

## Happy New Year Everybody



*Amerlux, a wholly-owned subsidiary of Delta Electronics, has been a catalyst for change in the lighting industry since 1984—simply by listening to the marketplace.*

### Interior Spaces

Our lighting designer toolkit encompasses a broad spectrum of tools that help you shape how occupants perceive the interior characteristics of your space: commercial downlights, linear systems, multiples, track heads, wall mounts, troffers, cylinders and pendants. All share the same award-winning pedigree: ours.

### Exterior Spaces

Weather-proof, water-resistant and vandal-proof—not to mention Dark Sky-friendly. Our extensive lineup of exterior architecture lighting fixtures accentuates modern structures by providing safe, balanced lighting to outdoor venues, including landscapes, parking lots, garages and streetscapes.

### Technology in Spaces

From color-tuning and color-rendering to antimicrobial lighting and WiFi and Bluetooth controllability, design professionals and facility executives who employ the best lighting and control technologies effectively monitor and control their most critical asset: their bottom line.

[Amerlux - Commercial Lighting Manufacturer | SPEC-Grade Lighting](#)

### National LED Market Observer

**1. Federal Government Now Requires Energy Efficient Outdoor Lighting Products at Thousands of Government Sites and Facilities** - The federal government is the nation's largest property owner, maintaining a portfolio of nearly 9,600 buildings that span over 375 million square feet. It's the nation's largest energy consumer, as well. The GSA's [2024 P100 Facilities Standards for the Public Buildings Service](#) — a key document guiding building design and the purchase of products for federal and other public entities — now points project actors to the DLC's [LUNA Technical Requirements and Qualified Projects List](#) for certain types of outdoor lighting at public facilities. Specifiers, designers and installers wishing to identify outdoor lighting products for use in federal and other public buildings can find and compare LUNA-listed luminaires by creating a free [myDLC](#) account and then searching the [LUNA QPL](#). [Federal Government Now Requires Energy Efficient Outdoor Lighting Products that Reduce Light Pollution at Thousands of Government Sites and Facilities | EO&M](#)

2. **Registration Now Open for LEDucation 2025** - LEDucation, a premier annual event for the North American lighting industry, is excited to announce that registration is now open for its 2025 Trade Show and Conference being held at the New York Hilton Midtown, March 18–19, 2025. New and returning exhibitors, industry influencers, and a myriad of engaging, educational experiences will help all attendees gain an advantage in the lighting business. With over [400 exhibitors](#) gathered across four expansive Trade Show halls, attendees will be able to explore the latest advancements in lighting products and technologies that are shaping a brighter, more efficient future for our industry. For more information on these sessions including complete presenter bios, visit [leducation.org/2025-presentations](https://leducation.org/2025-presentations). Attendees can view registration details and find a link to register at [leducation.org/registration](https://leducation.org/registration)



3. **Electrical Wholesaling's 2025 Market Planning Guide by Jim Lucy** - The electrical industry is tracking for slow growth in 2025 after a steady but not spectacular year in 2024. Electrical Marketing's updated estimated electrical sales potential data pegs sales growth at +2% nationally and \$150.4 billion in total electrical sales (not adjusted for inflation). Electrical Wholesaling's +2% growth estimate is admittedly rather pedestrian given the current health of the U.S. economy and the perception that the new Administration's pro-business stance will be good for the electrical wholesaling industry. EW's editors believe there's more upside in sales potential than downside risk and that electrical sales in 2025 could easily grow at a much faster rate. EW survey respondents were almost universally bullish on the impact of the Presidential election results. [2025 Market Planning Guide | Electrical Wholesaling](#)

4. **Delta Achieves 57 Percent Lighting Energy Reduction at LEED Zero Energy HQ** - Delta Electronics announced its LEED Zero Energy-certified Americas headquarters green building in Fremont, California, is expected to achieve a significant 57 percent reduction in annual lighting electricity consumption. This accomplishment is attributed to the recent integration of a total solution featuring systems from three Delta Group companies: cutting-edge Carisma LED lighting systems from Amerlux, smart building management software from LOYTEC and Delta Controls, along with Bluetooth low-energy drivers and multi-sensors. [Delta Electronics Achieves 57 Percent Lighting Energy Reduction at LEED Zero Energy HQ - Facility Management Energy Efficiency Quick Read](#)

5. **Cost of Electricity Expected to Skyrocket Due to Data Center Demand by Greg Zimmerman** - The explosion of artificial intelligence, cryptocurrency mining, and other computing-intensive processes have fueled a building boom for data centers. But they've also fueled a massive spike in energy demand, which is in turn leading to higher energy prices for many facilities across the country. [One study estimates](#) data centers could be responsible for a 70 percent increase in the cost of electricity over the next 10 years. One hyperscale data center, as a point of reference, can use as much electricity as 40,000 homes. [Cost of Electricity Expected to Skyrocket Due to Data Center Demand - Facility Management Data Centers Quick Read](#)

6. **DALI, TALQ and Zhaga Announce Collaboration to Unify Data Streams for Smart Street Lighting Solutions** - The DALI Alliance (DALI), the TALQ Consortium (TALQ), and the Zhaga Consortium (Zhaga)—each focused on defining international lighting standards to ease investment decisions for public and private entities—recently announced the signing of a liaison agreement to collaborate on unifying data streams for smart street lighting systems. The collaboration aims to provide a better choice of solutions with interoperable components and enhance communication across outdoor lighting systems. [Lighting Controls Association – The Lighting Controls Authority](#)

7. **The Lagging Transition to LEDs in Schools** – Part 2 of 3 by Jessica Kelly, Andrea Wilkerson, Dan Blitzer - This article series looks at the current situation from the perspective of school facility personnel. Part 1 covered the transition to LED technology: [The Lagging Transition to LEDs in Schools – Part 1 of 3 by Jessica Kelly, Andrea Wilkerson, Dan Blitzer](#) Part 2 identifies the inter-related factors likely to affect adoption of LED systems in place of outdated fluorescents in school across the country Part 3 in the series will consider upgrade options available to school decision-makers but with tough decisions and trade-offs that consider both short- and long-term outcomes. State legislative actions to eliminate linear fluorescent lamps (outright or effectively) are increasing (see Chart). So far, 10 states have laws on the books or under consideration. Vermont has already prohibited all linear lamps, and, in January 2025, lamps cannot be sold in four more states (California, Colorado, Oregon, and Rhode Island). In November 2023, 140 countries agreed to prohibit the manufacture and import of linear fluorescent lamps, also due to mercury content. If fluorescent lamp sales continue to decline at an estimated rate of 20% annually over the next five years, the market will have fallen by another 67%, leaving sales at just 10% of the pre-LED rate. For schools needing a reliable and economical supply of replacement lamps, this looks like the effective end to fluorescent lighting in the United States. [The Lagging Transition to LEDs in Schools – Part 2 of 3 | EC&M](#)

## Global LED Energy Market Observer:

8. **The LED Spectrum That's Designed for Vertical Farming** - Vertical farming is transforming the landscape of agriculture, making it more sustainable, efficient, and scalable. Central to this transformation is the technology that supports plant growth, with lighting playing a pivotal role. Cultivators are in search of LED grow lights that can deliver higher yields and improved crop quality. In response to this demand, Valoya of Finland has introduced the Lumi-VF spectrum, an LED lighting solution designed specifically for vertical farming. The Lumi-VF spectrum is an outcome of careful design, optimized to enhance yield, improve plant quality, and enable more efficient energy use in vertical farming LED lights. Valoya's products are equipped with LEDs that offer a broad and continuous spectrum, closely resembling natural sunlight. [The LED spectrum that's designed for vertical farming - LEDinside](#)



9. **Electric Toyota Bz3c SUV Will Have 630km Range and Lidar Powered Self-Driving** - The Toyota bZ3C will launch in early 2025 and will have a range of up to 630 km. It's claimed that the Midsize SUV will be FAW Toyota's most intelligent car to date, with noteworthy intelligent driving and an intelligent cockpit. Dominating the dashboard is a 15.6-inch infotainment screen, which apparently supports more than 200 third-party apps. It's claimed to have the first driver and occupant monitoring system in its class. This includes AI face recognition, in-car video calls, reminders about children, and features such as gesture and voice control, along with an AI virtual assistant. The steering wheel itself appears to have a large number of buttons on it. There is a Lidar unit on top of the windshield, and the car is set to feature high-end smart driving ability. The car should be able to undertake urban smart driving along with high-speed and parking functions. [Electric Toyota bZ3C SUV will have 630km range and lidar powered self-driving - LEDinside](#)



10. **The New Peugeot 3008 and 5008 Feature Pixel LED Smart Lighting Technology** - The arrival of new PEUGEOT 3008 y 5008 GT not only marks a step forward in design, but introduces a technological revolution with the incorporation of the Pixel LED Headlights, these SUVs already stood out for their distinctive design and electrified technologies and now they also offer safety and visual comfort in all driving conditions. Standard in the finish GT, the Pixel LED headlights offer you the best on the market in terms of visibility, this system ensures a optimal light beam that does not dazzle drivers of other vehicles by automatically adapting, while providing a distinctive appearance thanks to its feline look formed by the three claws PEUGEOT features. [The new Peugeot 3008 and 5008 feature Pixel LED smart lighting technology - LEDinside](#)



## Special AI News (lots happening here we need to know)

**11. Meta to Build \$10B AI Data Center, Musk Expands AI Facility** - The largest artificial intelligence data center ever built by Facebook's parent company Meta is coming to northeast Louisiana, the company said Wednesday, bringing hopes that the \$10 billion facility will transform an economically neglected corner of the state. Meanwhile, Elon Musk's AI startup, xAI, is expanding its existing supercomputer project in Memphis, Tennessee, the city's chamber of commerce said Wednesday. The chamber also said that Nvidia, Dell, and Supermicro Computer will be "establishing operations in Memphis," without offering further details. The U.S. Commerce Department found that there aren't enough data centers in the U.S. to meet the rising AI-fueled demand, which is projected to grow by 9% each year through 2030, citing industry reports. [Meta to Build \\$10B AI Data Center, Musk Expands AI Facility - tEDmag](#)

**12. Harnessing AI to Empower Electrical Contractors by Sal Paraltore** - The electrical contracting industry is no stranger to innovation. AI is set to transform the tools of the trade, enabling smarter, safer, and more efficient work. One of the core tasks for an electrician/technician is measurement — voltage, current, resistance, and beyond. Historically, these measurements have relied on the precision of the tools in hand and the expertise of the technician using them. But what happens when AI is introduced into this equation? AI, coupled with machine learning (ML), allows for the analysis of vast datasets at speeds and accuracies far beyond human capability. By recognizing patterns in data that might be invisible to the human eye, AI can enhance the precision of measurements and reveal insights that were previously unattainable. Moreover, AI can integrate data from multiple modalities to provide a more comprehensive understanding of a system's health. Imagine a tool that not only measures but also analyzes and predicts potential issues, offering recommendations on the spot. This isn't science fiction; it's the future of electrical work. [Harnessing AI to Empower Electrical Contractors | EC&M](#)

**13. AI Like ChatGPT Is an Inevitable Part of Construction's Future by Dr Graham Kelly** - Construction today is more open to innovation than ever before, allowing us to assess, analyse and improve many different aspects of the construction process. When it comes to asking the question, what does the digital future of the construction industry look like, who better to ask than [ChatGPT!](#) Ask just about anyone today, what is the biggest topic in construction tech right now and the answer will be [artificial intelligence \(AI\)](#). AI in construction has the potential to help organisations realise value throughout the whole project lifecycles, including design, procurement, construction and operations. It can also help to overcome challenges is safety, costs, scheduling, maintenance and so much more. Here are some key trends and aspects shaping the digital future of the construction industry: [Don't fear the future: AI, BIM and a tech-led construction industry \(pbctoday.co.uk\)](#)

1. **Building Information Modelling (BIM)**
2. **The Internet of Things (IoT)**
3. **Augmented reality (AR) and virtual reality (VR)**
4. **Drones**
5. **3D printing**

**14. AI Will Force a Transformation of Tech Infrastructure by Steven Rosenbush** - Cloud services and private networks for years had to handle relatively limited amounts of data. Now that artificial intelligence and deep learning are driving vast quantities of photos, video, sound and natural language into the mix, however, data that was once counted in gigabytes and terabytes is measured in much larger units of petabytes and exabytes. Information systems, including the cloud, must expand to store all of that data. Less obvious—and more interesting—is the need to access all of that information at much higher speed and, critically, lower operating cost. [AI Will Force a Transformation of Tech Infrastructure - WSJ](#)

15. **The Great Reshoring: Wake Up, America, Your Factory Floor Is Calling by Alexander De Ridder** - The real AI revolution isn't happening in Silicon Valley conference rooms — it's about to explode on America's factory floors. This isn't your standard automation upgrade. AI-powered manufacturing is like giving every worker a superpower. Suddenly your maintenance tech isn't just fixing machines — it's preventing breakdowns before they happen. Your quality control is catching defects that human eyes can't even see. Your production planning is adjusting to market changes in real time. But here's the best part: AI turns your biggest cost center—labor—into your greatest asset. Instead of replacing workers, AI elevates them. It handles the mind-numbing routine tasks while your people focus on what humans do best: innovating, problem-solving, and making the kind of judgment calls no algorithm can match. This approach not only creates new jobs but also transforms existing roles into hybrid positions that synergize human and AI capabilities. [The great reshoring: Wake up, America, your factory floor is calling](#)

16. **TCL Hosts Global Technology Innovation Conference, Showcasing Latest AI and Display Innovations** - The TCL Global Technology Innovation Conference, now in its 11th year since its inception in 2004, marked a significant shift from its previous internal forum to an open forum welcoming industry professionals. The conference served as a platform for scholars, top experts, industry leaders and partners to explore future industrial development. On December 11, the 2024 TCL Global Technology Innovation Conference (TIC) was held in Shenzhen. With the theme "The Future is Visible by AI", the conference focused on AI applications, smart devices, displays, new energy photovoltaics. During the event, TCL unveiled 16 technological breakthroughs, including 5 all-scenario AI applications. [\[News\] TCL Hosts Global Technology Innovation Conference, Showcasing Latest AI and Display Innovations - LEDinside](#)

17. **Driving Decisions with Data: A.I. Models Increase Project Resource Efficiency by Jim Romeo** - A.I. is a hot topic and is making huge inroads into industrial sectors. Across every sector, there's an all-out sprint to harness A.I.'s power to build efficient business practices. The construction industry is no exception, and helpful data such as weather conditions, material costs, usage, labor expenditures, schedule data, change order data and more can be collected. A.I. is used in estimating software and other data science applications in construction in a way that is boosting the bottom line of projects that have been somewhat unpredictable. A.I. can be used to help preserve resources, make better estimates and produce more fruitful project results. A.I. is everywhere, improving estimating, budgeting and planning. There's more to come as A.I. applications are refined and larger data models are used. [Driving Decisions With Data: A.I. models increase project resource efficiency - Electrical Contractor Magazine \(ecmag.com\)](#)

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## Monthly Feature:

**Mind the AI Intuition Gap by Mitchell H Burman - The quality of your hunches will determine whether AI is your friend or foe.**

Since Chat-GPT was released in late 2022, many of us have been fixated on how AI will impact our futures. But the more important question is how will each of us adapt to AI? We and our organizations will be tempted to embrace AI-powered systems to make important decisions and complete tasks as easily as possible. This could potentially put the unique skills and talents that make us valuable in jeopardy. But ignore AI, and we risk falling behind a rapidly changing world.

Figuring out how to thread this needle will be a constant challenge, with no easy or permanent answer. But intuition — that ineffable supplement to critical thinking that lets us synthesize everything we've experienced and learned during our lives without even trying — will be a reliable indicator of our success. If our hunches are still leading us in the right direction in business and in our personal lives, we'll have an advantage over those who simply rely on AI's recommendations. And we'll be far better positioned to use AI to extend our advantages. We'll know what questions to ask these systems, and how to judge the answers.

These advantages will be greatest when it matters most: during times of significant change or disruption. The smartest AI systems struggle to make sense of unprecedented patterns or events, until there's sufficient data and time for them to be trained. We experienced such a disruption when COVID brought global supply chains to a standstill in early 2020. At the time, [only 2%](#) of companies were prepared to respond to this emergency. Factory workers sheltering in place and ports backing up certainly initiated the crisis. But companies were also over-reliant on automated logistics systems that had no idea what to do. For decades, these systems had been designed to strive for reduced channel stocks. AI algorithms designed to meet this objective were [irrelevant or worse](#) when it came to making sure every city and town had enough toilet paper.

Companies depended on their employee's hard-earned intuition to find their way forward. Operations experts at companies like Nike and Walmart ramped up digital channels to compensate for lost brick-and-mortar sales. College faculties pivoted to remote learning. Restaurant managers expanded take-out menus, and reassigned waiters to deliver orders. Pharmaceutical executives and Army logistics leaders, among others in the U.S. government's Project Warp Speed, determined how to make and distribute hundreds of millions of COVID vaccine doses in months. This accomplishment [required countless creative hacks](#) that AI systems wouldn't have known were options, like deploying Army cargo planes to deliver critical production equipment and supplies in emergency situations.

## Why intuition matters

Philosophers, writers, neuroscientists, and others have been [fascinated](#) with intuition for centuries. It's generally defined as the ability to synthesize experiences, acquired knowledge and even more abstract inputs (ethical or emotional implications, perhaps) and convert them into creative, adaptive, often original insights and actions.

We usually think of intuition as something that is instantaneous, unconscious, and effortless — like when we instantaneously know to stay away from a car because we sense the driver may be intoxicated. But a major ingredient of intuition is implicit knowledge, the [unconscious understanding](#) that we bring to the reasoning and critical thinking we do when we do not need to make a snap judgement. When a great cook runs out of a key ingredient but figures out how to compensate to make the meal even better, that's intuition. When Einstein — one of the greatest intuitive thinkers of all time — came up with thought experiments that allowed him to discover the theory of relativity while others labored over the math, that was intuition.

As Einstein is said to have claimed: "the intuitive mind is a sacred gift and the rational mind is a faithful servant." In other words, intuition is like a magical pixie dust that we apply to situations throughout our lives, in ways large and small — when we parent, improve our golf and perform at work.

Conversely, the lack of intuition can be costly. I saw this play out dozens of times during decades as a management consultant, often when companies thought they could replace savvy veterans with technology. Once, a freshly hired analyst for an aircraft manufacturer — someone with experience with computer systems, but no accumulated intuition about aircraft manufacturing — accidentally keyed in an order for 100x the needed number of wing components into a newly installed MRP system (the sexy new technology at the time). Even after reviewing the order, his lack of experience prevented him from catching the obvious error, and it cost the company tens of millions of dollars.

## Humanity's secret weapon over the machines

Barring any unexpected technical breakthroughs, intuition is likely to remain a critical human advantage. Our world is probabilistic and chaotic. The unanticipated happens. This means that our AI friends will always be faced with situations and conditions they haven't been trained to deal with. While it's certainly a [topic of debate](#), most neuroscientists don't see a way — at least not yet — for AI to acquire the power of intuition.

Of course, intuition is not always right, either. It's a [horrible guide](#) when it comes to picking stocks to buy, as author Daniel Kahneman explained in his best-selling book "Thinking Fast, Thinking Slow".

But in the Age of AI, having the intuition to try new ideas — even if they are wrong — will be a feature rather than a bug. As technology companies invest in once-unimaginable amounts of processing power to run ever more complex AI models, intuitive people and organizations will be able to explore and test their hunches faster than ever before.

In fact, research — not to mention good old common sense — shows that we do in fact learn more from our mistakes than our successes. This isn't hypothetical. We literally learn more from making and then having to [correct our errors](#), than from getting the answer correct the first time.

Humans have always worried about the impact of powerful new technologies, from Gutenberg's printing press to the iPhone. So far, there's no conclusive evidence that our intuition has suffered. But the potential downsides of AI — particularly generative AI, with its ability to let us ask any question about any topic and get back straight-forward answers, all in our native tongue — are undoubtedly serious.

Millions of students have come to rely on GenAI to study and write term papers. Software developers are letting systems such as Microsoft's GitHub CoPilot write a large percentage of their lines of code. In our personal lives, many of us are relying on AI-based services to help manage our finances, pick our outfits and provide medical advice. The technology is catnip to our curious, efficiency-seeking brains.

## Maintaining our intuitive edge

There's no simple formula for how to maintain one's intuition in an AI-infused world — but it will clearly be important to get in the habit of taking stock of where we have an intuitive edge worth protecting or nurturing. Most of us may happily part with our innate sense of direction and instead rely fully on GPS services like Waze, but Uber drivers and long-haul truckers should think twice. After all, the power will go out on occasion, and you will find yourself in areas without decent connectivity. AI may render your knack for picking the perfect restaurant obsolete, but you don't want to lose the sixth sense for spotting market opportunities that's fueled your career success.

Also, be aware that intuition will be hard to regain once it's lost. Like the frog in the pot of boiling water, you won't realize you're in trouble until it's too late. Then, while your more intuitive peers are using AI to test and generate still more informed hunches, you'll be coming up with fewer and fewer original ideas and falling behind faster as time goes on. The student who leverages Chat-GPT to research an assignment but writes it himself will likely become a better writer. The student who lets the chatbot do all the work will fear writing even more in the future.

Here's a real example for how to maintain a healthy balance between technological innovation and human capability: the calculator. When pocket-sized, spill-proof calculators were first introduced in the 1970s, educators and parents worried that students' math performance would suffer. It didn't happen, because school districts refused to stop teaching basic math skills. While fewer students can do long division in their head, the broad [consensus](#) is that calculators have helped students master more complex mathematical concepts.

So let the calculator example inspire you. You can either resist using AI for fear it will diminish us or rely on it too much to make our lives easier and more efficient. We'll all need to find the balance that will improve our lives not only by making them simpler, but by amplifying that which makes us special.

[Mitchell H Burman](#) A bit more about me: I spent 40 years leading advanced analytics and AI projects as well as education programs with organizations including HP, J&J, McKinsey & Co and MIT. I currently work with [The Return on Artificial Intelligence Institute \("RoAI"\)](#), helping companies apply the principles of AI. We've built an executive education program, including a novel game that illustrates the powers of AI by simulating the running of a bar, a diagnostic to determine an organization's AI readiness, and a process to implement AI while maintaining a healthy balance between man and machine.