs with no or limited IT resources to connect their cloud-based devices to adequate infrastructure efficiently. Proficloud.io features a simplistic and intuitive interface and dashboards, offering tools for device management, predictive maintenance, energy management, and cloud-based analysis.

2. Human Machine Interfaces (HMIs) and Industrial PCs (IPCs)

HMIs and IPCs allow clients to operate and monitor their systems, with an option to execute control and networking tasks seamlessly with a functional visualization. Both offerings feature compact designs and durable components, poised to grant reliable operation and performance while bridging the gap between IT and OT environments.

The HMIs comprise a core element in maintaining efficient communication between users and machines, allowing them to operate the system, track its state, and initiate interventions if needed. Their performance is supported by preconfigured control panels, software, and drivers, suitable for Visu+ software and HTML5 applications.

The selection of IPCs encompasses embedded PCs, panel PCs, through-rack PCs, multi-touch monitors, and ATEX/IECEx solutions applicable for recording, processing, measuring, controlling, and visualizing industrial application data.

3. Industrial Communication Products

The portfolio for industrial communication includes transmission mediums for large and close-proximity applications, including media converters, cellular wireless modules, servers, gateways, extenders, routers, Ethernet switches, printers, and software for control cabinet building, among others. Acknowledging the contemporary demand for reliable data transport, the corporation offers network components with gigabit transmission capacity empowered with intelligent filter functionalities.

4. PLCnext and I/Os Solutions for Intelligent Automation

This selection consists of PLCnext, functional PLC extensions, I/O systems, software tools, global community, and digital software marketplace to prepare clients for IIoT and Industry 4.0 upgrades. The suite enables the implementation of automation functionalities and integration of open-source code and applications via cloud connections, with a complementary option for parallel programming based on Visual Studio, Eclipse, Matlab Simulink, and PLCnext Engineer.

5. Automation Software

Phoenix Contact's automation software covers the entire process from configuration to system operation, featuring user-friendly functionalities for building management, diagnostics, configuration, planning, marking, PLC programming, and visualization.

Achievements

To date, the Group has achieved the following milestones:

- In 2022, Phoenix Contact launched its Energy Solution Partners program, a global network of partners who would provide product expertise and introduce strategies for connecting decentralized generation sources to local power grids using certified Phoenix Contact feed-in controllers.
- Moreover, Phoenix Contact India received the "Electronics Manufacturer of the Year" award in the 8th edition of the EM Best of Industry 2022 Awards.
- The same year, the Group won three "Control Engineering Engineers' Choice" awards in recognition of its Axioline Smart Elements, FL mGuard 1100, and the QUINT POWER 600VA DC to AC Inverter solutions.
- In 2021, Phoenix Contact's SPE Connectors won in the "Smart Manufacturing" category of MM MaschinenMarkt's Best of Industry Awards.
- Moreover, its product family for DC charging cables for the lower power range, the CCS C-Line, won the "Good Design Award 2021" for practical and stylish design by the Chicago Athenaeum Museum.
- Phoenix Contact won the "2018 Excellence in Production" competition and was named "Tool Maker of 2018" by the ML tool laboratory WZL of the RWTH Aachen and the Fraunhofer Institute for Production Technology IPT. Previously, in 2016, the Group was named the overall winner.



Executive Team 1/2

Frank Stührenberg CEO

Experience:

- Progressed to CEO of Phoenix Contact Group (current)
- Member of the Foreign Trade Committee and Asia-Pacific Committee for German Business of the Federation of German Industries (current)
- Member of the Board of Trustees of the KlimaWirtschaft Foundation (current)
- Member of Orgalim's Executive Forum for Advanced Manufacturing (current)
- Member of the Board of Trustees of the Economic Society for Westphalia and Lippe (current)
- VP and Treasurer of the German Electro and Digital Industry Association (current)

Academic Background:

- BEc in Business Informatics from Paderborn University

Dirk Görlitzer Group COO

Experience:

- Progressed to COO at Phoenix Contact Group (current)
- President and Member of the Board of the Business Area Industrial Components and Electronics (current)
- Member of the Phoenix Contact Executive Board and Head of the Manufacturing Solutions division and the subsidiaries in China and India (current)
- Member of the Hannover Messe Exhibitor Advisory Committee (current)

Academic Background:

- BEE in Communication Engineering from OWL University of Applied Sciences in Lemgo



Executive Team 2/2

Torsten Janwlecke

COO

Experience:

- Progressed to COO at Phoenix Contact Group (current)
- President of the Business Area Device Connectors (current)
- Member of the Phoenix Contact Group Executive Board with responsibilities for the Business Area, Quality & Product Compliance, Facility Management, and Metal Parts Production divisions (current)
- Executive Board Member for Environment, Energy, and Climate of the German Electro and Digital Industry Association (current)
- Advisory Board Member of the Electronica Trade Fair (current)

- Executive Managing Director at Metz Connect Group
- Senior VP at Robert Bosch
- Progressed to General Manager of Business Development at Olympus Europe
- Sales Manager at Hitachi
- Regional Sales Manager at Kontron

Academic Background:

- BEE in Communications Engineering from the University of Applied Sciences Bielefeld
- BAA from the University of Applied Sciences Hamburg

Ulrich Leidecker

Group COO

Experience:

- Progressed to COO at Phoenix Contact Group (current)
- President and a Member of the Board of the Business Area Industry Management and Automation at Phoenix Contact Group (current)
- Member of the Phoenix Contact Executive Board with responsibilities for the Purchase and Logistics divisions and the subsidiaries in the USA (current)

- Chairman of the Regional Office North Rhine-Westphalia (current)
- Vice Chairman of the Automation Section at ZVEI (current)

Academic Background:

- BEE in Control and Automation Technology from Paderborn University

Inventory Management

Utilizing technologies like an automated inventory management system allows businesses to monitor their stock levels automatically while deploying minimal human resources. These systems help manage stocks, minimize miscalculations in sales, and avoid unsatisfied customers.

The inventory management systems track stock levels in real time, delivering precise information across all sales channels, ultimately improving efficiency and decision-making while reducing costs.

Data from Valuer:

Average Funding of Inventory Management companies:

\$9,278,249

Technology Trends:

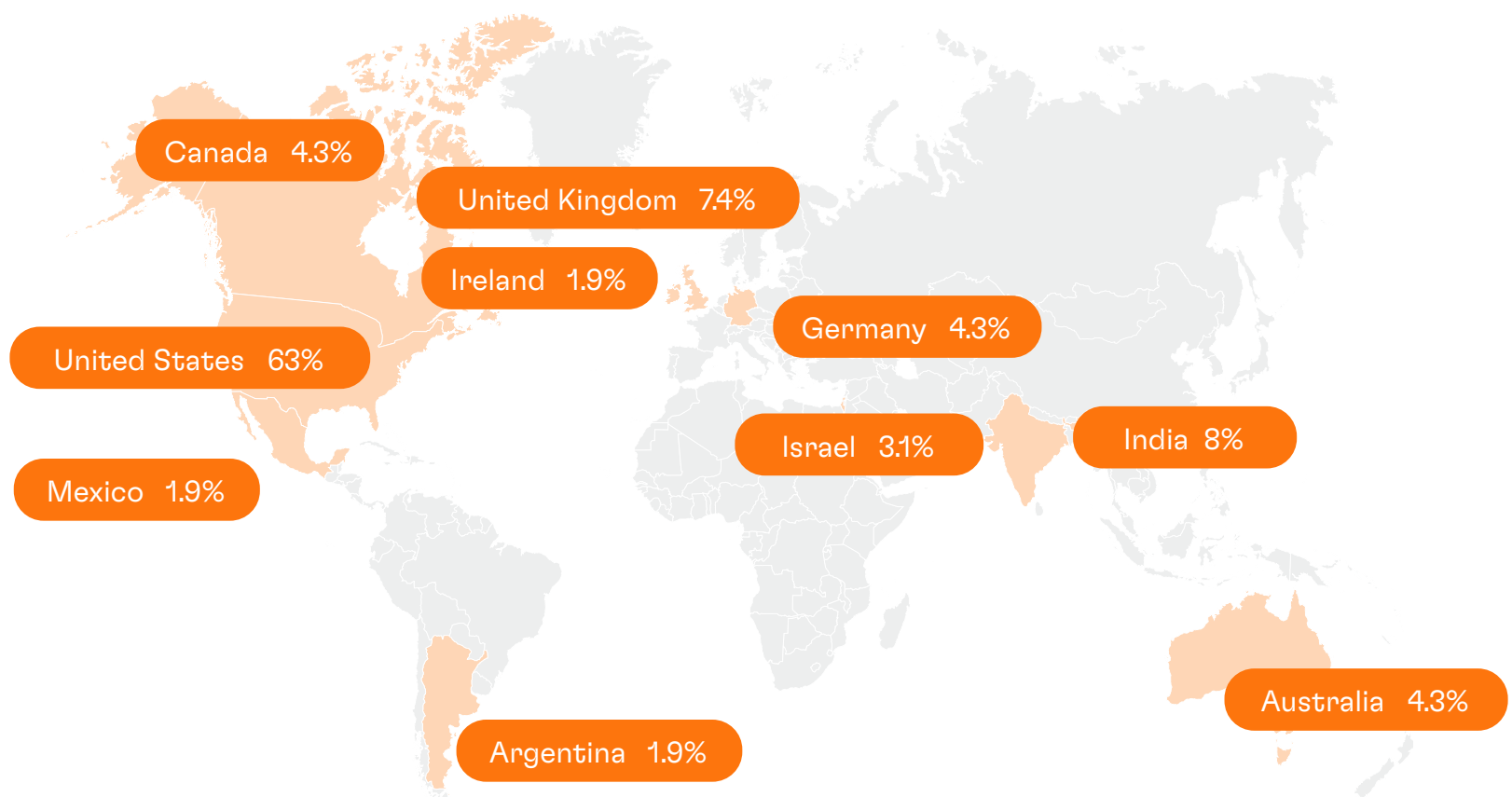
RFID:

Radio Frequency Identification (RFID) is a wireless communication technology that utilizes radiofrequency waves to identify and track inventory and assets automatically. RFID systems usually encompass an RFID reader, antennas, and RFID tags, assembling a smart label feature that can store a range of information, including serial numbers, short descriptions, and more.

Predictive Analytics:

Predictive analytics entails the use of current and historical data, statistical modeling, data mining, and machine learning to extract future outcomes and performance insights. Analyzing data with such methods allows organizations to enhance their decision-making concerning resource use and operational efficiencies and to reduce risk based on predictions about future events.

10 countries with the largest number of Inventory Management companies on Valuer:





Company Highlight:

Element ID

Year of inception:
2006

Country:
United States

Company stage:
Growth/Expansion

Funding:
N/A

Team size:
3

Website:
element-id.com

Element ID has developed a novel method for fusing RFID middleware and reader hardware into a single unit. During the process, Element ID identified the opportunity for this interface to improve the ROI on ERP systems while increasing cost efficiency using data collection equipment.

Based on these findings, Element ID has grown to become one of the few suppliers providing complete turnkey RFID solutions globally. Element ID was founded in 2006 and currently operates with a team of three members from its headquarters in Bethlehem (PA).

Customers:

This company has not disclosed information for its client list.

Business Model

The company's business model is centered around the following characteristics:

- Element ID is a B2B company offering integrated RFID solutions to businesses operating in the manufacturing, food and beverage, and warehousing industries.
- During the implementation stage, Element ID sources or manufactures all elements needed for the project. Customers can use internal resources for the physical installation of the equipment, or they can utilize Element ID's integrator partners.
- Finally, Element ID tunes and tests the entire solution and completes the integration with the customer's ERP system.
- Moreover, Element ID is a provider of Sage X3 Hardware, including brands such as Honeywell, Zebra, SATO, Datalogic, and Janam.
- The company's pricing strategy varies depending on the type of product. However, Element ID requires no license fees and mandatory maintenance contracts.

Value Proposition

The company communicates the following as its main value propositions:

- Element ID positions itself as an innovative leader in the automatic identification industry, claiming better prices than its competitors. Moreover, the company enables customers to improve efficiency while reusing as much existing infrastructure as possible.
- The company develops its embedded software and manufactures many of its products; it also integrates data entry tools, RFID, and barcode solutions and devices, providing hybrid solutions to fit customer applications.
- Furthermore, the company is a Sage X3 specialist and, as such, acts as a one-stop shop for data collection hardware, software, services, and support for companies looking to assist customers in adding ADC functionality to X3. From sourcing barcodes, location labels, and overhead barcode signs to WiFi site survey and build-out, Element ID enables getting all data into X3.

Element ID's comprehensive product implementation process includes initial recommendations, a site survey, a proposal for a system design, and installation. It combines RFID middleware and hardware in the same device, enabling organizations to reduce the risk, complexity, and cost of RFID deployments. Specifically designed for industrial and automated environments, the solutions eliminate the need for RFID middleware or other RFID management software and minimize third-party hardware and software use by preprocessing data. A configurable host interface allows customers to set how the data is delivered, making them compatible with their existing interface.

Software Products

The company is focused on providing proprietary embedded software that interacts directly with the hardware of the devices it is connected to. Its software portfolio includes:

- **AssetSage™ Cloud** - a remotely hosted, entry-level asset tracking package available on a monthly subscription basis. The customizable database can be run as a standalone system or integrated into the customer's ERP system.
- **AssetSage™ Mobile** - a solution for small businesses that combines HyperSage™ Mobile with an onboard database, requiring no external PCs, servers, or data connections. The data files can be imported and exported, with the ability to generate reports.

- **HyperSage™ Mobile** - middleware for WinCE, WinMob, and Win Embedded handhelds that works with barcode, RFID, or both, enabling hardware control and providing data association, data filtering, and host message formatting modes.
- **HyperSage™ Manufacturing Edition** - provides the core functionalities of HyperSage Mobile with additional function screens to capture the needed data for direct connection to an ERP or WMS system.
- **Hypersage™ Embedded** - an RFID middleware product for controlling reader hardware and delivering configurable modes for operation, data filtering, host message formatting, and direct interface to host servers.
- **TagLink™ Embedded** - patented technology that connects RFID data with physical items, allowing for time and position-based tracking of RFID-tagged items on conveyor systems.
- **SmartReader™ Setup Wizard** - a Windows-PC-hosted setup utility providing output bits and functions, host message formatting, reader power, and RFID read trigger and duration.

Hardware Products

The hardware portfolio encompasses:

- **RFID Industrial Portal** - reports the last-seen-at location of a target item as it passes through. It includes the RFID reader, middleware, antennas,

Product Portfolio 2/2

metal stands with brackets, stack light diagnostic indicator, and metal back shields to minimize crosstalk between dock doors.

- **RFID (Mobile) Read Station** - offers the hands-free capability to track items as they pass close to a station. It includes an RFID reader, middleware, antenna, stacklight diagnostic indicator, and a Nema box or mounting bracket.
- **Handheld Barcode/RFID** - enables intensified interaction between the user and host software system. It includes the handheld hardware and software that establishes a direct connection to a database, keyboard wedge, VT100 terminal emulation,

direct-to-SQL connection, and data capture to a file.

- **RFID Wall Mount Portal** - a solution with a better range and a larger read field than a read station, used for tracking assets, tools, raw materials, finished goods, and more.
- **ERP-Connected Appliances** - a touchscreen computer running data collection software that captures, processes, and associates data from multiple sources before transferring it into an existing ERP system.
- **Always Connected Solutions** - partnering with Verizon, Element ID offers complete wired and wireless cellular solutions.

Achievements

To date, the company has achieved the following milestones:

- Element ID has worked with various leaders from the food and beverages, manufacturing, delivery, and pharmaceutical industries, including FedEx, UPS, USPS, Walmart, and Macy's.
- Its success in delivering positive client results has been witnessed in a case study with ICM Products, a specialty chemical company producing an array of chemical compounds. In partnership with 4aBetterBusiness,

Element ID helped the client increase on-time delivery from 50% to 96%. It also recorded a 22% reduction in inventory and a 6-month reduction in Sage X3 rollout time.



Executive Team

Jack Romaine CEO

Experience:

- CFO of HiJinx Brewing Company (current)
- Head of Semiconductor Equity Research Group at SG Cowen
- Head of the RFID Development at AccuSort Systems Inc.

Academic Background:

- MBA, Finance from Lehigh University
- MSEE from Lehigh University
- BSEE from Lehigh University

David Martin CTO

Experience:

- Senior R&D Software Engineer at AccuSort Systems Inc.
- Fire Control Technician at US Navy

Academic Background:

- BSEE, Electrical Engineering from The College of New Jersey

Robotics in Industry 4.0

When implemented in industrial and manufacturing settings, robotics and automation can help tackle repetitive tasks and augment existing job positions, thus optimizing daily routine tasks and increasing overall efficiency and productivity.

Furthermore, with robotics taking over manual tasks, companies can allocate their human resources toward more important tasks that require higher intellectual capital.

Data from Valuer:

Average Funding of Robotics in Industry 4.0 companies

\$19,647,658

Technology Trends:

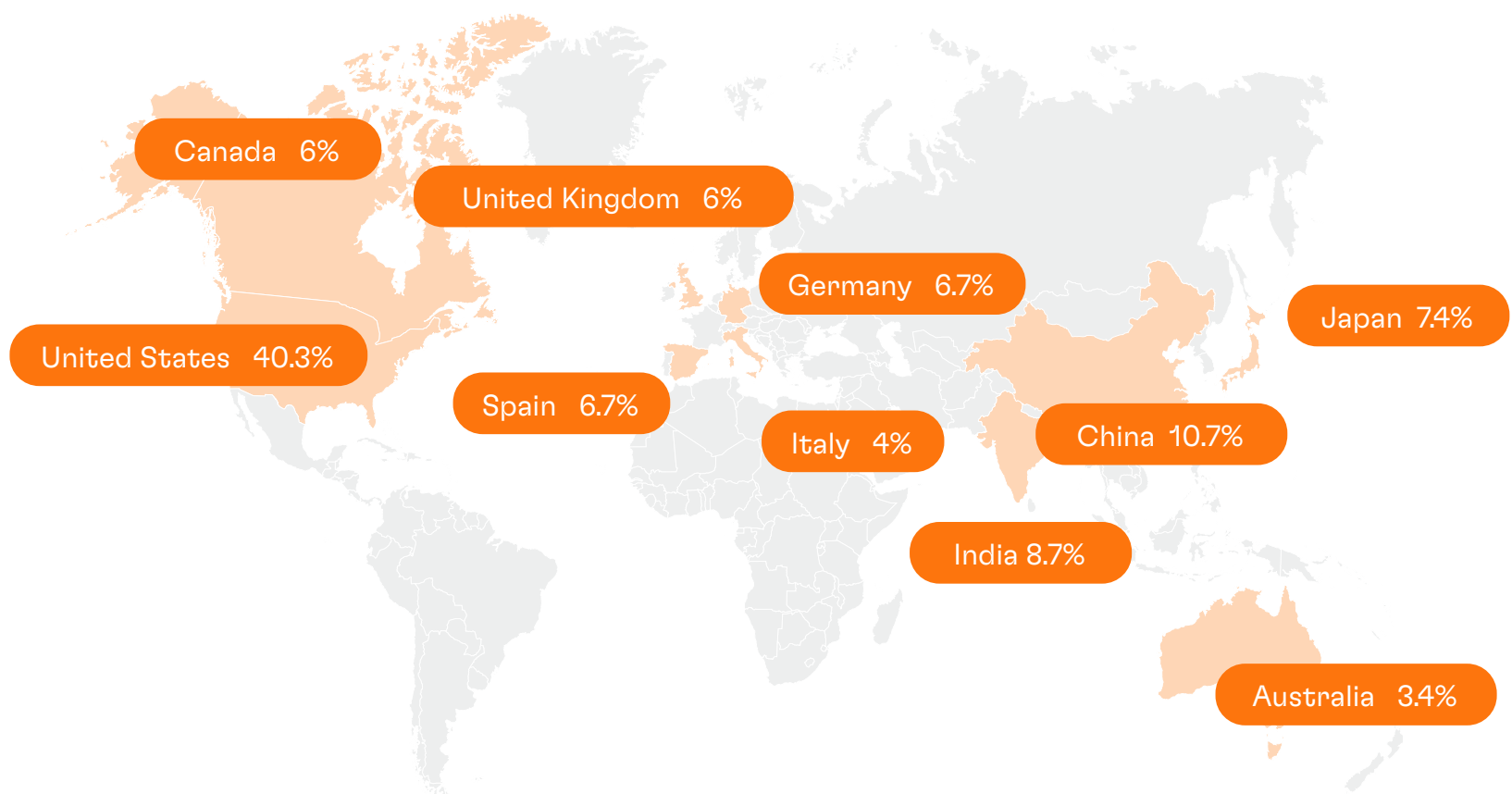
Collaborative Robots (Cobots):

Cobots, or collaborative robots, are specialized robots designed to work alongside humans within a shared space. With features like compliant grippers and collision-avoidance capabilities, cobots have multiple applications, such as enabling automation in industrial environments or completing specific tasks, including welding and precision picking.

Warehouse Robotics:

Warehouse robotics automates warehouse tasks such as sorting, transportation, and picking by leveraging specialized robotic systems. These systems are often used to increase the productivity and efficiency of the warehouse and minimize the risk of injury. Warehouse robots include robotic arms, collaborative robots, autonomous mobile robots, and others.

10 countries with the largest number of Robotics in Industry 4.0 companies on Valuer:





Company Highlight:

Logicbus

Year of inception:
2001

Country:
United States

Company stage:
Growth/Expansion

Funding:
N/A

Team size:
34

Website:
logicbus.com

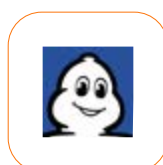
Logicbus is a vendor of software and hardware products in the field of automation, measurement, and control. The company serves as a representative of local and foreign companies, distributing their products across the United States, Canada, Mexico, and parts of Latin America. Its portfolio features sensors, PCs, robotic and artificial vision products, meters, generators, and software solutions, among others.

The company was established in 2001 and operates from its headquarters in Chula Vista (CA), with an additional office in Guadalajara (Mexico).

Customers:



Intel



Michelin Group



HP

Business Model

The company's business model is centered around the following characteristics:

- Logicbus operates as a B2B company, collaborating with suppliers and manufacturers of industrial equipment, software developers, and various IIoT solution providers.
- Its suite encompasses an extensive selection of hardware and software solutions applicable to various industries, including aerospace, education, automotive, energy, food, entertainment, healthcare, metallurgy, petrochemistry, textile, and more.
- The company also employs a D2C model, offering its products to individuals and businesses across the US and Mexico via its online store. A fragment of its suite can also be purchased via eBay and Amazon.
- Logicbus has several revenue streams, including direct hardware sales and software licensing.

Value Proposition

The company communicates the following as its main value propositions:

- Logicbus has expanded its roster to nearly 40 partner companies, distributing over 1,000 different items of theirs.
- The company offers quantity discounts for larger orders, which are appraised by the number of items. The discount rates can reach up to 14%, applicable to orders whose volume exceeds 100 products.
- Free shipping on selected products is another benefit offered by Logicbus, applicable to online orders equal to or greater than \$500.
- To ensure prompt and quality customer service, Logicbus has implemented technical support lines in English and Spanish, complemented by a WhatsApp channel for seeking assistance.

Logicbus's offering features an extensive suite of hardware and software products categorized into nine groups:

1. Automation and Process Control
2. Data Acquisition and Data Logging
3. PCs and Industrial Communications
4. Integration Services
5. Power Monitoring and Quality
6. Sensors and Transducers
7. Software and IoT
8. Test and Measurement
9. Vision and Robotics

The automation and process control group encompasses robotic solutions, RFID technology, scanners, PLCs, screens and monitors, automation controllers, and diverse instruments and gadgets. Measurement Computing, Seneca, Fatek, and Siglent are some of the suppliers in this segment.

Robots

The robotics selection features collaborative robots, i.e., cobots, suitable for manufacturing applications for additional operational support to the personnel. Logicbus offers four types of robotics designed with different motion ranges and functionalities for visual guidance, collision detection, compact infrastructure, and high precision for industrial operations.

Artificial Vision

This segment contains 3D laser scanners and barcode scanners. The first group

comprises ECCO and SR scanners, featuring products with different measurement ranges, scan rates, lateral and vertical resolutions, and scope of view field. The barcode selection features gun and desktop scanners, offering durability and reliability to retail and POS computing operations.

Programmable Logic Controllers (PLCs)

PLCs are electronic devices that optimize the operation logic of equipment, plants, and industrial processes, predominantly used for industrial automation applications. Logicbus's PLC collection encompasses user-friendly devices underpinned by SoC core technology and communication tools, featuring touchscreen HMIs and regular ones with buttons, Fatek, and Controllino products.

Radiofrequency Solutions

RFID tags and labels are the main products in this segment, tailored for medical, mining, retail, automotive, and security applications.

Programmable Automation Controllers (PACs) and Industrial Monitors

The PAC suite consists of compact embedded programmable and rack programmable process controllers complemented with control racks and products for industrial data acquisition. The monitor selection features hazardous duty-certified flat panel LCD monitors, adaptable for operation in harsh factory settings and built to secure reliability in industrial environments.

Motion Controllers, Remote Alarm Units, and Panel Instruments

Logicbus offers comprehensive bundles of products for monitor control and remote alarm setting. The first bundle includes encoders, steppers, servos, gearheads, and assorted accessories, wherein the latter features modems, routers, GPS receivers, dataloggers, mini-PACs, and gateways. Panel instruments encompass another notable selection, segmented into kiosks, digital panel indicators, plotters, controllers, and accessories.

Power supply products and miscellaneous gadgets, including intercoms, card readers, and sensor switches can also be found within the automation portfolio.

Achievements

To date, the company has achieved the following milestones:

- Over the years, the company has acquired a sizeable client base featuring prominent organizations such as NASA, Hershey's, Intel, HP, Michelin, and more.
- Logicbus helped a client develop temperature monitoring systems for industrial ovens by providing the ICP DAS DGW-521 communication gateway; the gateway was connected to the client's heating system and DALI temperature controller, increasing the energy efficiency and stability of the client's industrial hot air ovens.
- The company partnered with Cogeco to deliver the SENECA (data acquisition and local control) and Rilheva (supervision and alarm management) technologies to the remote control system for wastewater treatment and rainwater lifting at the Mercedes-Benz dealership in Rome, Italy.
- Partnering with a medical company for perinatal screening systems, Logicbus delivered the SEALEVEL device for transmitting patient data to upgrade the client's system and simplify future updates, improving reliability.



Executive Team

Blasioz Valenzuela

CEO

Experience:

- Project Manager at Logicbus Inc. (current)
- Field Sales Engineer at National Instruments

Academic Background:

- Diploma in General and Strategic Human Resources Management and Personnel Administration from Tecnológico de Monterrey
- BE in Electrical and Electronics Engineering from Tecnológico de Monterrey
- BE in Electrical and Electronics Engineering from the University of Detroit Mercy

Industrial Process Control

Industrial process control is an automated method of monitoring specific industrial processes that eliminates the need for human manual monitoring.

Industrial process control systems are generally installed in industrial settings to help improve performance, maintain output, enhance quality, increase energy efficiency, and lower overall manufacturing costs.

Data from Valuer:

Average Funding of Industrial Process Control companies:

\$4,230,167

Technology Trends:

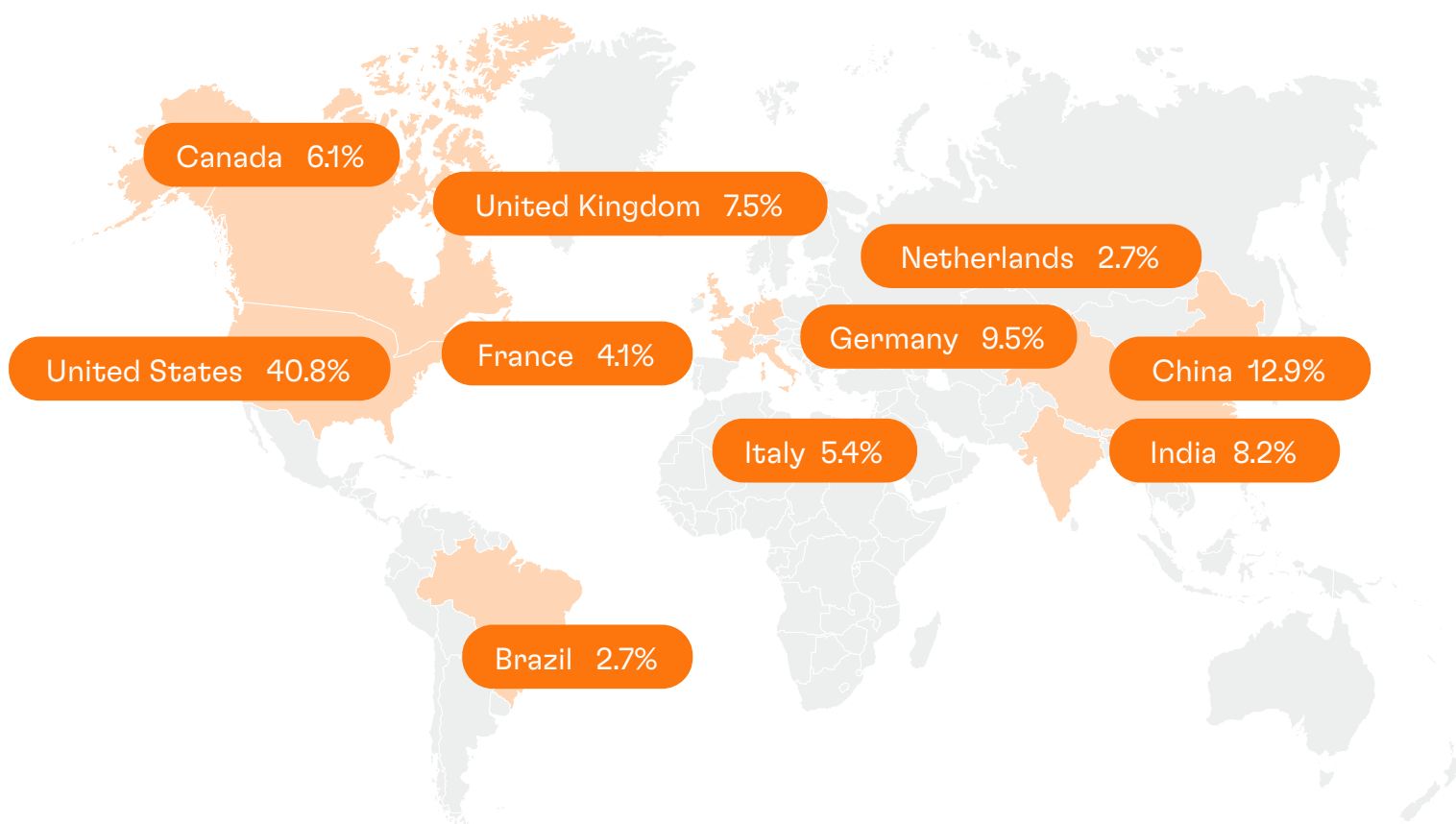
Data Loggers:

Data loggers, dataloggers, or data recorders are small electronic devices that collect temperature, voltage, current, humidity, and other datasets of interest. Data loggers monitor outdoor environments, indoor environments, storage spaces, water conditions, and others to ensure industry standards compliance like temperature and humidity.

Big Data in Industry 4.0:

Big Data is a field that consists of large, complex, and voluminous data sets, along with the processes and methods used to analyze and extract actionable insights from them. The technology plays a crucial role in Industry 4.0, analyzing sensor data from production machinery and providing valuable insights for smart factory management.

10 countries with the largest number of Industrial Process Control companies on Valuer:





Company Highlight:

NRwell

Year of inception:
2017

Country:
United Kingdom

Company stage:
Growth/Expansion

Funding:
N/A

Team size:
22

Website:
nrwell.com

NRwell is a global retail and refurbishment company specializing in industrial automation equipment. The company caters to various industrial and manufacturing sectors by providing new, refurbished, and obsolete equipment and spare parts for motors and encoders, safety automation, PLC systems, and robotics from a wide selection of recognized suppliers such as Omron, Siemens, Mitsubishi, Cabur, Pilz, and Vem Motors, among others.

NRwell was established in 2017 in Cannock, the United Kingdom, and operates with a team of 22 people across its offices in Portugal, the United States, and Mexico.

Customers:

This company has not disclosed information for its client list.

Business Model

The company's business model is centered around the following characteristics:

- NRwell provides new, refurbished, and obsolete industrial automation equipment and spare parts from market-established manufacturers such as Omron, Siemens, Mitsubishi, and Schneider.
 - The company caters to all businesses involved in automation or manufacturing segments by offering them expeditious replacements for broken equipment and assistance in developing new projects in a cost-friendly manner.
- NRwell's revenues are based on sales of industrial equipment. To date, the company has built a comprehensive portfolio comprising over 29,000 products from 400 manufacturers.

Value Proposition

The company communicates the following as its main value propositions:

- As the primary user benefit, NRwell emphasizes the provision of a cost-friendly solution for acquiring new or refurbished industrial automation equipment from a large variety of manufacturers.
 - The company offers global customer support coverage from its international offices and capacities to dispatch orders on the day of purchase.
 - Its products come with a 12-month warranty for new items and six months for refurbished ones.
- Additionally, the company is Achilles FPAL- and UVDB-certified, granting NRwell qualifications for collaborating with the oil & gas and utility industries.

Product Portfolio

NRwell's portfolio includes more than 29,000 articles of new, refurbished, and obsolete industrial automation equipment, instrumentation and control systems, and spare parts for various industrial sectors. Moreover, the company provides cost-effective emergency repairs, maintenance, and related services to minimize downtime and assist clients in undesirable situations or breakdowns.

NRwell's portfolio contains the following types of products:

- **PLC Systems** – Programmable Logic Controllers that serve as ruggedized industrial computers adapted for various electro-mechanical processes in manufacturing and automation environments. NRwell's PLC offer includes over 80 manufacturers, such as Allen Bradley, Omron, and Siemens, with products for small or large applications.
 - **Servo Motors and Encoders**
 - The company's offer includes electric, servo, DC and geared motors, as well as rotary, absolute, and incremental encoders used for detecting the angle, speed, and travel distance—sending feedback to the controller. It offers a selection from around 100 renowned brands, such as Mitsubishi and Indramat Bosch.
 - **HMI Screens and Displays**
 - The company offers its clients a portfolio of human-machine interfaces, displays, operator interfaces, and touchscreen monitors from around 70
- manufacturers, such as Pils, Omron, and Schneider.
- **Inverters and Drives** – NRwell supplies its customers with AC inverter drives and DC drives, as well as variable frequency, variable speed, and servo drives from over 80 manufacturers, including Danfoss, AEG, KUKA, etc.
 - **CNC Systems** – The company provides more than 30 computer numerical control systems and parts from brands such as Omron, Pilz, and Allen Bradley.
 - **Safety Systems** – NRwell delivers safety automation equipment from more than 60 manufacturers, including Guardmaster, Schneider, and Siemens. Its safety system portfolio includes safety relays, light curtains, safety drives, sensors, and receivers.
 - **Robotics** – For intelligent automation, the company provides spare parts and accessories for robots manufactured by companies like ABB, Mitsubishi, and Fanuc.
 - **General Automation** – NRwell's product portfolio includes more than 400 parts and accessories manufactured for general automation purposes, including articles such as printed circuit boards, measuring systems, flow meters, cables, and push buttons.

Achievements

To date, the company has achieved the following milestones:

- In July 2022, NRwell won the International Trade Award at the Staffordshire Business Awards.
- In June 2022, the company sponsored the Business Contribution to Communities Awards at the Cannock Chase Volunteer Star Awards.
- In 2020, NRwell received Achilles FPAL certification for aligning with oil and gas industry standards.
- In 2019, NRwell was granted the Achilles UVDB pre-qualification for achieving a high standard of supply chain assurance in the utility industry.



Executive Team

Duarte Madeira Managing Director

Experience:

- Progressed to Managing Director at NRwell (current)
- Team Lead at DAX Automation
- Customer Service at Tradedoubler
- Account Manager at Vodafone

Academic Background:

- Attended the English Functional Skills program at the South Staffordshire College
- Attended the Economics program at Sabugal College

Nikola Taylor Director

Experience:

- Progressed to Director at NRwell (current)
- Sales Administrator at Rockwell Automation

Academic Background:

- BA with Honors from the Staffordshire University
- National and A-level diploma from Burton College

Advanced Manufacturing

Advanced manufacturing is a field in manufacturing utilizing innovative technologies, such as big data, automation, computation, software, and sensors to enhance existing products or introduce to market novel advanced products, ultimately increasing the business value and competitiveness.

These technologies can be deployed at any phase of the manufacturing process, from initial design to the production of final products.

Data from Valuer:

Average Funding of Advanced Manufacturing companies:

\$6,943,162

Technology Trends:

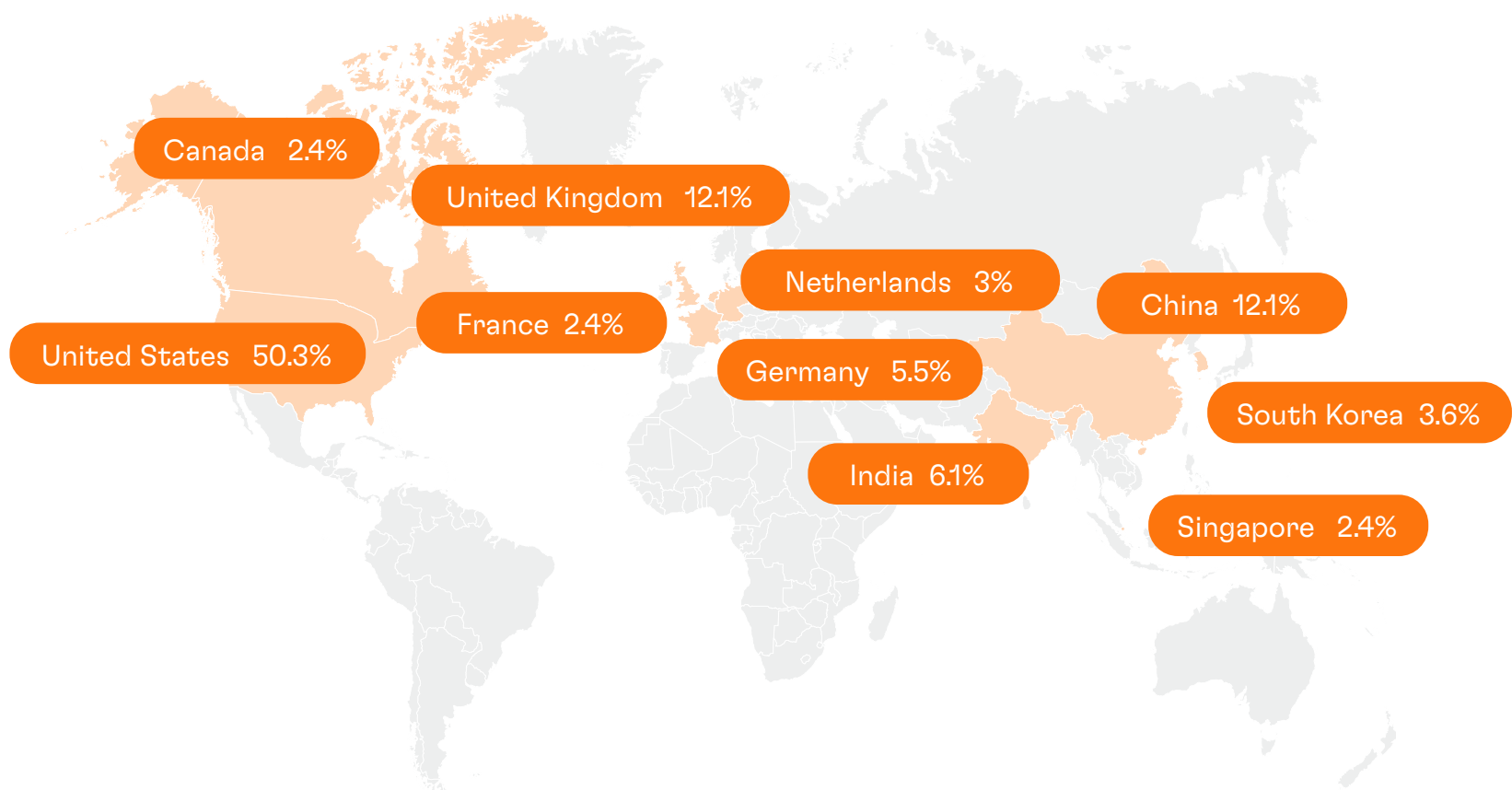
Electronics Manufacturing Automation:

Electronics manufacturing automation is the process of utilizing novel technologies for developing electronics with minimal human assistance. Using systems and products that combine hydraulics, mechanics, pneumatics, and electronic components, the process increases efficiency and productivity while improving security at the workplace.

Manufacturing Execution Systems:

Manufacturing execution systems are software solutions that provide visibility, control, and optimization of the manufacturing processes across an entire organization. From raw materials to finished products, these systems offer a comprehensive overview and synchronization of the production processes across distributed plants and connect them in real time to the enterprise. This results in improved yields, lower operating costs, and increased compliance.

10 countries with the largest number of Advanced Manufacturing companies on Valuer:





Company Highlight:

Vention

Year of inception:
2016

Country:
Canada

Company stage:
Growth/Expansion

Funding:
138,680,487 USD

Team size:
319

Website:
vention.io

Vention offers a manufacturing automation platform (MAP) that enables manufacturers and engineers to design, automate, order, and deploy automated equipment. Its portfolio extends to plug & play-compatible and rigid hardware parts and modular components for industrial automation.

The company was founded in 2016 with a mission to make machine design accessible to everyone by applying re-engineered design, simulation, procurement, and commissioning of industrial equipment. The Vention team encompasses over 300 members, operating from the headquarters in Montreal (Canada) and two additional offices in Boston (MA) and Berlin (Germany).

Customers:



Siemens



Volkswagen



Philips

Business Model

The company's business model is centered around the following characteristics:

- Vention operates on a B2B model, targeting engineers, automation project managers, manufacturers, and businesses seeking to develop, optimize and deploy automation applications.
- Its portfolio is applicable across manufacturing, quality inspection, assembly, packaging, and material handling operations. Common implementations include shelves, racks, robot pedestals, workstations, palletizers, industrial carts, and lab automation equipment.
- Vention's products have been adopted across 3,000 factories, ranging from small manufacturers to large enterprises, including Apple, Facebook, BMW, Tesla, Siemens, Philips, and Volkswagen, among others.
- Its comprehensive manufacturing automation portfolio has piqued the interest of eminent investors such as Georgian, Bain Capital, White Star Capital, Bolt, Real Ventures, and Fidelity.
- Vention's revenue model is based on hardware sales and subscription plans set at a fixed price per machine, each containing a distinct set of features and support levels.

Value Proposition

The company communicates the following as its main value propositions:

- Vention has developed its MAP intending to assist innovative manufacturing companies in automating their production floor. The company enables clients to design, automate, order, and deploy manufacturing equipment using the cloud-based platform directly from a web browser.
- The company's MAP promises shorter design and procurement cycles and lower project risk due to the requirement-driven design. Furthermore, the software offers straightforward calculations of projected ROI and payback, risk-free commissioning with pre-tested components, and reduced end-to-end project time due to the single digital environment.
- Vention promotes simplicity in production systems through its long-lasting industrial-grade hardware and cloud-CAD software with an intuitive layout.
- Vention has built a significant traction, recording over 3,000 companies on five continents, and 100,000 platform users.

Vention's main product is a cloud manufacturing automation platform (MAP) that allows clients to design, automate, order, and deploy industrial equipment in a single digital environment. The product line has multiple applications, most commonly in manufacturing, quality inspection, assembly, packaging, and material handling.

The realistic design and simulation environment comprises several features:

MachineScope

MachineScope is a software solution that allows clients to define project requirements from design to deployment and precisely map automated processes. Additionally, it helps maintain a single source of truth for all equipment specifications, track compliance, determine maintenance needs, and develop equipment acceptance criteria.

MachineBuilder

MachineBuilder is Vention's smart engineering toolbox with a 3D CAD environment to design and virtually build factory equipment, featuring smart design tools and a library with thousands of modular and mutually compatible components. Moreover, the intuitive interface contains automated part mating, real-time part recommendations, assisted component configurations, automated bills of materials, and assembly time estimates, all available from any web browser.

MachineLogic

MachineLogic is a no-code interface that enables process simulation and the deployment of industrial automation sequences with a portfolio of components, including actuators, robot arms, conveyors, and more. Machine configurations are automatically detected from the 3D design, and users can program machines and robot paths completely code-free using the intuitive environment. MachineLogic also features a simulation interface that allows clients to preview their automation solution before ordering.

MachineApps

The MachineApps module offers tailored, code-free applications purposely built to operate industrial machines for palletizing, path-following, box erecting, and robot cells, among others. Additionally, it provides remote access to machine log files for identifying and diagnosing issues while enabling Vention's technical support to connect to existing machines for a premium service.

MachinePortal

MachinePortal offers simple collaboration on industrial equipment projects on the cloud, which clients can use to track progress, supervise project ideas and designs, manage team access rights, securely share engineering files, and streamline digital procurement.

MachineCloud

Vention's latest product feature is a digital twin that enables software-

Product Portfolio 2/2

assisted deployment of automated equipment, featuring remote control capabilities that allow manufacturers to monitor the status of machinery in real-time and prevent downtime. Other features include step-by-step setup instructions for hardware and wiring, remote access to machine log files for troubleshooting and technical support, and cloud updates for immediate changes to the physical equipment.

Modular Hardware

Vention offers a comprehensive library of modular hardware for machine assembly, motion control, safety, and frame accessories. Lastly, the company's dedicated designs and parts libraries offer various company- or community-made components for purchase.

Achievements

To date, the company has achieved the following milestones:

- The Canadian company has secured over \$138 million in funding to date. The latest investment round was a \$95M Series C financing from Georgian, Fidelity Investment Canada ULC, White Star Capital, Bain Capital Ventures, and Bolt Ventures.
- In 2022, Vention announced the launch of MachineCloud, a digital twin software for assisted industrial automation deployment. The product was designed to ensure a customized flow that eliminated challenges associated with hardware and software commissioning.
- Another 2022 accolade includes a recognition by Deloitte, which listed Vention among the 500 most innovative, fast-growing tech companies in North America.
- In May 2021, Vention announced a partnership with OnRobot and allied with FANUC, intending to collaborate and accelerate the design and deployment of cobot applications.
- In 2021, Vention was recognized as a Disruptive Innovator by Forbes Magazine.
- In 2020 the company was selected among the Next 50 in Global Tech: Smart Manufacturing, a list compiled by EqualOcean.
- The same year, the company was named among the 16 Companies-to-Watch, as part of Deloitte's Technology Fast 50™ program winners.



Executive Team

Etienne Lacroix
Co-Founder & CEO

Experience:

- Associate Principal for Operations and Product Development Practices at McKinsey & Company
- Technical Leadership Program (TLP) Manager at GE Lighting
- Project Manager at Leger Engineering & Machining
- Founder and Product Technology Leader at Unusual Technologies

Academic Background:

- MBA from Harvard Business School
- BSc in Mechanical Engineering from ETS (École de Technologie Supérieure), Quebec
- DEC in Mechanical Engineering from Valleyfield College



About IoT Community

(Internet of Things Community)

The IoT Community is a privately held UK based and registered corporation, serving as the world's largest and longest-standing CxO community of senior business leaders and IoT practitioners comprising 30,000+ members globally. Founded in 2015, the function of the community is to focus on the adoption and application of IoT in commercial environments, seeking to understand and contribute to applying the technology or overcoming the wide variety of barriers, inhibitors, and technical and operational issues.

The IoT Community aims to be the place to be or place to come for IoT information and insights on the implementation and operation of IoT systems and applications. Their focus is on accelerating the adoption and implementation of IoT systems and applications, making these processes easier, widespread, and secure.

For more information, visit:



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About Valuer

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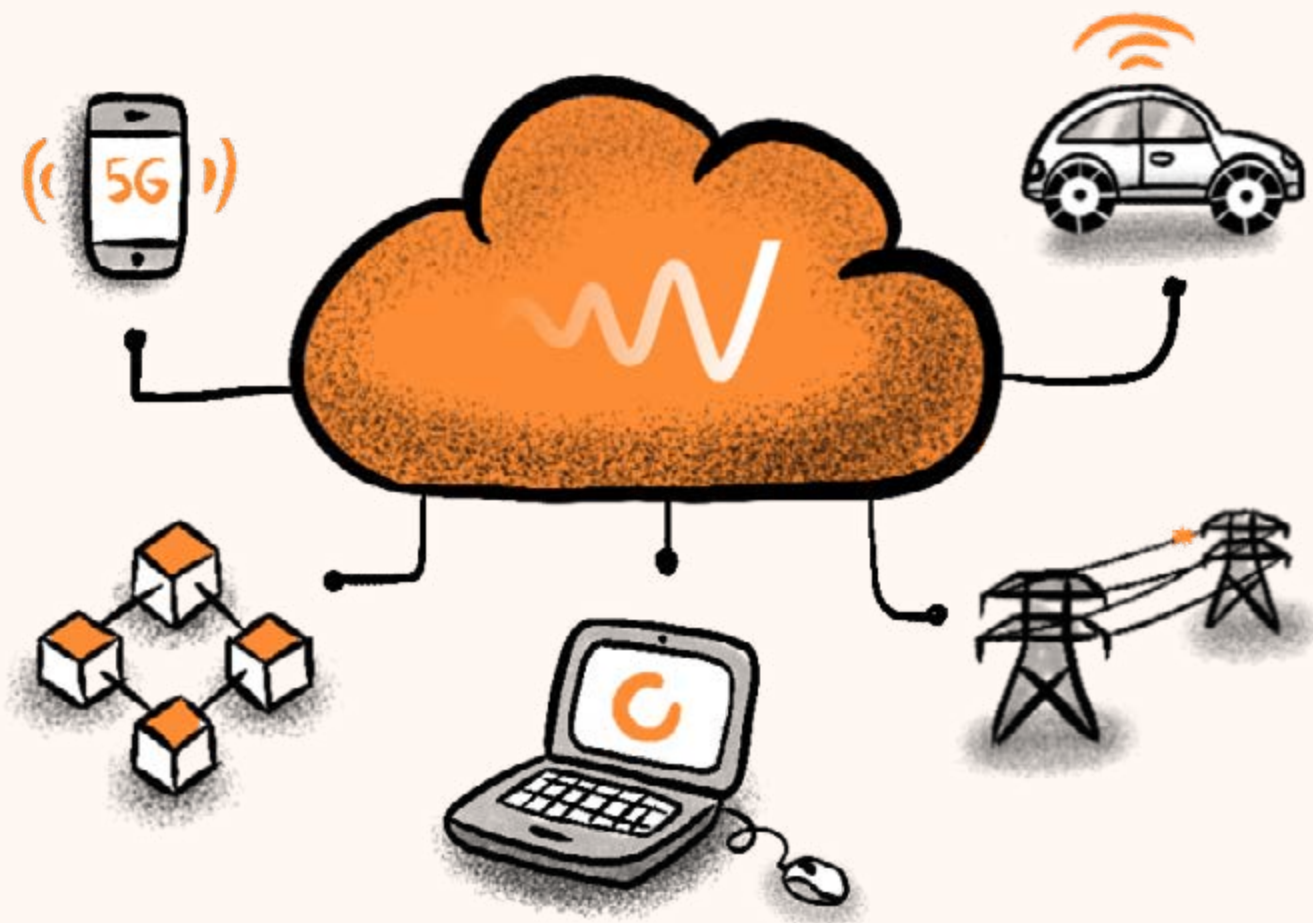
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