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The New World of Lighting

7 Top Trends Reshaping
the Industry. Read more
on **pg. 14**



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Electrical Wholesaling®

March/April 2023 • Vol. 104, No. 2 • www.ewweb.com

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Also publisher of:

EC&M **Electrical Marketing**



Winner of the
Jesse H. Neal Editorial
Achievement Award
1966, 1973, 1975,
1981, 1985
Winner of the Jesse H. Neal
Certificate of Merit
1960, 1961 (First Award),
1976, 1993, 1996 (2)



Electrical Wholesaling (USPS Permit 499-810, ISSN 0013-4430 print, ISSN 2771-6414 online) is published 6x a year (Jan/Feb, March/April, May/June, July/Aug, Sept/Oct, Nov/Dec) by Endeavor Business Media, LLC, 1233 Janesville Ave., Fort Atkinson, WI 53538. Periodical postage paid at Fort Atkinson, WI, and additional mailing offices. POSTMASTER: Send address changes to Electrical Wholesaling, PO Box 3257, Northbrook, IL 60065-3257. SUBSCRIPTIONS: Publisher reserves the right to reject non-qualified subscriptions. Subscription prices: U.S. (\$ 56.25); Canada/Mexico (\$ 80.00); All other countries (\$ 180.00). All subscriptions are payable in U.S. funds. Send subscription inquiries to Electrical Wholesaling, PO Box 3257, Northbrook, IL 60065-3257. Customer service can be reached toll-free at 877-382-9187 or at Electricalwholesaling@Omeda.com for magazine subscription assistance or questions.

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Making the right connections

ChatGPT: Ready for its Electrical Market Debut?

You can now ask ChatGPT and other chatbots hundreds of questions about your business, but don't trust their answers implicitly — yet.

Everyone is talking about artificial intelligence (AI) these days. It's actually been around for quite a while. ERP software companies have been using it for years in their R&D efforts, and other tech-minded companies use it to vet production processes and other quality control applications. A big difference between past AI applications and chatbots such as OpenAI's ChatGPT, Microsoft's Bing and Google's Bard is that anyone can access them on the internet.

The most popular of these chatbots, ChatGPT (<https://chat.openai.com>), has only been available for four months, but it's already an online sensation. Released to the masses by Elon Musk and OpenAI's other co-founders on Nov. 30, 2022, it only took four days for ChatGPT to hit the 1-million user mark.

Bill Gates said in his blog, www.gatesnotes.com, that only two demonstrations of technology ever struck him as revolutionary. One was when he first saw a graphical user interface, now used to access personal computers, and the second was when he saw ChatGPT. Gates was sold on ChatGPT after he challenged the OpenAI developers to train their AI to pass an AP Bio exam, and ChatGPT got 59 out of 60 questions correct, even though it had never seen any of the specific questions before.

Gates said in his blog that the development of AI is as fundamental as the creation of the microproces-

sor, personal computer, Internet and mobile phones.

"It will change the way people work, learn, travel, get health care and communicate with each other," he wrote. "Entire industries will reorient around



it. Businesses will distinguish themselves by how well they use it."

I was inspired to test ChatGPT's usefulness in the electrical market after reading David Gordon's "A Chat with ChatGPT About the Outdoor Lighting Market" on www.electricaltrends.com. Gordon asked ChatGPT questions about trends in the outdoor lighting market and although some of the answers were pretty rudimentary, you could see how this technology will get much smarter as it assimilates more information on users' queries.

I asked ChatGPT 16 questions on various topics in the electrical market.

For the most part, I was impressed with ChatGPT's answers, although they seemed to be drawing from the well of basic electrical market knowledge. A few answers were incorrect, but most were accurate, if pretty basic. Here are five of the questions I asked ChatGPT:

■ I am a distributor of electrical supplies. One of my lighting manufacturers recently launched a new LED lighting product. Please write a strategic marketing plan to help me sell this new product.

■ How can I use my ERP computer system to help manage my inventory of products so I don't have stock-outs?

■ I am a developer of ERP computer systems for distributors. How can I use artificial intelligence to improve the ERP solutions my company sells to distributors?

■ I am an small electrical distributor who would like to use social media to promote my company more effectively. Please write me a strategic plan to do this.

■ I am an independent manufacturers' representative who sells electrical supplies. I need advice on whether or not to take on a new lighting product line to sell.

It's worth your time to explore what these chatbots have to offer. An interesting exercise might be to assign employees in each of your company's departments the task of coming up with 10 questions for ChatGPT on their specific piece of your business. Then have each department's manager ask ChatGPT those questions. While many of the responses may be very basic, the exercise may uncover some topics that you can dig into at your next strategic planning meeting.

ChatGPT is not infallible. Occasionally, its answers could be punchlines for the jokes of late-night comedians on television. But it's early days for these chatbots, and once their artificial intelligence gets "smarter," how much they know might get a bit scary. **EW**

By Jim Lucy, Editor-In-Chief



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Dodge Momentum Index Rises in February

The Dodge Momentum Index (DMI), issued by Dodge Construction Network, advanced +1.9% in February to 203 points (2000=100) from the revised January reading of 199.3 points. In February, the commercial component of the DMI rose +1.4%, and the institutional component increased +2.9%.

“The Dodge Momentum Index returned to growth in February after falling -9% last month,” said Sarah Martin, associate director of forecasting for Dodge Construction Network, in the press release. “The continued elevation in the DMI should provide hope that construction activity will grow in 2024. Owners and developers tend to put projects into planning until well after economic conditions weaken. During the Great Recession, for example, the DMI did not substantially decline until 2009. Therefore, the anticipated mild economic growth in 2023 could cause the DMI to moderate over the year, but it’s unlikely to fall below historical norms.”

Commercial planning in February was bolstered by almost +20% growth in office planning activity, as data

centers continued to steadily enter the planning queue. Institutional planning was driven higher by growth in education and healthcare projects, notably the continued investment in research laboratories. On a year-over-year basis, the DMI remains +43% higher than in February 2022. The commercial component was up +55%, and the institutional component was +22% higher.

A total of 22 projects with a value of \$100 million or more entered planning in February. The leading commercial projects included the \$500-million Northwestern Mutual Headquarters in Milwaukee, and the \$375-million Legacy Highlands warehouse and retail project in Beaumont, CA. The leading institutional projects included the \$500-million University of Michigan Residence and Dining Hall in Ann Arbor, MI, and the \$213-million Center of Innovation laboratory building in Emeryville, CA.

The DMI is a monthly measure of the initial report for nonresidential building projects in planning, shown to lead construction spending for nonresidential buildings by a full year.

BILLION-DOLLAR EV PLANTS TOP PROJECT ACTIVITY

The sheer size of the many new construction projects obscured the national trend in the overall construction market.

While many construction economists expect the overall market to decline in 2023, it’s not hard to find dozens of large projects that either broke ground or entered the planning stage over the last three months. We found that airports, data centers and, surprisingly, large office projects were among the largest project types. Several semiconductor plants and electric vehicle factories or plants that manufacture EV batteries also topped \$1 billion in total contract value.

Tops on our project list is Brightline’s \$10 billion high-speed rail link between Las Vegas and the Los Angeles metropolitan area that’s scheduled to start construction later this year. According to a post at www.sfgate.com, the 218-mile long rail link is expected to create 35,000 construction jobs.

The \$4.2-billion Terminal 6 at New York’s JFK Airport, which broke ground in January, was the second largest project *EW*’s editors could find. It was the largest of several airport projects now under construction, including the \$1.3-billion expansion of Sacramento’s airport; the \$322-million expansion of BWI Airport in Baltimore; the \$150-million expansion of Spokane International Airport; and the \$110-million Gerald R. Ford expansion in Grand Rapids, MI.

The billions of dollars expected to be spent on semiconductor or EV plants over the next few years is flat-out

amazing. Supported in part from the CHIPS semiconductor bill and federal infrastructure funding are several newly announced projects that broke ground or are in the planning stage, including the Hyundai Motor Group/SK EV factory in Bartow County, GA, with a total contract value of \$4 billion to \$5 billion; the \$3.5-billion Honda/LG Solutions EV plant that broke ground in Jefferson Township, OH, last month; a \$1.9-billion EMP Shield semiconductor plant in Burlington, KS; the \$810-million Envision/AESC battery plant that will supply a BMW EV factory in Florence, SC; and a \$760-million renewables energy battery plant in Weirton, WV.

Despite the swing toward remote officing, several companies are moving forward with large office projects, including the \$600-million Mutual of Omaha headquarters in Omaha, NE; the \$575-million Spark Therapeutics Gene Therapy Innovation Center at Drexel University in Philadelphia; the \$460-million CoStar corporate campus in Richmond, VA; and Northwestern Mutual project mentioned in the article above.

Billion-dollar data centers in Sandston, VA, and Elk Grove, IL, as well as several smaller facilities made *Electrical Marketing*’s top project list, which is updated quarterly and is part of a \$99 annual subscription to the newsletter. Visit www.electricalmarketing.com for subscription information.

OneSource Hits \$1 Billion in Sales

Sonepar USA, Charleston, SC, announced that its OneSource Distributors business unit surpassed \$1 billion in sales in 2022.

Founded in 1983, OneSource has grown to more than 530 associates and 15 locations across California, Hawaii, Arizona and Baja, Mexico. The company primarily distributes electrical products and services across the contractor, industrial, renewables and utility markets. In 2022, each business segment saw significant growth. New customers, growth with existing customers and into new markets and expanded value-add services were key factors in the company's success.

"OneSource has aggressive plans to continue enhancing its customer offerings and supply chain network," said Rob Taylor, president of Sonepar North America, in the press release. "In 2020, OneSource opened a new CDC in Fullerton, CA, and has plans to open a new distribution center in Honolulu, HI, this year. OneSource is also expanding its Oceanside, CA, RDC, creating an improved San Diego customer experience."

CES Opens Branches in Maryland and Michigan

City Electric Supply continued its branch expansion bonanza over the past few months with new locations in Prince Frederick, MD, and Fenton, MI.

The new CES branch near the Chesapeake Bay area in Prince Frederick supports three counties. Branch Manager Erik Stokely came on board with CES three years ago and has worked in the electrical industry for over half of his life. He got his start working with his dad, who has been a master electrician for nearly four decades. Stokely worked at several other CES locations before coming to Prince Frederick to help open and manage the new location.

"I got my start as a lineman in the field," he said in the press release. "I used to help out my dad with inspections on the weekends, doing various work with generators and other things he might need. We're an electrical family through and through. We all have fun at the dinner table talking about the industry."

After a three-month renovation project, the City Electric Supply branch across the country in Fenton is open for business. It's the 10th CES branch in Michigan. CES Fenton will be led by Branch Manager Maxwell George.

"We are trying to expand our web of branches here in Michigan, and we wanted to put a new CES location in Fenton," said District Manager Brad Jenks in the press release. "This CES location will help connect some dots between our existing branches, such as Brighton, Waterford and Lansing, to help support our existing business and help new customers."

EW NEWS ANALYSIS

Rockwell Acquires Knowledge Lens

Rockwell Automation acquired Knowledge Lens, a services and solutions provider based in Bengaluru, India. Following the acquisition, Knowledge Lens will merge with Rockwell Automation's digital services business, Kalypso. The financial terms of the acquisition are not yet disclosed.

The increase in demand to scale connectivity, as well as enable data-driven predictive and prescriptive insights, is aiding growth of Rockwell Automation's digital transformation services business. The addition of Knowledge Lens will further expand Rockwell Automation's capabilities to harness the power of data and enable autonomous manufacturing. Founded in 2013, Knowledge Lens caters to a broad range of manufacturers, with a focus on highly regulated industries.

Frank Kulaszewicz, senior VP of Rockwell's Lifecycle Services segment, said in the press release, "The acquisition of Knowledge Lens improves our ability to help more manufacturers around the world discover and use the hidden insights in their data to drive value for their businesses."

Signify Buys Intelligent Lighting Controls

Signify, Eindhoven, Netherlands, acquired Intelligent Lighting Controls Inc. (ILC), Edina, MN, a U.S. manufacturer of wired control systems, expanding its connected portfolio. Intelligent Lighting Controls' sales are primarily focused on energy-saving control systems in applications such as healthcare, education, offices and sporting venues. Founded in 1990, ILC will continue to be headquartered and maintain its manufacturing in Edina.

Going forward, Intelligent Lighting Controls will sell its brand of wired control systems as part of Cooper Lighting Solutions, a business unit of Signify's Digital Solutions division. ILC's wired control systems expand the Cooper Lighting Solutions portfolio of energy-saving solutions, providing enhanced opportunities to sell a broad range of energy-efficient LED lighting products in the U.S., Canada and Mexico.

VITAL STATISTICS

CONSTRUCTION

New Construction Put-in-Place (\$ billions, SAAR)

	Jan '23 ₁	Dec '22 ₂	Mo. % Change	Jan '22	YTY % Change
Total Construction	1,825.70	1,827.50	-0.10	1,726.60	5.7
Total Private Construction₁	1,442.60	1,442.00	0.00	1,381.70	4.4
Residential	847.4	852.1	-0.6	881.9	-3.9
New single family	374.4	380.7	-1.7	458.6	-18.4
New multifamily	120.5	120.1	0.4	99.9	20.6
Nonresidential	595.2	589.9	0.9	499.8	19.1
Lodging	21.6	21.4	0.9	15.4	40.5
Office	83	82.6	0.5	72.5	14.5
Commercial	121.4	125.4	-3.2	99.5	22.1
Health care	44.1	44.3	-0.3	39.4	12.1
Educational	20.5	20.6	-0.7	17.9	14.2
Religious	3.1	2.9	4.7	2.8	11.2
Amusement and recreation	14.7	14.8	-0.4	13	13.7
Transportation	19	18.8	0.8	15.1	25.9
Communication	24.9	24.9	0.2	24	3.6
Power	100.5	99.5	1	107.5	-6.5
Electric	77.2	77.4	-0.3	83.1	-7.2
Manufacturing	139.4	131.5	6	90.6	53.8
Public Construction (\$ billions) ₂	383.1	385.5	-0.6	344.9	11.1
Residential	9.6	9.5	0.2	8.9	7.9
Nonresidential	373.5	376	-0.6	336	11.2
Office	13	12.8	2.2	11.9	9.2
Commercial	4.1	4.1	-1.6	3.3	23.3
Health care	11.6	11.4	2.3	10.2	13.7
Educational	84.1	84.6	-0.6	80.5	4.5
Public safety	10.8	11	-2	10	8.1
Amusement and recreation	14	14.4	-2.5	13	8
Transportation	42.5	41.6	2	41.2	3.1
Power	11.1	11.1	-0.2	9.5	16.7
Highway and street	117.3	118.4	-0.9	100.8	16.4
Sewage and waste disposal	32.4	33.2	-2.4	28	16
Water supply	21.4	22.8	-6.4	18.2	17
Conservation and development	10.3	9.5	8.6	8.5	21.5

	Feb '23 ₁	Jan '23 ₂	Mo. % Change	Feb '22	YTY % Change
Housing Starts (SAAR)	1,450	1,321	9.8%	1,777	-18.4%
Total (thousands of units)	1,450	1,321	9.8%	1,777	-18.4%
Single-family (thousands of units)	830	821	1.1%	1,213	-31.6%
Multi-family (thousands of units)	608	490	24.1%	532	14.3%

EMPLOYMENT WAGE & PRICE STATISTICS

	Mo.	Latest Month	Mo. % Change	Year ago	YTY % Change
Employment, Electrical Contractors (thousands)	JAN	1029.5	0.2	965.4	6.6
Hourly wage, Electrical Contractors (\$)	JAN	35.19	0.6	32.03	9.9
Copper prices (cents per pound)	FEB	408.81	-0.8	439.80	-7.0

INDUSTRIAL MARKET

	Mo.	Latest Month	Mo. % Change	Year ago	YTY % Change
Electrical Mfrs' Shipments (\$ millions)	JAN	4,237	4.7	3,452	22.7
Electrical Mfrs' Inventories (\$ millions SA) ₂	JAN	8,309	-0.4	6,646	25.0
Electrical Mfrs' Inventory-to-Shipments ratio	JAN	1.961	-4.9	1.925	1.9
Electrical Mfrs' New Orders (\$ millions SA) ₂	JAN	4,189	5.2	3,405	23.0
Machine Tool Orders (\$ millions) ₃	JAN	347.70	-16.3	476.95	-27.1
Industrial Capacity Utilization (percent, SA) ₁	MON	77.74	0.9 pts.	76.98	1.0 pts.

NEMA'S EBCI MAKES SOLID MOVE IN FEBRUARY

After spending nearly all of 2022 in unchanged or even contractionary territory, the current conditions component improved dramatically just two months into 2023 as the February reading added 17 points to January's score to reach 63.3 points.

The ElectroIndustry Business Conditions Index (EBCI) is a monthly survey of senior executives at electrical manufacturers published by the National Electrical Manufacturers Association (NEMA), Rosslyn, VA. Any score over the 50-point level indicates a greater number of panelists see conditions improving than see them deteriorating.

The move toward electrification and infrastructure investments, as illustrated in one comment that described "strong continued demand in EV, utility and data centers," played a role as did strong orders activity and easing supply chain pressures.

The future conditions component made an even bigger improvement, gaining 20 points to hit 66.7 points in February. A sharp pullback in the proportion of respondents who expected "worse" conditions in six months was the primary driver of the increase, with only 7% sharing that perception, while 40% indicated that "better" conditions lay ahead. Although comments pointed out potential weakness, such as in residential construction, on net they reflected a buoyed outlook compared to recent sentiment.

In the U.S. Census Bureau's new construction data for January, the private Manufacturing category was once again in the spotlight, with a +6% gain in January to \$139.4 billion. The Computer/electronic/electrical sub-category did most of the heavy lifting with a +8.8% monthly increase and +157.9% year-over-year (YOY) increase to \$60.9 billion.

The private Office category showed a small +0.5% monthly increase to \$90 billion, but that figure was up a surprising +14.5% over Jan. 2022.

Single-family construction, the largest single category, lagged all others with a -18.4% YOY decline to \$374.4 billion. **EW**

Footnotes: 1 - preliminary; 2 - revised; 3 - includes residential improvements; Z - less than 0.005 percent; SA - seasonally adjusted; SAAR - seasonally adjusted annual rate. **Sources:** Construction Put-in-Place statistics - Department of Commerce; Housing starts - Department of Commerce's Census Bureau; Electrical contractor employment numbers and hourly wage - Department of Labor; Copper prices - *Metals Week*; Electrical manufacturers' shipment data - Department of Commerce; Machine Tool Orders - Association for Manufacturing Technology; Industrial Capacity Utilization - Federal Reserve Board; and Purchasing Managers Index - Institute for Supply Management.

Note: Additional economic data relevant to the electrical industry is available on a bi-weekly basis by subscribing to *Electrical Marketing* newsletter. For subscription information see www.electricalmarketing.com.

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Mark Your Calendar — Upper Midwest Electrical Expo in Minneapolis April 19-20

Minneapolis will be home to the nation's largest regional electrical trade show later this month on April 19-20. Sponsored by the North Central Electrical League (www.necel.org), the Upper Midwest Electrical Expo typically draws over 9,000 attendees. The 2021 show had 320 booths with 335 electrical manufacturers and drew attendees from 44 U.S. states and 5 Canadian provinces. The 2021 NCEL breakfast was a big hit, too, drawing 400 hungry attendees and exhibitors. Along with the busy booths loaded with new products, this year's show will also offer a robust training curriculum with classes on the National Electrical Code. For more information on the 2023 Upper Midwest Electrical Show visit www.ncel.org/expo.html.



ABB Investing \$20 Million in Robotics Plant



ABB is expanding its North American robotics headquarters and manufacturing facility in Auburn Hills, MI, with a \$20-million investment. The project is expected to be completed in Nov. 2023. The expansion will create 72 new jobs in the area and is supported by a \$450,000 Michigan Business Development Program performance-based grant.

“Our investment is a significant step in accelerating ABB Robotics’ global leadership in developing and manufacturing cutting-edge robotic solutions in the United States, for the Americas,” said Sami Atiya, president of ABB Robotics and Discrete Automation, in the press release. “As the global mega trends of labor shortages, uncertainty, the near and

reshoring of production, and a desire to operate more sustainably accelerate, more businesses are turning to automation to build resilience while improving efficiency and flexibility. Our expanded facility will help us to better serve customers in the United States and across the Americas, giving them access to innovative automated solutions.”

Adding to the \$14 billion ABB has already invested in the United States since 2010, the latest investment in its robotics headquarters and factory will benefit customers in the Americas, particularly those in growth sectors including electric vehicles, healthcare, packaging and logistics. ABB Robotics moved into the 538,000-sq-ft building in 1993 and opened the manufacturing plant in 2015, becoming the first global industrial robotics company to fully commit to a North American robotics production footprint.

Legrand Opens New Distribution Center in Western Ohio

Legrand recently opened a 625,000-sq-ft operations facility in Union, OH, near Dayton that will provide over 200 new jobs to the area and enhance the company's ability to ship more quickly to customers.

The company said in the press release that it's committed to sustainability, and that the opening of the Dayton facility supports this commitment through various approaches. The building is on track to receive Green Globes Level One Certification. In addition, the new centrally located facility, coupled with existing West Coast and Southern Distribution centers, will service customers more efficiently, reducing freight and carbon emissions. The company said the new facility will allow shipment of products to most of the customer base within a two-day transit time.

Some of the Legrand products used in the construction of the facility include:

- Architectural and industrial lighting from Kenall, Finelite, OCL and Pinnacle.
- Automated window shades from Legrand Commercial Shading
- Electrical wiring devices from Legrand's radiant Collection and Cablofil wire management
- Data room outfitted with Legrand Minkels technology
- Voice-data-video (VDV) equipment from Legrand's AV division, such as Middle Atlantic, Chief, Vaddio, Da-Lite and C2G



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INDUSTRY EVENTS

April 19-20, 2023

UPPER MIDWEST ELECTRICAL EXPO

Minneapolis; North Central Electrical League
www.ncel.org

May 21-23, 2023

LIGHTFAIR TRADE SHOW & CONFERENCE

New York; www.lightfair.com

May 23-25, 2023

NAED ANNUAL CONFERENCE

Marco Island, FL; www.naed.org

June 12-14, 2023

NAED WOMEN IN INDUSTRY FORUM

Salt Lake City, UT; www.naed.org

June 14-16, 2023

NAED ADVENTURE

Salt Lake City, UT; www.naed.org

September 18-20, 2023

IDEA E-BIZ

Nashville, TN; IDEA
www.idea4industry.com

September 30-October 2, 2023

NECA SHOW

Philadelphia; National Electrical
Contractor Association (NECA)
www.necashow.org

October 18-20, 2023

AD ELECTRICAL NORTH AMERICAN MEETING

Dallas; Affiliated Distributors
www.adhq.org

November 6-8, 2023

NAED EASTERN CONFERENCE

Marco Island, FL;
www.naed.org



Leviton Expands Factory in Camargo, Mexico

Leviton, Melville, NY, expanded its 80,000-sq-ft factory in Camargo, Mexico, to house several new production lines and a distribution center for more efficient operations, as well as areas that benefit employees such as dedicated offices, a cafeteria and recreational center. The new facility will add 300 positions to the Leviton workforce in the region. Leviton expects to complete construction later this year.

“We’ve been manufacturing products in Camargo for over 25 years and are extremely excited to be expanding our footprint yet again in this region,” said Michael Mattei, executive VP and general manager, Leviton Commercial & Industrial. “As customer needs and dynamics shift, we’re staying ahead in terms of how we meet demand and develop new products. In this new space, we’re adding technology and manufacturing capabilities that will allow us to even better serve our customers.”

The facility will manufacture products for all four Leviton business units and serve customers across the world. Incorporating automation and new technology in the facility will also improve Leviton’s ability to meet capacity demands, improve lead times and bring new products to market in a faster and more sustainable manner.

Focusing on reducing its overall environmental impact and empowering and enabling customers to be more sustainable, Leviton’s goal to achieve company-wide carbon neutrality by 2030 (CN2030) will be reflected in the construction and the expansion of the Camargo facility. “It was important to incorporate our CN2030 efforts in building this facility,” said Jaime Estrada, VP, Chihuahua operations, in the press release. “As Leviton strives for carbon neutrality by 2030, the expanded Camargo facility will adhere to Green Building Initiative standards.”

Southwire Opens New Office in Atlanta Metro

Southwire, Carrollton, GA, opened a new hub at The Battery Atlanta in Cobb County adjacent to Truist Park, home of the Atlanta Brave, on Wednesday, Feb. 15.

Approximately 200 team members, customers, partners and community leaders commemorated the occasion with a ribbon cutting, tours, networking and a special guest appearance by Atlanta Braves mascot, Blooper. The roughly 23,000 sq ft of offices, meeting rooms, workstations and multi-purpose space will provide team members space and opportunity for connection and collaboration.

While expanding its presence in metro Atlanta provides the company with a competitive edge for talent recruitment and retention and exciting opportunities, Southwire remains committed to its headquarters in the west Georgia area and each of its existing communities.



In other company news, Southwire plans to open what it's promoting as "the largest, most advanced copper rod plant in the world" near its Carrollton headquarters.

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Megatrends Reshaping **THE LIGHTING WORLD**

Wondering why the lighting industry seems so different these days? These mergers, new market opportunities and some technological magic are reshaping the market.



The lighting industry has been in a constant stage of change (some folks might say turmoil) for decades. In the early 1980s, many lighting manufacturers focused on squeezing out more energy savings from fluorescent tubes. Fast-forward a few years, and there was a ton of action in the conversion to electronic ballasts and the development of compact fluorescent lamps. At the dawn of the 21st century, the LED revolution was just getting started, and it's amazing to think that the only places you saw LEDs back then was in exit signs, traffic lights and eventually some theatrical lighting.

What a difference a few decades make. LEDs are everywhere now and in some

By Jim Lucy, Editor-in-Chief

applications their color and intensity can be controlled by a smartphone. LEDs have reshaped the very structure of the lighting industry and the manufacturers that develop the products, the reps that sell, and in spec-grade categories, stock the product, and the full-line distributors that still count on lighting products for up to 30% of their sales. *Electrical Wholesaling's* editors did some thinking about all of the changes in the lighting market and made their picks for the trends that will have the most impact on the business over the next few years.

#1. The tiers of lighting manufacturers are more distinct than ever.

In the lighting world, there's a relatively small group of lighting manufacturers with annual revenues of more than \$1 billion; a larger group of mid-sized players with revenues of between \$100 million less than \$1

billion; and smaller lighting vendors with annual revenues of less than \$100 million. According to public documents, published articles and other credible online sources, the members of the "billion-dollar club" include Signify, Acuity, LEDVANCE and Current. The mid-sized lighting manufacturers include Lutron, and the lighting product business units in Legrand and Leviton at the high-end of the tier, as well as Ideal Industries' Cree Lighting business, TCP, Maxlite, Halco, RAB Lighting, WAC Lighting, Nicor Lighting and Keystone Lighting Solutions. Smaller lighting manufacturers including Earthtronics, Energy Focus, Tivoli Lighting, USAI Lighting and Edison Price.

Lighting equipment manufacturers of all sizes — from the largest billion-dollar companies to the smallest specialty manufacturers — have access to most of the same LED semiconductor chips and fixture or control manufacturing/fabrication processes, so the name of the marketing game in the years to come will be how these large and small companies differentiate themselves in the market.

#2. Brand ownership continue to evolve.

The largest lighting manufacturers market dozens of lighting brands. At last year's LightFair show in Las Vegas, the three largest exhibitors — Signify (including the Cooper Lighting brand portfolio); LEDVANCE; and Current (including brands purchased in the Hubbell Lighting acquisition) controlled 83 different lighting brands. Add in Acuity Brands, which did not exhibit at LightFair, and these four companies sell at least 114 lighting brands.

Many of these brands got their start as small independent companies that eventually became part of a larger lighting manufacturer's product portfolio. After acquiring new lighting brands, new parent companies always must decide whether to invest the marketing dollars to maintain these brands or to promote their corporate identity. Brands live or die based on these decisions.

Look no further than GE Lighting's journey of more than 100 years, from an iconic brand with roots in Thomas Edison's original lamp business, to a prominent place in the GE portfolio of companies, and more recently to its new identity as part of Current, which now blends GE's commercial/industrial lighting business with what was once Hubbell's lighting division.

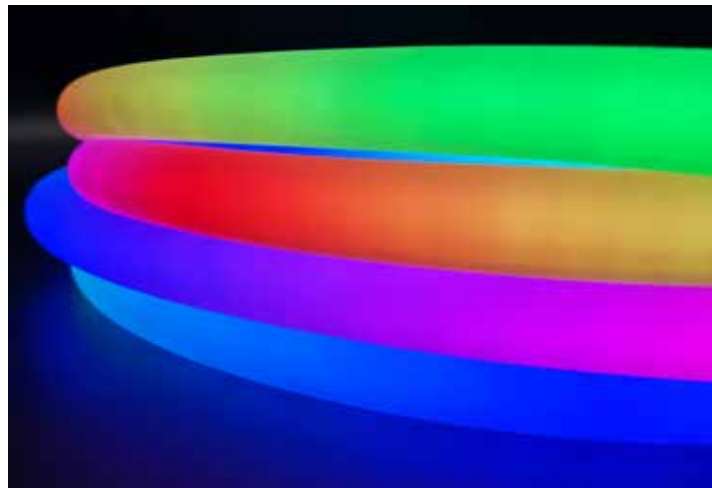
#3. Marketing customizable white LEDs that enhances productivity and improves mental focus. Tunable LED lighting can be customized to specific applications, including classrooms, factories, hospitals and senior living facilities. There's a lot of research into how certain types of lighting can increase students' attention spans, help productivity/safety on the factory floor, and affect the moods of patients in hospitals and seniors in nursing homes. The concept of tunable white light isn't new, but manufacturers now have a new generation of LED chips that can be matched more accurately to specific applications and more insight into the impact of white LED light on health/well-being from an ever-growing body of research.

#4. The horticultural lighting niche? Believers expect it to grow, baby, grow. While programming LED chips to provide the unique lighting spectrum needed for marijuana in the cannabis industry gets all the ink, manufacturers are also marketing LED growth lights for the broader horticulture and farming verticals in what's called CEA (Controlled Environment Agriculture) applications. These verticals include flowers, food crops and urban farms, where plants are grown in warehouses or multi-level buildings turned into greenhouses.

Facility Solutions Group (FSG), Austin, TX, operates a specific business unit that focuses on helping growers and farmers increase crop yields in a broad array of CEA applications. Another interesting distributor in this niche is Ultra Yield Solutions, with offices in Reno, NV, and Mamaroneck, NY, which was started up by Chris Brown, an electrical lifer who spent decades with Wiedenbach-Brown, Purchase, NY. Ultra Yield Solutions sells CEA products from Acuity Brands and a stable of smaller specialists in this area.

#5. New app-based lighting controls continue to enter a crowded market. Over the past few years, a dizzying array of app-based lighting controls that can be controlled from a smart phone have hit the market. While these apps are aimed at smaller to medium-sized applications and hard-wired control systems are used on more complex lighting jobs, it's still amazing to think how quickly these lighting control apps replaced much more complex lighting control systems that a few short years ago only lighting engineers could understand and program.

#6. The power of LEDs allows fixtures to get smaller. Because evermore powerful LEDs can pack a bigger lighting



Lighting designers have never had so many different form factors to work with in developing new light sources. The Flexile Midnight lighting system from Tivoli Lighting is just one of many imaginative products out the market today that push the envelope of what's possible.

punch in an increasingly small package, lighting fixtures are shrinking in size. Think of how wafer-thin LED downlights have replaced thousands if not millions of those clunky downlight troffers in retrofit applications, or how thin LED panels for fluorescent lighting replace 2 x 4 troffers. This trend represents cost savings for lighting manufacturers to be sure, but it also cranks out plenty of good environmental vibes because it cuts down on manufacturing materials and the energy needed to power the factories that make them.

#7. Lighting rep mergers are reshaping sources of supply and expertise in local markets. Over the past few years, we have seen some notable rep regional acquisitions and they show no sign of stopping. SESCO Lighting, Maitland, FL, quite possibly the largest lighting rep in the nation, has made the most deals, merging with four different Southeast lighting reps. These companies were G2 Lighting, Birmingham, AL (2017); Marvin Bochner, Miami (2020); Schneider Co. (2021); and WHOCO Lighting & Controls, Raleigh, NC (2022).

Convergence Partners Inc., North Kansas City, MO, also expanded its regional reach with mergers with its 2022 partnerships with Integrated Sales Inc., Lavista, NE; and Lighting Solutions of Iowa, Van Meter, IA. Synergy Electrical Sales, Fairless Hills, PA, was also involved in a notable regional merger, with its move into the New York market through its 2020 merger with Pyramid Lighting Group.

The next wave. The lighting industry is always evolving, and it will be fascinating to see what trends develop over the next few years, and which new players and technologies will make their mark. Some lighting pros are already speculating about "LEDs 2.0," when the first wave of LED installations that revolutionized the industry need to be replaced as they near the end of their life span. Fasten your seatbelts — it will continue to be a most interesting ride. **EW**

COMMERCIAL LIGHTING REBATE TRENDS FOR 2023

In this article, Leendert Jan Enthoven, BriteSwitch's founder and owner, discusses why 2023 will be another strong year for commercial lighting rebates.

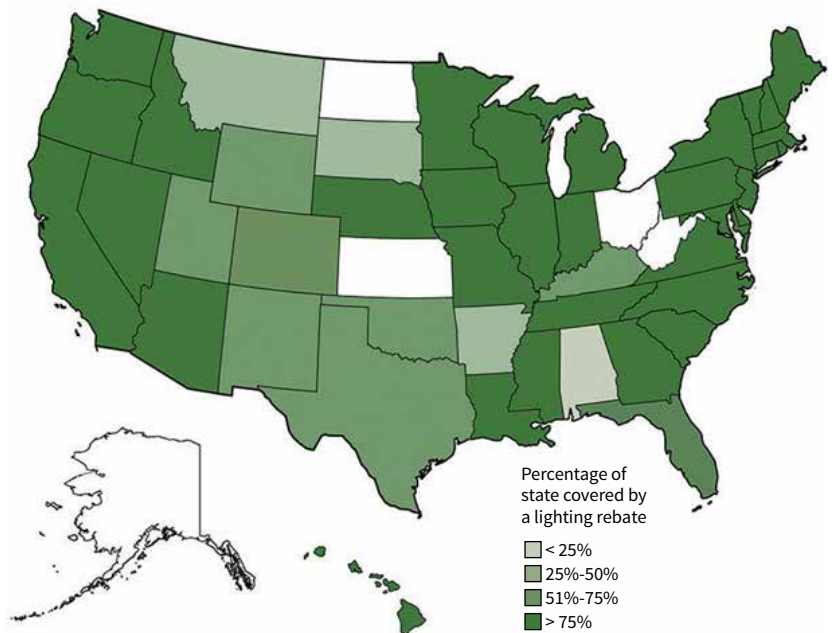
Editor's Note. Rebates have been a staple in the commercial lighting marketplace for decades, helping customers transition to more efficient lighting at a reduced cost. Each year, these programs adjust their offerings, evolving to match the current market needs. In this article, Leendert Jan Enthoven, BriteSwitch's founder and CEO, explores the latest trends in lighting rebates for 2023.

OVER 3/4 OF THE U.S. HAS A COMMERCIAL LIGHTING REBATE PROGRAM

At the start of 2023, 78% of the United States has a commercial lighting rebate program available. That's consistent with the past few years and just shy of the record of 79% we saw back in 2017. Looking across the country, we haven't seen any dramatic change in areas discontinuing or starting new programs. As we've seen in the past, the most robust programs are still in the Northeast and Northwest, while states like Ohio, Kansas and North Dakota offer no rebates.

It's interesting to see that the three most populated states — California, Florida and Texas — also have some of the lowest rebate potential. While all three states appear green in the map above, the programs there are so restrictive that they offer little value for most projects. For example, Florida Power & Light, Florida's largest utility, limits the program to a handful of fixture types.

By Leendert Jan Enthoven



A BIG CHANGE FOR SCREW-IN/GENERAL SERVICE LAMPS

The most significant change for rebate programs in 2023 is in response to the Energy Independence and Security Act (EISA). Phase 2 of that legislation will go into full effect in July 2023 and will increase the minimum efficacy requirement of many general service lamps, like A19s and PARs, to 45 lumens per watt. That has created two big changes with rebate programs.

With this upcoming change, programs are pushing hard to complete projects with these lamps in the first half of the year. Many of these programs are offering bonuses or increased dollar amounts to capture the savings while they still can. In fact, the average rebate for a screw-in/

incandescent replacement lamp shot up an impressive 71% from last year to \$7.66 per lamp. Projects at hotels, multi-family buildings, restaurants and other businesses that often use these lights should plan their projects in the first half of this year while the higher funds are still available.

For the second half of 2023, many programs will be discontinuing the rebates for general-service lamps. EISA does not explicitly prohibit rebates for these products. However, it does mean that inefficient lighting will no longer be available for sale starting in July. Therefore, many programs question if customers still need to be motivated to make the switch.

Also, since the new baseline wattage will be much lower, the utility can claim less savings. For example, when

2023 Average Rebate Amounts in North America

Type of LED Solution	2023	% Change vs. 2022
Replacement Bulbs (A19, PAR, MR)	\$8	71%
Linear Tube	\$4	1%
Pin-Based (CFL-NI Replacement)	\$6	-11%
Downlights	\$28	-2%
Troofers/Panels	\$34	1%
Retrofit Kits (1x4, 2x2, and 2x4)	\$38	10%
Accent/Track Lighting	\$50	-2%
Screw-in HID (Corncob)	\$58	4%
Outdoor Wall Mount	\$98	4%
Parking Garage Fixtures	\$101	4%
Outdoor Pole/Arm Mount	\$106	3%
High-Bay Fixtures	\$127	4%

Based on prescriptive and midstream rebates as reported in BriteSwitch RebatePro for Lighting in Feb. 2023

measuring program effectiveness before EISA, a program could say a 60W A19 was replaced by an 11W LED, resulting in 49W savings. However, under the new guidelines, a 60W equivalent A19 (800 lumens) would have to be at most 17.8W.

REBATE AMOUNTS STAY RELATIVELY FLAT ACROSS ALL OTHER CATEGORIES

For most other lighting types, the 2023 incentive amounts have stayed relatively consistent year-over-year. It's the third year the rebates have remained stable, bucking the historical trend of a -10% to -20% decline each year. In 2021 and 2022, we attributed this stability to the pandemic and the need to get more projects. This year, the motivating factor is likely due to increased LED costs and inflation (See chart above).

The product categories with the highest dollar amounts are typically the lighting fixtures that offer the most energy savings, such as high-bay fixtures and pole lights. These fixtures have historically had the highest rebates, and the 2023 amounts are on par with their record-high levels.

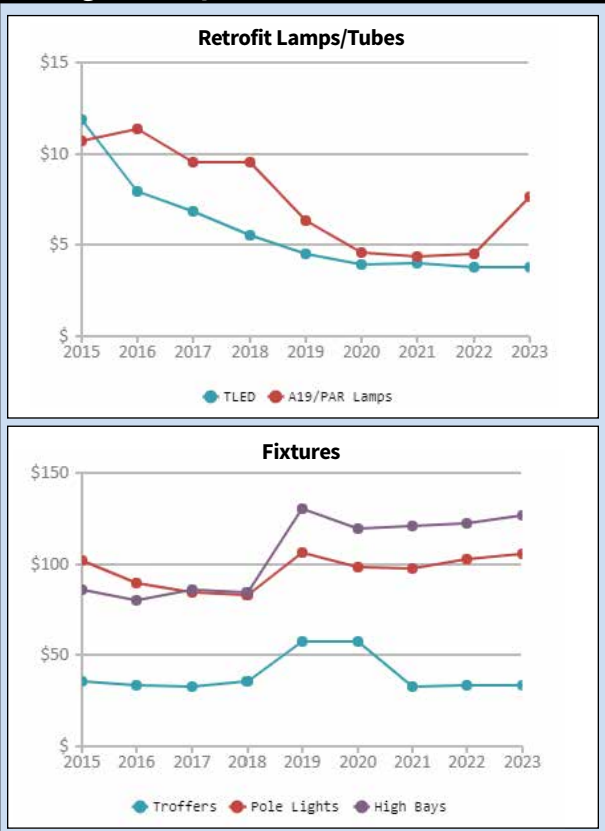
Rebates for lighting controls also remain consistent over the previous year. For basic controls, like wall and remote-mount occupancy sensors, the rebates still cover a good portion of the cost, making it a great add-on to most energy efficiency projects.

More advanced controls, like Networked Lighting Controls (NLC), have also stayed flat for 2023 in terms of geographic availability and dollar amount. This trend is surprising since the rebates for this category saw a good amount of growth in 2022. Programs still seem to be struggling with how to explain the benefit of NLC to customers in a quantifiable way.

PROGRAMS ARE GETTING HARDER TO USE

A negative trend in rebate programs is that many of them have become less user-friendly. Many of the incentive programs have shifted to online portals in an effort to cut costs and streamline work on their end. Those portals are usually poorly developed, full of glitches and slow down the application process. A simple

Average Prescriptive Rebates in North America



pre-approval application with just one line item now may take up to 20 minutes, much longer than with paper or PDF applications.

As programs “streamlined” their applications, they’ve also cut staff, and it’s increasingly hard to connect to someone. When there is a problem with a project or an application, reaching someone typically involves calling a general call center where an assistant with no knowledge of lighting or the rebate program takes your contact information and passes it to the utility’s staff, who can take up to a week to get back to you.

These issues make the rebate process, which was already cumbersome, even worse. As a result, people looking to file rebates in 2023 need to focus on allowing enough time to complete all the steps in the process and have a project management system in place for tracking each rebate application from start to finish.

2023 IS ANOTHER STRONG YEAR FOR COMMERCIAL LIGHTING REBATES

Commercial lighting rebate programs still have life left in them. While rebates may seem like “old news,” they still are a valuable tool for making projects more affordable and improving the payback period of a project. While most states have a program, research the rebates available for all of your projects. **EW**

Leendert Jan Enthoven founded BriteSwitch in 2008 to help businesses take advantage of the rebate and incentive programs. You can contact him at info@briteswitch.com or (609) 945-5349.



Commercial Market 101

Although construction economists expect most segments of the commercial market to slow down in 2023, data centers and retrofit work should still shine. Part 1 of 2 parts.

This month's article focuses on one of the most important of all markets for electrical products — the commercial construction market.

The products used in this market cut across virtually all product categories, including lighting; wire and cable; fittings; connectors and terminals; conduit, cable tray and wiring systems; wiring devices; motors and motor controls; distribution equipment; circuit breakers and fuses; switchgear; voice-data-video (VDV) products; power conditioning equipment; signaling equipment; building management systems; and electricians' supplies.

With this selection of products, it's easy to see why few markets are nearer and dearer to an electrical distributor's heart than new construction and retrofit

work in the commercial market. It's a huge market that sweeps across big cities, small towns and rural areas — from Main Street America to malls and strip shopping centers. The biggest applications include office buildings, stores and shopping centers, hotels, banks, theaters, museums, sporting facilities, data centers and other public buildings.

Commercial construction probably accounts for a bigger selection of products from a distributor's warehouse shelves than any other market. Depending on how you define this market, it accounts for approximately 26% of a typical electrical distributor's business, according to *Electrical Wholesaling* magazine's most recent reader surveys.

According to the preliminary 2022 year-end Value of New Construction Put-In-Place data from the U.S. Census Bureau, office construction was the biggest commercial construction segment

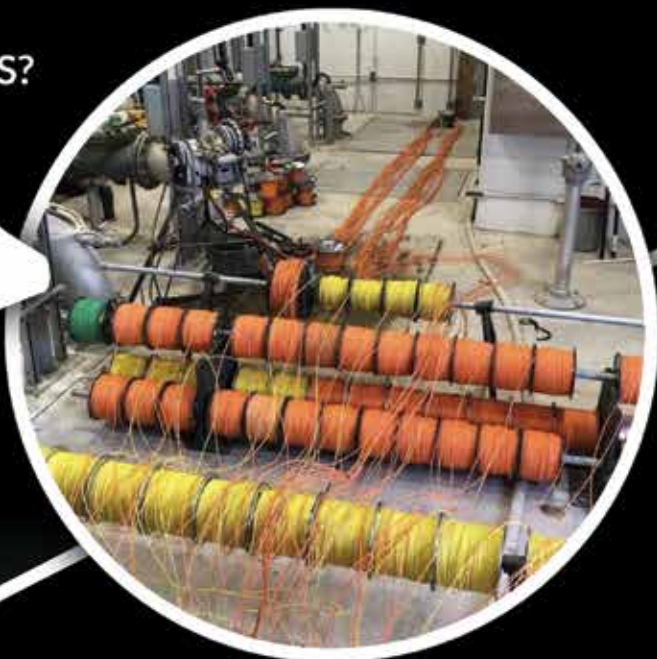
with \$75.5 billion in projects underway throughout 2022. It accounts for roughly 14% of all private nonresidential construction. The warehouse construction category has grown substantially. It's now the second largest category, with \$61.5 billion in construction value. It includes the massive distribution centers being built by Amazon and other online vendors, as well as facilities for brick-and-mortar retailers. Retail construction, another large commercial construction category, has declined quite a bit in recent years. Last year it tallied \$13.7 billion in new construction work. The amount of shopping center and mall construction is down quite a bit because of competition from online retailers. From 2015-2018, it regularly topped \$20 billion in new construction activity.

The more commercial profitable jobs often get obscured by the "trophy" jobs. Everyone likes to drive by the biggest

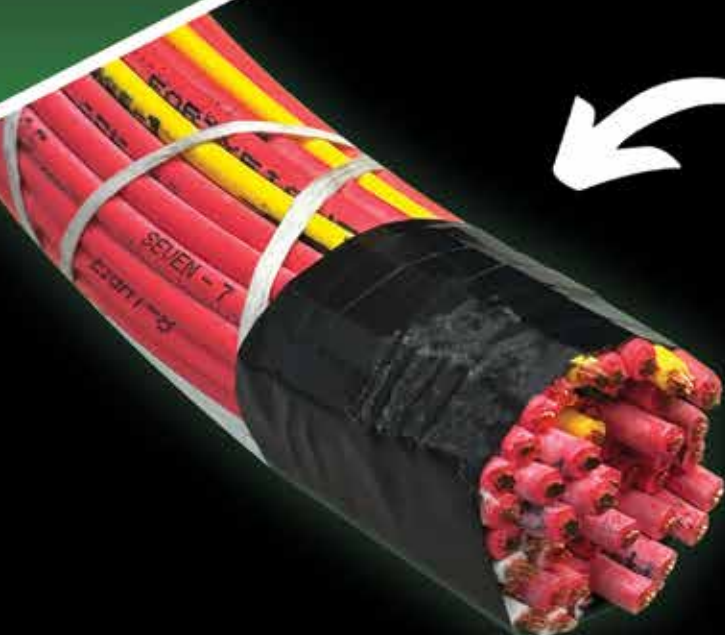
By Jim Lucy, Editor-in-Chief

DOES YOUR JOBSITE LOOK LIKE THIS?

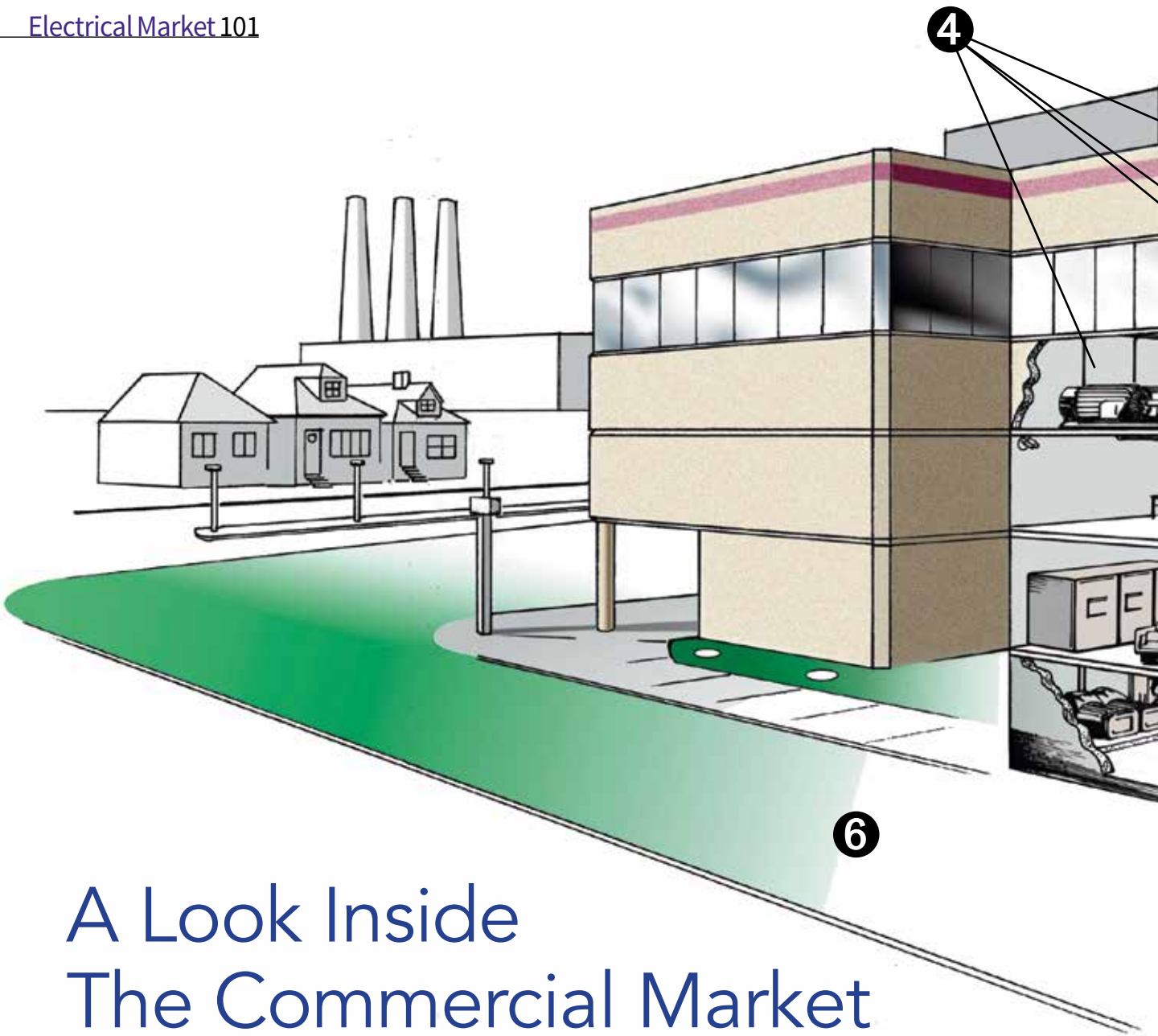
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A Look Inside The Commercial Market

POWER IN

1

- Pole-line hardware & utility meters
- Load centers
- Switchgear
- Distribution equipment
- Circuit breakers & fuses
- Solar panels and mounting hardware

CURRENT CARRIERS

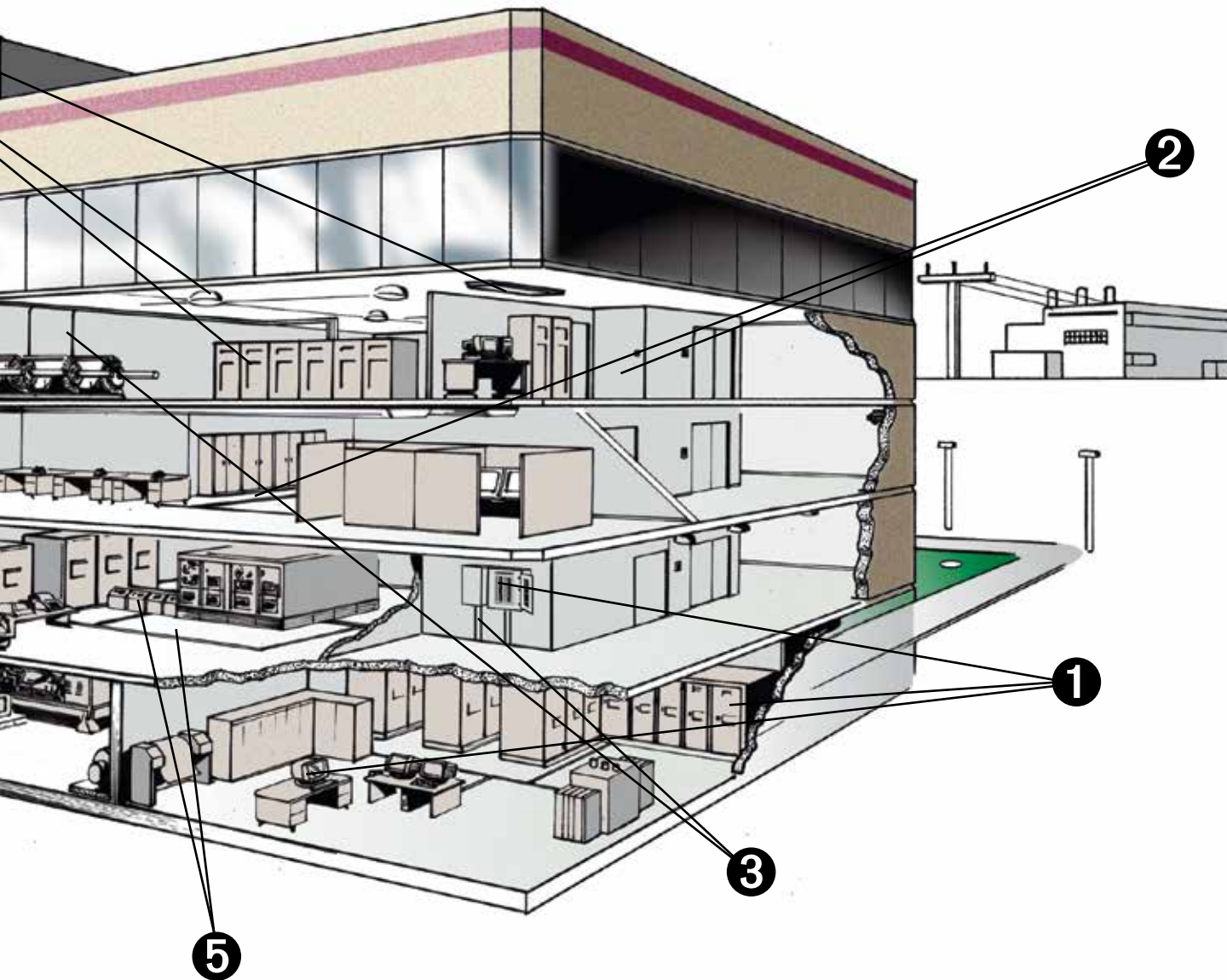
2

- Building wire & power cable
- Wiring devices and wallplates
- VDV cabling & equipment
- Portable cord
- Building management systems
- Wireless communication systems

PROTECT & DIRECT

3

- Cable fittings & fasteners
- Receptacle boxes
- Junction boxes & covers
- Enclosures
- Underfloor wiring systems for offices & IT rooms



MISC. ELECTRICAL LOADS

4

- LED lamps
- Lighting fixtures & ballasts
- Exit signs
- Occupancy sensors & lighting controls
- Motors & drives
- Snow-melting equipment for walkways
- EV charging stations

VDV CABLING

5

- Voice/data/video systems
- Security systems
- UPS & power conditioning equipment
- Power-over-Ethernet (PoE) cabling systems

TOOLS OF THE TRADE

6

- Hand tools
- Power tools
- Metering equipment
- Conduit benders
- Insulating tape
- Light meters

KEY COMMERCIAL APPLICATIONS

Definitions vary for the scope of the commercial market because some people like to break out this market into different sub-segments. Whatever you decide to call it, there's a ton of business waiting for savvy distributors and their customers. Here are the biggest customers in the commercial market:

- Office buildings
- Strip shopping centers
- Big-box retailers
- Shopping malls
- Main Street America shops
- Hotels and motels
- Restaurants
- Theaters, theme parks and other entertainment facilities
- Banks
- Museums
- Sporting stadiums
- Data centers

construction project in town and say to anyone who will listen, "We worked on that project." But for every office tower, stadium or other landmark job, there are probably dozens of smaller — but more profitable — jobs that get done quietly, don't go out to bid and never quite hit the radar screen in the market. Don't overlook the small projects or retrofit work that may still be available even in the slowest of economic times.

While spending on nonresidential construction picked up momentum toward the end of 2022, the American Institute of Architects (AIA) expects construction spending will moderate in 2023 and slow significantly in 2024, according to its Consensus Construction Forecast panel, which is made up of leading construction economists. The panel is projecting commercial construction to increase +2.6% in 2023 but contract -1.4% in 2024. These economists also see office construction dropping -0.5% in 2023 and -0.7% in 2024. The AIA Consensus Construction Forecast

KEY SEGMENTS OF COMMERCIAL CONSTRUCTION MARKET (\$ MILLIONS)

	2022	2021	YOY % Change	% of Private Construction
Total Construction	1,798,094	1,626,444	10.6	
Private Construction	1,434,095	1,279,464	12.1	
Commercial	111,538	90,885	22.7	25.8%
Office	75,454	74,871	0.78	14.1%
Warehouse	61,527	49,357	24.66	14.2%
Lodging	18,190	17,579	3.48	3.4%
Multi-retail	13,701	10,049	36.34	3.2%
Food/beverage	10,000	7,905	26.50	2.3%
Other commercial	7,815	7,388	5.78	1.8%
Automotive	7,669	6,450	18.90	1.8%

Source: U.S. Census Bureau 2022 Annual Value of Private Construction Put in Place

10 METROS WITH THE HIGHEST OFFICE VACANCY RATES

Rank	City/Metro	Total Vacancy - Sq Ft	Total Vacancy %
1	Houston	49,168,674	26%
2	Fairfield County	9,785,733	25%
3	San Francisco	21,674,619	25%
4	Dallas	52,398,535	25%
5	New Jersey	41,643,517	25%
6	Milwaukee	9,034,986	24%
7	Phoenix	24,320,095	23%
8	Westchester County	6,042,646	23%
9	Chicago	59,863,725	23%
10	Los Angeles	44,046,970	23%

Source: JLL

TOP 10 CITIES FOR OFFICE SPACE UNDER CONSTRUCTION

Rank	City	Office Space Under Construction sq ft
1	New York	16,554,153
2	Seattle	12,571,242
3	Austin	6,839,205
4	Silicon Valley	6,408,235
5	Dallas	5,960,017
6	Washington, DC	5,696,250
7	Boston	4,233,228
8	Atlanta	3,423,468
9	Chicago	3,014,257
10	Los Angeles	2,899,000

Source: JLL 4Q 2022 data



3d © Kwaricot | Dreamstime.com

Data centers will remain one of the hottest construction sectors in 2023.

combines the forecasts of Economy.com, FMI ConstructConnect, Associated Builders and Contractors, Wells Fargo Securities, Markstein Advisors and Piedmont Crescent Capital.

Dodge Construction Network says in its 2023 Construction Outlook that, “Commercial construction will see a pointed falloff in activity during 2023 as starts decline -3% to \$153 billion and square footage falls a more substantial -15% to 921 million sq ft.”

Dodge also says the warehouse sector is overbuilt and will decline in 2023, and that the outlook for retail, hotels and offices will continue to be soft because of the impact of COVID-19. Data centers will be a strong segment of the commercial market, according to the Dodge forecast.

When you need forecasts on the health of the construction market, check out *Electrical Wholesaling’s* monthly “Electrostats” department, which compiles the Department of Commerce’s Value of New Construction data for offices, lodging and other market segments. More detailed data by project type is available on a monthly basis at www.census.gov. Other sources of economic data include Dodge Data & Analytics’ www.construction.com, and www.constructconnect.com the American Institute of Architects’ Architectural Billings

Index, available monthly at www.aia.org; and CBRE’s www.cbre.com and JLL (www.us.jll.com). JLL and CBRE offers quarterly reports on office vacancy trends for the entire United States and major U.S. metropolitan markets. Office vacancy rates are an important regional economic indicator because developers and building owners generally won’t

build many new buildings when office vacancy rates are much above 10%. The table on page 22 offers JLL data on the vacancy rates in the 10 largest office construction markets. **EW**

Part 2 will be published in EW’s May/June print issue. The complete article is now available at www.ewweb.com.

WHAT’S NEW

The commercial market has seen lots of changes and now offers even more sales opportunities for distributors, reps and manufacturers. Here are some of the biggest changes.

- Applications for LEDs have expanded and are now replacing traditional lighting sources in virtually all applications.
- Connected lighting systems that occupants and building owners can control remotely with apps on smart phones.
- IP-enabled lighting fixtures that have security cameras, wireless routers and other sensing systems that utilize the key real estate occupied by lighting fixtures.
- Low-voltage PoE (Power over Ethernet) cabling reduces installation costs of lighting systems.
- Integrated building control systems where lighting, security,
- HVAC and other systems can communicate with each other.
- Building owners are leasing their rooftops to solar companies and getting a break on the electricity these PV installations generate.
- As electric vehicles become more widespread, EV supply equipment will be a key add-on product.

How AI Can Personalize Sales Experiences for Your Customers

Distributors can use Artificial Intelligence (AI) to build out a strong omnichannel strategy.

Have you super-sized your omnichannel experience? It might be time to. A McKinsey survey of 3,500 decision-makers in 12 markets found what customers want from omnichannel is “more” — more channels, more convenience and a more personalized experience. And if they don’t get what they’re looking for, they’ll take their business elsewhere.

If you don’t offer a consistent customer experience across channels, 72% of B2B buyers will actively look for a new supplier. And 74% of buyers will switch to your competitors if it’s not immediately clear which products are available online.

As customers increasingly lean toward remote and self-serve digital shopping, distributors must meet these needs — or someone else will. Venture capitalists are poised to steal market share; they poured \$80 billion into marketplaces over the last year, according to Crunchbase.

You can’t remain stagnant in your omnichannel efforts. Customers won’t stay loyal for long; they’ll move on to whoever will meet their needs.

The good news is that technology like artificial intelligence (AI) can help you create the seamless digital experience

By Benj Cohen



your customers demand — personalized and consistent across every channel.

WHY AI MATTERS FOR SALES EFFECTIVENESS

Most distributor channels are disconnected. Inside sales can’t see what customers were looking at online and customer service can’t see details from the last in-person sales visit. When the omnichannel infrastructure isn’t

there, your customers get a disjointed experience. They struggle to find and buy what they need. And your sales team can’t access the right info to help them. Ultimately, sales decline. The McKinsey study found that for a customer to stay loyal to your business, they not only want a consistent experience across channels and product availability online but also the ability to purchase from any channel.

AI is critical to delivering this omnichannel experience. Plus, it makes a personalized buying journey possible for each customer. AI collects data from all your company's systems, looks for patterns across the data set and then makes intelligent recommendations. It can sift through customer behavior, buying history and hundreds of thousands of SKUs to determine the best products to recommend each customer. It can also suggest add-on products commonly purchased together and help sales reps answer questions through a semantic search of product catalogs.

By connecting the dots between channels, AI makes your data useful. Your website and sales team can deliver an extraordinary customer experience when your data is useful. When customers can find and buy what they need — and enjoy interacting with your company — there's no reason for them to leave.

What makes AI a unique technology? AI learns much like humans do by recognizing patterns or repeating behaviors. It sees a bunch of examples in a data set and then applies those patterns to new examples.

AI is exponential by design. The more data added to a system with AI at its core, the smarter it gets. Since distributors have tons of data and repetitive activity, AI applications can be very effective. With time and training, AI can outperform humans in determining what products a customer is most likely to buy.

AI gets exponentially more valuable with scale. This is why the sooner you start using the technology, the better. By using AI, distributors can grow sales and provide the personalized omnichannel experience customers expect. According to McKinsey, to win in the new omnichannel world, personalization is key. You need to know what your customers need and deliver the same experience no matter where they interact with you. Customers' expectations are changing, and AI will help you win.

HOW AI GROWS REVENUE WITH PERSONALIZATION

A personalized omnichannel approach is more effective than traditional sales

models for more than 90% of companies surveyed by McKinsey. AI makes personalization at scale possible.

Although a B2C company, Amazon is on the cutting edge of what's possible with personalization. But it didn't happen overnight. Amazon launched its first personalization algorithm in 1999. Without the AI-powered suggestions you see on Amazon, finding what you're looking for on the site would be impossible. This personalization improves the customer experience, but it's also a huge lever for Amazon's growth. AI-powered suggestions drive 35% of Amazon's digital sales — about \$69 billion annually in revenue.

Distributors can also use AI to deliver a personalized omnichannel experience and increase sales. For example, AI can help you grow sales from the inside sales team. One challenge an inside sales team faces is getting to know the customer. Without going on-site, the inside sales rep lacks visibility into what might need restocking.

AI can help with that. It can figure out what a customer needs by finding patterns in buying history, browsing activity, similar customer purchases and more to suggest relevant upsell and cross-sell recommendations for each customer to an inside sales rep. This same AI model can also help you deliver a personalized experience to your customers online, similar to how Amazon's AI makes product suggestions to shoppers. Ultimately, this personalized experience can boost top-line sales by 10% or more.

While omnichannel is critical, you can only go so far without connecting your channels with AI. You will see customer information at every touchpoint with the right AI application. This comprehensive view of activity and customer data allows AI to make better recommendations based on relevant needs.

GET STARTED WITH AI

AI takes over manual data analysis to free up sales and customer service reps to spend more time doing what they do best — selling and building relationships with customers. AI adoption in your organization requires employee buy-in. These three key steps can help your company adopt an AI-supported digital solution:

#1. Align the “why” with your company's users. The better you align the “why” for the tool to each team member's role, the more success you'll have. For example, a salesperson might be interested in seeing how an AI solution will increase their commissions. A customer service rep might be excited to see how the technology will make it easier to help customers.

#2. Think big and start small. When implementing new technology, think big. Consider how the technology will impact company-wide revenue and how it can differentiate your company in the market. But, implementation is more effective when you start small. Train a few users first to ensure they are comfortable with new workflows and tools. Starting small is an effective strategy to build momentum before deploying the new technology on a larger scale.

#3. Set measurable targets. Define and set measurable metrics for success as you begin your AI implementation. Setting goals helps you identify areas for improvement and allows you to measure the effectiveness of your AI adoption. Align your key performance indicators (KPIs) across departments, communicate goals and use measurable results to track performance. Since this isn't a “set it and forget it” process, you can use the data you gather to make adjustments and ensure your AI deployment's success.

The only way to give customers a consistent, personalized experience on every channel is to use AI. It's time to step into the digital future and super-size your omnichannel experience. **EW**

Benj Cohen grew up in his family's distribution business, Benco Dental, a dental supply business started by his great-grandfather in the 1930s. He blended this background with a Harvard degree in applied math to found [proton.ai](http://www.proton.ai) (www.proton.ai), a company dedicated to bringing artificial intelligence to distribution companies and others in the B2B world to deliver large ROI. Cohen was the subject of a 2019 Electrical Wholesaling feature on AI, “The Art & Science of Artificial Intelligence.” You can contact him at benjamin.cohen@proton.ai.

THIS MONTH'S PRODUCT PICKS

Architectural Downlights

For the AX3 3-in. LED precision recessed luminaires, designers can now select enhanced Aculux's WarmDim technology with packages from 800 lumens to as high as 1,500 delivered lumens. Enhanced Tunable White technology is also offered from 800 lumens to 2,000 delivered lumens. When WarmDim is selected, AX3 precision optics are available with a lighting distribution as narrow as 12 degrees. Aculux's patented WarmDim technology warms the color of the LED light on a gentle gradient as it dims light output.

Aculux/Acuity / www.aculuxlighting.com



Post Top Area Lights

SATCO/NUVO recently introduced a line of LED Adjustable Post Top Area Light that offers a sleek, contemporary design for general-area lighting requiring a highly efficient architectural light source with precise control. Unique to this product is the locking articulating head allowing adjustments from 0-90° for directional illumination. Another advantage of the articulating head, noting the 35W and 55W versions, is that it is Dark Sky Compliant when oriented at 0°. Color selectable choices include 3,000K/4,000K/5,000K with 120V-347V input voltage options. These luminaires are offered in four popular wattages to service a variety of lighting applications and feature an integrated NEMA photocell.

SATCO/NUVO / www.satco.com

Smart IP66-Rated Fixture Mount Sensors

Smart Fixture Mount Sensors (FMS) for high-bay applications are in-fixture controls engineered to install directly into high-bay and low-bay luminaires to provide an integrated occupancy sensing, dimming, daylight harvesting and scheduling solution to meet the most stringent energy code requirements. "Smart Fixture Mount Sensors simplify lighting controls for high-bay, parking structure and outdoor lighting applications, effectively reducing installation time and costs while meeting energy codes," said Tom Leonard, vice president of controls at Leviton, in the press release. "For added convenience and flexibility, these in-fixture controls are fully configurable using the popular Smart Sensor App."

Leviton / www.leviton.com



LED Fixture for T-Grid Ceilings

The LEDVANCE Value Class Dual Selectable T-FIT is an innovative, modern, and sustainable panel bar solution that fits in T-grid ceilings as an alternative to flat panels in offices, conference rooms, restaurants and retail areas. With less plastic and raw materials than regular panels, this new solution is Dual Selectable (three CCTs and three lumen outputs in the same SKU), 120-347V and DLC Standard listed.

LEDVANCE / www.ledvanceus.com

THIS MONTH'S PRODUCT PICKS



Linear Architectural Luminaires

The Optique architectural line of modular, in-wall, surface-mount and suspended linear luminaires are powered by a Nano Linear Light Engine (White or RGBW) and are built and shipped as complete UL-listed fixtures. To simplify ordering, the low-profile products will include all brackets, screws or accessories needed for installation. The luminaires are powered by an Optique Nano Linear Light Engine that are offered in numerous lumen outputs (100 to 1,500 lumens per foot); seven color temperatures (2,200K – 5,000K CCT); and provide 98-plus color rendering index (CRI) and high R9 and R13 values. Color variation is kept within a 2-step MacAdam ellipse for unparalleled quality and consistency.

Optique Lighting / www.optique-lighting.com



Flexible Lighting

Flexile Midnight and Daylight flexible fixtures enable lighting designers to create unique lighting patterns without any shadowing. Created for interior aesthetic architectural applications, the new Flexile units provide dramatic color when lit and can deliver multiple patterns, movements and schemes. Designed as a high-efficient alternative to neon, both Flexile Midnight and Daylight provide a 360° lighted surface that illuminates uniformly with RGB mixing and multiple lengths. Intended for architectural, entertainment, commercial and food-grade environments, Flexile Midnight and Daylight have a UV-stabilized silicone housing that resists saline solutions, acids, alkali, corrosive gases, yellowing and cracking.

Tivoli Lighting / www.tivolilighting.com

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OmniCable (West Chester, PA):

Greg Donato, OmniCable's Chief Commercial Officer (CCO), will retire effective April 21. Donato has over 39 years in the industry, the past 30 between OmniCable and Houston Wire & Cable (HWC). He spent 15 years at HWC prior to joining OmniCable as executive VP of Sales and Operations. Over his 15-year career with OmniCable, he has held various roles, including COO, and helped shape OmniCable into the company that it is today.



Donato

Current (Greenville, SC):

Bill Tolley was appointed as interim CEO. Departing CEO **Manish Bhandari** was instrumental in leading the company through the pandemic and the acquisition of Hubbell's C&I Lighting business.

Tolley has served on Current's board of directors for several years. He has decades of experience in the electrical and lighting industry as a long-time senior executive of Hubbell. He will focus on implementing the company's strategic and tactical agendas while identifying and onboarding a permanent CEO.



Tolley

Schaedler Yesco Distribution (Harrisburg, PA):

Matt Healy is now residential construction sales manager. Schaedler Yesco has built a reputation serving the industrial and commercial market, and is now working to also build sales in the residential market. Healy has been with Schaedler Yesco since 2019 as a customer experience manager.



Healy

Turtle & Hughes (Linden, NJ): The company's Integrated Supply division promoted **Blake Varbero** to vice president, Business Development, responsible for leading the division's national sales efforts. Varbero has spent his entire Turtle & Hughes 13-year career in this division, which provides MRO (maintenance & repair operations) supply chain services to Fortune 100 companies.

OBITUARY

Tom Stark, president and owner of Arlington Industries, passed away on March 6. Stark was respected throughout the electrical industry as the consummate entrepreneur and inventor. He grew Arlington from a small fittings manufacturer to a powerhouse in the fittings market known for launching dozens if not hundreds of new products over the years and investing in large end-user advertising and marketing programs to promote them. Stark was also a supporter of the National Electrical Manufacturers Representatives Association (NEMRA) and Arlington's dedicated network of independent manufacturers' reps. For an rep, getting the Arlington line is a huge accomplishment because of the wide acceptance of the company's products by end users and the company's consistent marketing support and new product launches.

Stark held many patents for Arlington products and loved to talk with electrical contractors and other customers at trade shows to see what type of job-site challenges they were having, and then designing products to overcome these challenges. He was also intimately involved with the company's manufacturing processes, and enjoyed adapting machinery on the company's production lines for the company's constant flow of new products. He also built a company culture at Arlington that attracted top salespeople and regional managers who dedicated much of their electrical careers to the company.

A company statement on his passing said that although Arlington is saddened by the loss of Tom Stark the business operation will continue unchanged.

Arlington was purchased by his father Eugene Stark, Sr. in 1949. Tom became president of the company after graduating from the University of Florida in 1975. Stark was born in South Florida on Nov. 9, 1953 and attended the University of Florida where he met his wife, Betty (Elizabeth) and earned his degree in accounting. He is survived by his wife, Betty, two daughters: Meredith (Camille) Oostwegel and Allison (Aaren) Riley, and three grandsons: Spencer and Winston Oostwegel, and Sawyer Riley; as well as his brother Gene (Jean) Stark and sister Patricia Stark.

In lieu of flowers the family suggests a remembrance made in Tom Stark's name to Childhelp, a nationwide non-profit organization serving the needs of neglected, at-risk and abused children www.childhelp.org.

Crawford Electric Supply/Sonepar (Houston): Regional Vice President **Tim Horny**, a 18-year-company veteran, will be retiring March 31. He has more than 40 years of industry experience and established the distributor's San Antonio market. The press release said Horny built a successful career recruiting talented associates, mentoring future generations of leaders and executing strategic plans that increased market share and contributed to shaping the company's profitable growth.



Horny

McNaughton-McKay Electric Co. (Madison Heights, MI): **Donald Slominski Jr.**, chairman and CEO, retired on March 31. The board of directors has appointed **Mark Borin** to succeed Slominski as CEO on April 1. Slominski joined McNaughton-McKay Electric Co. in 1996 as the director of finance and was elected president and chief executive officer in 2005. He guided McNaughton-McKay through the successful transition from a family-owned to an employee-owned organization, delivering a number of strategic acquisitions and transforming the company from 800 employees and \$450 million revenues to 1,750 employees and \$2.2 billion in revenues. Borin joined the McNaughton-McKay leadership team as president in June 2020.



Slominski



Borin

Legrand (West Hartford, CT): **Laurie Englert** is now chief marketing officer (CMO) for Legrand, North and Central America. She takes on this position after the former CMO of 15 years, **Stephen Schoffstall**, retired at the end of 2022. In this role, she will oversee marketing strategy across all Legrand business divisions and serve as a member of the



Englert

executive committee. Englert brings to this position 30-plus years of experience in various marketing and communication roles.

Agilix Solutions (St. Louis): **Roy Davis** was promoted to director of Construction Sales for the company's South Region. Davis will be based in the Agilix Bartlett, TN, branch and will lead the region's outside construction sales team and project solutions group. Davis was formerly a field electrician. He has been with Agilix for 22 years.

Winsupply (Dayton, OH): **Jeffrey Dice** is now president. Currently the president of Winsupply Equity Group, Dice will replace Winsupply President **John McKenzie**, who is retiring Feb. 28.

REP NEWS

Signify signed new reps for its Genlyte Solutions luminaire brands and Color Kinetics in New Mexico and El Paso, TX. **Visual Interest**, which already represents Signify's complete range of professional lighting offers in Colorado, has been appointed for these Signify brands in these territories. **Allied Group Sales** will continue to represent Signify's Philips LED lamps and Advance portfolio in New Mexico and El Paso, TX.

Morris Products, Queensbury, NY, made three changes in representation for 2023 in Ohio, the Pacific Northwest, and the Georgia/Alabama/FL Panhandle.

Effective Jan. 1, John Smith, principal, **Griesser Sales**, is representing Morris Products in Ohio and northern Kentucky, and effective Jan. 21, **Electrical Sales Associates (ESA)**, Kyle Shilley, principal, is representing Morris in the Pacific Northwest, including Washington, Oregon, northern Idaho and Alaska.

Effective Feb. 1, **Glenn Associates**, Chris Camp and Danny Todd, principals, now represent Morris Products in the Georgia, Alabama and Florida Panhandle markets.

Axis Lighting has selected **Next Generation Lighting** to represent the company's full portfolio in north Georgia, including Atlanta. **ALESCO/NGL South** will represent Axis Lighting and BalancedCare in central and south Georgia, including Augusta, Macon, Columbus and Savannah.

Next Generation Lighting and ALESCO/NGL South specialize in architectural lighting and controls for new construction, design build renovations and retrofit projects.

(Continued from page 32)

firms like Zebra/Fetch, Locus Robotics, 6 River Systems and Orange-Grey. These so-called co-bots, which can look like a bin-carrying Segway, move back and forth among workers throughout the facility, significantly reducing the walking for warehouse associates. With these robots also bringing cheaper and quicker ways to deploy, some robotics providers have even introduced “robots as a service” business models — leasing these machines to warehouse operators — reducing initial capital costs.

Moving forward. Automation is one major lever that companies can pull. Robots won't replace workers in the near term, but rather make them more efficient and productive. Humans will be “crew chiefs,” commanding and maintaining teams of robots. Robots can also help with your worker recruit-

ment while closing the generation gap among warehouse workers.

It will improve the quality of experience for the work force because instead of constantly walking and doing rote manual things, individuals will learn how to manage the robot to keep it up and running. It will create a career path and a more sophisticated skill set and make sure the evolution of jobs does not leave longtime workers behind.

Some experts believe “lights out” warehouses run by robots around the clock without requiring air conditioning or lighting will arrive in three or four years. I don't know about that time-frame. But I do see a need for more companies in the distribution industry to evaluate the potential of robotics to increase efficiency and reduce costs and worker accidents. This could double throughput and reduce cost per transaction.

The urgency? I worry about the owners and senior operations managers who don't pay attention to this fast-moving trend of robotics over the near-term. Why? Because, even today, many distribution centers and warehouses are just “racks, carts and a clipboard.” They're just not going to be able to keep up with the service demands and cost factors to remain competitive. **EW**

Howard Coleman and his team at MCA Associates helps distributors and manufacturers implement continuous improvement solutions focused on business process re-engineering, inventory and supply chain management, sales development and revenue generation, information systems and technology, organizational assessment and development. MCA Associates may be contacted at 203-732-0603, or by e-mail at hcoleman@mcaassociates.com.

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Robot Will Reshape Distribution Centers

The author believes the day when robotics become commonplace in the distribution industry is not far away.

This past summer while visiting a wholesale distributor's distribution center, I watched receiving personnel spend an afternoon unloading boxes from a tractor-trailer in near 100-degree heat. This is even before the "stuff" is put away on the shelf. From the looks on their faces they were not happy, and you had to feel some empathy for the difficulty of the task and what was still to be done.

It suddenly occurred to me that instead of just thinking about how to design DC/warehouse space around robots, robots are now being built that are able to operate more on our terms, in our spaces and in our environments.

The situation I was observing just amplified how robotics are now being designed to handle the tough, often menial and accident-prone tasks at warehouses.

Robotics and particularly other forms of automation are not new to logistics. We have conveyor belts, scanners and other innovations that have helped automate and accelerate, for some decades now, the obsession for speed — characteristic of the distribution industry. But the pace of investment and change — fueled by the pandemic-era e-commerce boom, a tight labor market and a fragile supply

chain — has really taken off in recent years. Most experts say robotics will change how warehouses are operated and designed. Some say we're entering a golden era.

Actually, the seeds of the surge in warehouse robotics were planted during the 2008 recession, when carmakers, which depend heavily on robotics, dealt with a significant and prolonged downturn. But unlike repetitive assembly line manufacturing, warehouses demand a significant degree of flexibility.

Only recently have systems like visioning and artificial intelligence become cheaper and powerful enough to sort the tens of thousands of different products streaming through a DC or warehouse. This technological leap is part of a larger embrace of robotics. In fact, the robotics industry saw a +28% jump in purchases from 2020 to 2021, according to the Association for Advancing Automation. The technology is becoming more affordable and filtering down through the distribution industry, beyond the big players like Walmart and Amazon. It's predicted that there will be a +25% increase in robotics and automation investment in 2022.

Although seemingly fueled by the distribution giants like Amazon, Walmart and others which saw logistics as ripe for innovation, they have helped supercharge distribution's turn toward automation. Other large and small organizations with a large labor content also employ this strategy. They

strive to make these jobs more secure and safer, while still being focused on using robotics as a cost-saving measure to reduce aspects of human labor. The wholesale industry has always been concerned with the cost of warehouse labor, but it has been hesitant to trim employees in a tight labor market.

Adoption of robotics in warehouses will increase +50% or more in the next five years, according to surveys taken by the Materials Handling Institute. The goal is the "mechanical orchestration" of workflow, in which a team of autonomous mobile robots (AMR's), steered by sophisticated software and artificial intelligence, can move pallets, cartons and piece-pick products in a seamless environment — in collaboration with the appropriate positioning of warehouse associates. This strategy covers most typical warehouse functionalities from receiving and put-away to picking, order staging and shipping, as well as many other product transport requirements typical of distribution centers and warehouses.

I see a parallel in this adoption of technology in the media business. Netflix was the only company that could figure out streaming video, until suddenly it wasn't. In a similar fashion, I see an emerging middle class of robotics users in the distribution industry. Other companies, of all sizes, will start to catch up.

There's increased demand for "goods-to-person" robots offered by
(Continued on page 30)

By Howard Coleman



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