

2021 COGNEX ANNUAL REPORT PRESENTS  
ROBERT J. WILLETT AS AGENT 001 IN

# A.O.A.



# AGENTS OF AUTOMATION

There's no time to WASTE

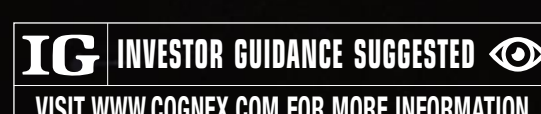
"AGENTS OF AUTOMATION" STARRING **ROBERT J. WILLETT** PRESIDENT, CHIEF EXECUTIVE OFFICER & DIRECTOR

CO-STARRING: **SHEILA DIPALMA** EXECUTIVE VICE PRESIDENT, EMPLOYEE SERVICES **CARL GERST** EXECUTIVE VICE PRESIDENT, VISION AND ID PRODUCTS **PAUL TODGHAM** SENIOR VICE PRESIDENT & CHIEF FINANCIAL OFFICER

SPECIAL APPEARANCE BY: **ANTHONY SUN** CHAIRMAN OF THE BOARD, COGNEX CORPORATION, AND FORMER MANAGING GENERAL PARTNER, VENROCK ASSOCIATES

CASTING DIRECTORS: **PATRICK A. ALIAS** SENIOR VICE PRESIDENT, COGNEX CORPORATION **THEODOR KRANTZ** FORMER VICE PRESIDENT & CHIEF FINANCIAL OFFICER, AIRMAR TECHNOLOGY CORPORATION **SACHIN S. LAWANDE** PRESIDENT & CHIEF EXECUTIVE OFFICER, VISTEON CORPORATION

**DIANNE M. PARROTTE** INDEPENDENT CONSULTANT **MARJORIE T. SENNETT** FORMER MANAGING DIRECTOR, FARALLON CAPITAL MANAGEMENT, LLC



This Annual Report is a parody and not a real movie poster.

# AGENTS OF AUTOMATION

## One company's fight against global manufacturing inefficiencies.

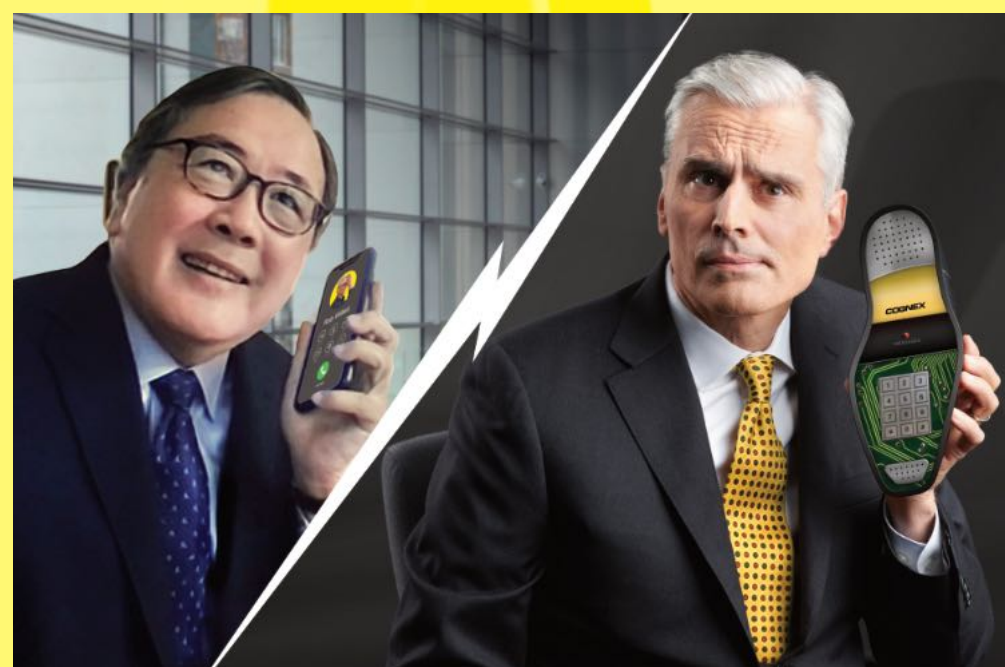
Cognex Secret Agent 001, Rob Willett, and his Agents of Automation (A.O.A.) take down the villainous organization, WASTE (Whiners Against Saving Time and Energy), and its efforts to slow production times, encourage errors, and create chaos in manufacturing and distribution operations around the world.



Three heads are better than one: (L-R) Cognex head Agents of Automation, Sheila "CCO" DiPalma, Paul "Mr. Moneybags" Todgham, and Carl "the gadget guy" Gerst team up to discuss Cognex strategies for eliminating WASTE once and for all.

### The name's Willett. Rob Willett.

I am pleased to report that we successfully completed our mission in 2021. It was a record year for Cognex. We generated \$1 billion in annual revenue for the first time, an increase of 28% over 2020, and set records for net income and earnings per share from continuing operations. With manufacturers under siege from WASTE, the trends driving the adoption of machine vision technology from Cognex were stronger than ever. We benefited from the rise of e-commerce, the transition to electric vehicles (EVs), widespread labor shortages, and increasing requirements for product traceability. Additionally, the COVID-19 pandemic accelerated growth in areas such as "touch-free" barcode reading, logistics automation, and visual inspection.



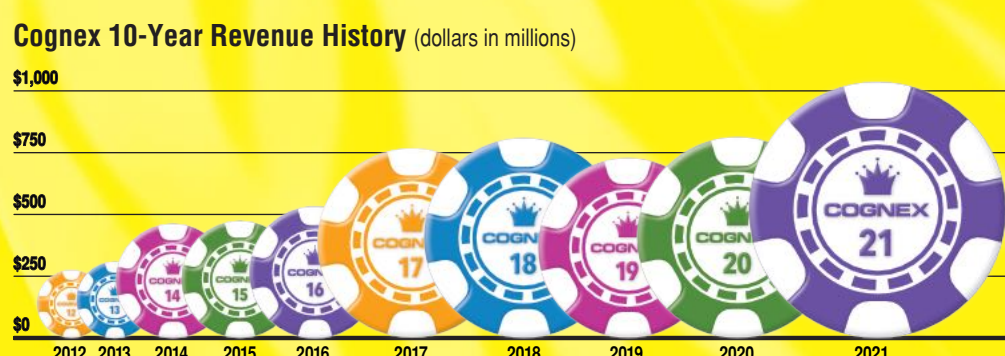
A "shoe-in" for Agent of the Year: Commander Rob Willett (R), Agent 001, reports record results for 2021 much to the delight of newly elected Chairman of the Board, Anthony "T" Sun (L), and Cognex shareholders.

Despite glowing results, our mission in 2021 was met with some high-stakes gambles. Like many companies, Cognex was impacted by global chip shortages and higher supply chain costs. But we quickly employed counter-measures, including building on-site inventory, sourcing alternate components, and redesigning products. And when the chips were down, we put our customers' needs first, sacrificing short-term profitability to secure inventory and expedite product delivery.

These challenges did not stop our mission. We achieved strong growth across all major end markets in 2021 except for consumer electronics. We also saw broad growth across global regions, including fast-growing geographies where we are investing (such as India and Vietnam).

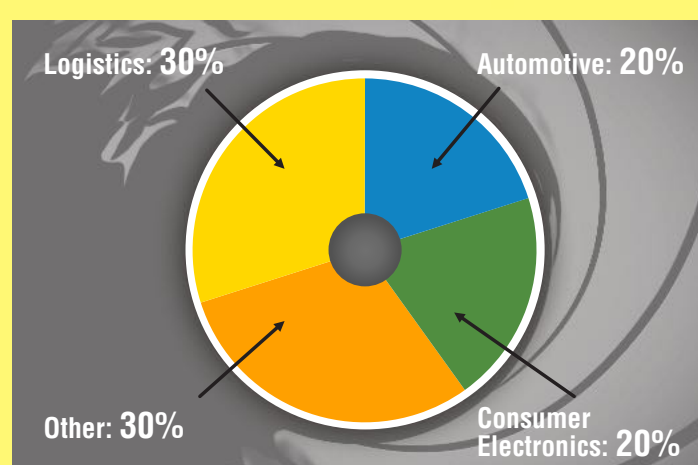
### For Your Eyes Only: Performance and Opportunities by Market

**Logistics**  
As WASTE wreaked havoc in distribution centers worldwide, logistics became Cognex's largest market in 2021 for the first time. It was our fastest-growing sector, increasing by approximately 65% over 2020 and surpassing the stretch goal we set for ourselves. E-commerce and omni-channel retailers invested aggressively in automation to help fill orders rapidly, reliably, and cost effectively. Also, traditional brick-and-mortar retailers increased their investment in logistics automation to compete more effectively for e-commerce customers.



Cognex continued to grow market share in logistics during 2021 by solving new applications, from multi-sided tunnels for barcode reading and dimensioning, to 2D, 3D, and deep learning inspection, to item classification solutions. We also expanded in underpenetrated geographic regions. Future growth opportunities include segments such as parcel, and solutions such as system analytics and feature-based identification and inspection, where our expertise is becoming more and more significant in the plans of our customers. We believe our outlook for logistics is bright and we have high expectations for long-term growth in this market.

### Cognex 2021 Revenue by Industry (percentage rounded to the nearest 5%)



### Automotive

After two difficult years, we put our license to thrill into action and saw a return to strong growth in automotive during 2021. Manufacturers increased investment in long-standing applications for machine vision to ward off WASTE, while newer areas such as EV battery inspection continued to expand and contributed significantly to our growth. The world's largest EV battery manufacturers invested in Cognex machine vision systems and barcode readers as they scaled up their production processes.

Cognex deep learning technology is used during virtually every step of EV battery inspection, including cap welds, injection seals, cell and pouch surfaces, and panel welds. Manufacturers also rely on Cognex's Optical Character Recognition (OCR) tools to locate and decode alphanumeric codes printed on the bottom sides of batteries. In addition to opportunities in EV battery inspection, automotive electronic components are becoming increasingly sophisticated and more reliant on applications such as sensor alignment and glue inspection. Cognex deep learning is well positioned to help avoid potholes in those processes.

### Consumer Electronics

From smart eyewear to smartphones, consumer electronics is traditionally a strong market for Cognex. After growing by more than 30% in 2020, revenue from this market was modestly lower in 2021 as customers used



A view to a thrill: Commander Willett sets his sights on thrilling makers of augmented reality glasses and other hard-to-manufacture devices with Cognex WASTE-eliminating products.

capacity they built up in the prior year. Additionally, our customers focused more on upgrading existing lines rather than making big incremental investments for new smartphone technologies or remote work products.

The consumer electronics market is often cyclical, and we see demand continuing to be strong over the long term. We are confident customers will continue to turn to Cognex to help them miniaturize products and bring new technologies to market such as wireless charging stations, new displays, smartwatches, and virtual and augmented reality headsets—gadgets that help us all succeed in the field. Moreover, customers are trialing Cognex deep learning to help them automate the visual inspection of electronic components and eliminate WASTE from the manufacturing process.

### Medical-Related Applications

As always, Cognex battled in 2021 to improve efficiency, prevent counterfeiting, lower production costs, and increase throughput for life sciences, pharmaceutical, and medical device companies. We secured more than 30 design wins at leading life science original equipment manufacturers (OEMs). Customers also continued to invest in Cognex deep learning for a variety of COVID-related applications, including inspecting vaccine vials and assembling test kits. Revenue from medical-related applications is outpacing Cognex overall and offers a predictable and consistent revenue stream for us over the long term.

### Packaging Applications

Packaging applications are an attractive opportunity for Cognex to help protect product quality and safety, ensure package integrity, avoid mislabeling allergens, and maintain traceability for consumer product and food and beverage manufacturers. Increasingly, these companies are adopting Cognex identification (ID) technology to serialize all products they make. Serialization allows brands to avoid WASTE and ensure only authentic merchandise is sold to end customers and allows governments to monitor compliance and sidestep nefarious schemes more effectively. Item-level serialization in the past has been expensive and difficult to achieve—but it is becoming more standard with

Driving strong results: Enabling companies to steer clear of WASTE during the manufacturing process led to strong growth from the automotive industry in 2021 for Cognex.

Cognex ID technology. Additionally, manufacturers are increasingly turning to Cognex deep learning and 3D vision technology to inspect irregularly shaped and naturally made food products.

### Eliminating WASTE Once and for All

Winning technology is our secret weapon. The sophistication of Cognex software—together with custom-designed optics and illumination, and our 41 years of application experience—provide a significant competitive advantage. From our DataMan® line of industrial barcode readers to our In-Sight® family of vision systems, our VisionPro® Deep Learning software, system analytics, and our 3D vision tools, Cognex engineers create best-in-class products. And our intellectual property is protected by more than 1,000 patents and applications.

Cognex engineering expertise also enables us to provide vision tools that are faster, generate less heat, and run on lower-cost hardware platforms, making our products smaller, more energy-efficient, and easier to integrate than those of our competitors. As they say, good things come in small packages.

We are committed to maintaining our position as a technology leader in machine vision, and each year we invest significantly in RD&E to achieve this goal. We invested \$135 million in RD&E in 2021, which we believe is more than any of our competitors in industrial machine vision.



This agent goes deep: Agent Deep Learning works behind the scenes to deploy technology with human-like capabilities for solving complex inspection applications.

Our commitment to continuous technological innovation helps us introduce tomorrow's technology today. There are four areas of technology where we have invested in recent years that are making Cognex Agents of Automation particularly excited in our mission against WASTE.

### Deep Learning

Cognex's industry leadership in deep learning provides us with a distinct competitive advantage. We have two main WASTE-busting objectives in this area. First, is to make deep learning easier to use for more customers. We have seen rapid growth in sales of our In-Sight® D900 vision system, launched in 2020, and our Edge Learning™ tools, launched in 2021. Second, we are focused on making deep learning more powerful for sophisticated cosmetic inspection applications. This includes design wins for PC-based vision applications and the automation of time-consuming manual inspections, resulting in both significant cost savings and increased inspection accuracy and repeatability.



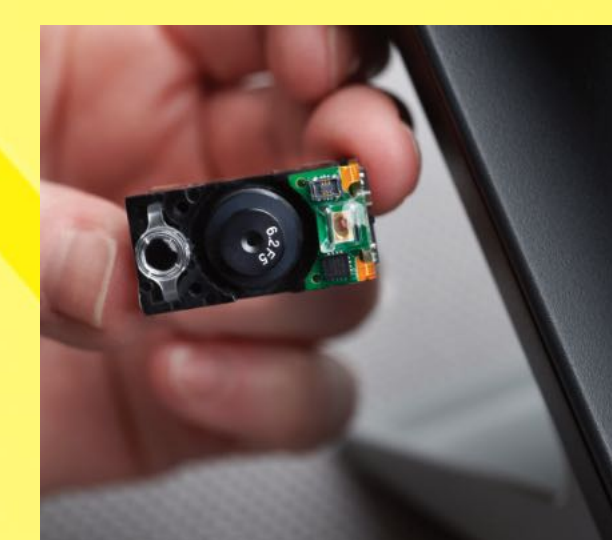
An epic climb: Surpassing \$1 billion in annual revenue during challenging times took focus, nerve, and industry-leading products. "At times, it felt like defying gravity," recalled Commander Willett.

### High-Performance Barcode Reading

Some of A.O.A.'s favorite gadgets are Cognex high-performance barcode readers. They allow customers to read even the most difficult barcodes at the highest speed and accuracy, and we continue to make improvements in their performance and usability. In 2021, we launched the DataMan® 8700 Series handheld readers. Featuring advanced image formation and quick processing, the 8700 Series handheld readers can instantly read challenging direct part mark (DPM) and label-based codes even when vital elements of the code are missing or damaged.

### Proven in the Field: Brainlab

This vision-assisted medical treatment company uses Cognex's 3D vision technology to improve the positioning of patients during radiotherapy. Cognex's 3D-A5060 area scan camera is a significant aspect of the Brainlab ExaTrac® Dynamic Patient Positioning system, which tracks patient position in real-time. With Cognex's 3D vision, Brainlab has stated the system can achieve sub-millimeter accuracy in locating body areas, like the chest and head of patients, allowing higher throughput and shorter cycles for time-critical applications.



Stealth matters: When caught in a tight spot, life science OEMs rely on the exceptionally compact—yet powerful—Cognex vision engine for their advanced automation equipment.

### 3D Vision

3D is a fast-growing market for Cognex. Our 3D vision technology is solving in-line applications where a height or volume measurement is required, including measurement of critical features such as object flatness, surface angles, or part volumes. In 2021, we released the In-Sight® 3D-L4000 vision system. Striking fear into the heart of WASTE, the 3D-L4000 is a first-of-its-kind solution and the culmination of exceptional engineering work across Cognex optics, vision tools, and customer experience teams.

### Industry 4.0 and Industrial Internet of Things (IIoT) Initiatives

Making data-driven decisions is critical for mission success. Cognex machine vision systems and barcode readers produce a tremendous amount of insight-rich data across manufacturing and logistics facilities. With the Cognex Edge Intelligence™ (EII™) software platform, launched in 2021, customers can now easily access important data from Cognex devices throughout their manufacturing and logistics facilities. Our Edge Intelligence software platform helps customers use the data to monitor system performance, manage devices remotely, prevent downtime, and boost productivity. It can also push data to other systems such as cloud storage platforms. Less fun, but much more effective than a jet pack, powerful visualization tools on the EII software platform enable manufacturers to access factory floor data instantly and securely to identify device issues in any of their worldwide plants and take corrective action faster.



The man with the golden Frisbee: Cognex invests in RD&E to ensure its bag of gadgets is always full. Here agents demonstrate a new device with proven success on the field.

### Scaling for Future Missions and Growth

In addition to innovation, Cognex has been investing in technology infrastructure to scale for future success. We recently implemented Salesforce.com to increase sales productivity, pricing optimization, and operational efficiency. This investment upgrades our customer relationship management (CRM) platform, and will help us improve demand planning for operations, provide enhanced feedback from sales to engineering, and better lead distribution for marketing.

### Cognex Agents of Automation: Always Mission Ready

Cognex has strongly embraced and invested in our culture since our inception 41 years ago. We believe our culture enables us to attract and retain smart, energetic, and creative talent, and is critical to our success. We work hard to create an environment where we value engagement and Cognoids (as we call ourselves) are inspired and empowered to always be ready and willing to do their best work.

A Special Services team at Cognex thrives creating innovative ReCOgnition reward programs, zany-themed employee meetings, improv movie nights, skydiving trips, paintball tournaments, legendary Halloween parties, and other opportunities for Cognoids to build connections and a sense of belonging. Our employee engagement scores are consistently and significantly higher than the technology industry average. During these unprecedented and challenging times, our 2021 employee satisfaction score increased by 3 percentage points over 2020.

To preserve and enhance Cognex's unique culture, and recognize cultural differences across and within regions, we have a global team of Cognoids who serve as Ministers of Culture (MOC) to bring our culture to life throughout the areas where we are present. Cognex MOCs are led by Cognex Chief Culture Officer, Sheila DiPalma, Executive Vice President of Employee Services. Sheila was appointed to this important role in 2021 following the retirement of our founder Doctor Bob Shillman as Chairman of the Board and an executive officer after a remarkable 40 years at the helm.

### Closing Thoughts

Thanks to the continued perseverance of Cognoids and trust of our customers, we achieved broad growth across the business in 2021.

Trends driving the growth of machine vision are as strong as ever and we are optimistic about opportunities in our key markets of logistics, automotive, and consumer electronics, as well as applications in medical-related industries and packaging.

I am grateful to Doctor Bob for his immense contributions to Cognex and for instilling the enthusiastic, entrepreneurial spirit that is the hallmark of our company.

We will continue to focus on our long-term growth, investing in innovation, technology infrastructure, and culture to ensure our continued success in 2022. Here's to another mission as smooth as a Vesper Martini—shaken, not stirred!

*Rob Willett*

Faithfully submitted,  
Commander Robert J. Willett, 001

### Shareholder Information

**Corporate Headquarters**  
Cognex Corporation, One Vision Drive, Natick, MA 01760  
Telephone: (508) 650-3000 Web: www.cognex.com

**Transfer Agent**  
Computershare (www.computershare.com/investor)

**Outside Legal Counsel**  
Goodwin Procter LLP, Boston, MA

**Independent Auditors**  
Grant Thornton LLP, Boston, MA

**Form 10-K**  
A copy of the Annual Report on Form 10-K filed with the Securities and Exchange Commission is available free of charge upon written request to Cognex Investor Relations at the address above, or via online request at www.cognex.com/investor.

This report, including the CEO's letter, contains "forward-looking statements" within the meaning of the Securities Act of 1933 and the Securities Exchange Act of 1934. For further information, please see the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the Form 10-K. A discussion regarding risks associated with forward-looking statements is included under the heading "Forward-Looking Statements." All information in this report is subject to change without notice.

Cognex, DataMan, In-Sight, and VisionPro are registered trademarks, and Edge Intelligence, EII, and Edge Learning are trademarks, all owned by Cognex Corporation. © 2022 Cognex Corporation; all rights reserved.

**Design:** PointOne Marketing & Design, Danvers, MA  
**Creative Director:** Don Ferber  
**Original Photography:** David Shopper (www.davidshopper.com)

**Printing:** In the USA by DS Graphics I Universal Wilde (www.dsgraphics.com)  
**Rolex Watch:** Robert "Fisheye" Prantiss  
**Coded Message:** Provided by Samuel F. B. Morse, Charlestown, MA

