ENERGY OBSERVER
A MONTHLY NEWSLETTER FROM AMERLUX®

SEPT 2020

The Whole Customer Value-Added Proposition

Let me define what I mean before I relate it to the lighting industry. Much has been written about the value proposition, the almost holy value proposition. It's a simple question: tell me what value you bring to the market; what makes you better than your competition? We have to teach it at the under-graduate and graduate level in any marketing course and I have often wondered that maybe we place too much emphasis on it. Well, we don't. A compelling value proposition is the essence of all our selling efforts. In its simplest terms, a value proposition is a **positioning statement that explains what benefit your product or service provides for your customers and how you do it uniquely better than your competition**. It's what you actually provide that is tangible or intangible and everything else your customer needs to make it acceptable to them as a **solution**. Well, that does sound like VALUE! Warren Buffet tells us that we sell on price while customers buy on value.

With that said, I think I just justified why we must sell on the Whole Customer Value-Added Proposition, with emphasis on value-added. In the high-tech digital world that we now find ourselves, my view is that we must expand the concept and must address three (3) distinct / essential offerings and they must all work together in a uniqueness that you own:

1. **The Product**
2. **The Solution**
3. **The Service**

Now let's look at the transition happening in the lighting industry.....and the Whole Customer Value-Added Proposition necessary if you intend to play in this new game.

Let's first deal with **THE PRODUCT**.....tangible lighting products. Back in 1879, we experienced a disruptive innovation called the Edison bulb. Disruptive innovation because it would eventually replace every kerosene lamp in the marketplace, and lead to the life changing electric power industry. For the first 50 years, it was all about quantity of light, then and who really knows when, quality of light became a focus. Quantity and quality of light for over 100 years was the value proposition. Then innovation took the form of longer life; then energy efficiency. All contributing to the evolution of a vibrant lighting industry. Disruptive innovation is happening again, right now, as every lighting source commercially available will be replaced by solid state lighting. The value-added value proposition is back to quantity and quality of light. Long-life and energy efficiency are off the table as it is intrinsic with SSL. When the possibilities are 300 lm/W and 100K hours of long life, let the innovators do their work and we get the benefit.

Next, **THE SOLUTION**: it's not just about light anymore, right? Light has always had ancillary benefits but now, we are talking about allowing us to manipulate the timing / intensity / tuning of light leading to incalculable benefits in our living and working activities. To explore how lighting products can solve a pain point. We are in the evolution stages of light becoming a value-added solution to many industry problems, dealing with improved productivity and increased performance and we see in this "new" normal, as a disinfectant solution. We are finding lighting solutions wherever lighting is found and it's everywhere:

- Office
- Retail
- Healthcare
- Human Centric
- Education / Institutional
- Horticulture
- Automotive
- Outdoor / Streetlighting
- Sports
- Many other market segments: home, hospitality, commercial, industrial, on and on.....
- Where there is light, there will be a value-added solution, maybe for the first time.

The SERVICE: if it's not about light anymore then what is it about? It's about IoT / IoE / PoE / VLC / Li-Fi / VoIP / SAE / Big Data / Big Networking / LaaS and much much more... It's the LaaS, I want to address. Lighting as a Service! If lighting has the potential to be the core connector to every electronic / digital device you own, we are not talking about traditional customer service: having the right product; in the right place; at the right price. That's so yesterday....it's just not enough of the whole value proposition. If we believe the solution to today's lighting systems must be a managed solutions dependent upon correctly designing / building quantity and quality of light, that requires intelligent specifications, competent installation, ongoing accurate measurement and monitoring, then we have no choice.....expanded services will play a more significant role, value-added and ongoing. It will include a financial service that offers intelligent control, connectivity and data collection as well. We will be asked to guarantee both the savings and performance for the entire design life of the solution, beyond providing just illumination. LaaS is a game-changer, a chance to create new user services.

National Energy Market Observer:

1. **Interest in Germicidal UV Lighting Spreads** - There is one area of specialized lighting that could be poised for growth as a direct consequence of the pandemic. It's called germicidal ultraviolet (GUV), an interior lighting application that produces invisible UV light capable of quickly destroying air- and surface-borne bacteria, fungi, and viruses, depending on the type of light used and the delivery mode. A proven technology with a long history, GUV has seen growing uptake, especially in health care settings. Now it's experiencing a spike in broader interest as a possible weapon to combat the spread of COVID-19 where people gather and as a ready line of defense against future infectious disease outbreaks. Predictably, though, the excitement building around GUV carries the potential for confusion, some of it consequential. Improperly designed, specified, or deployed solutions wrongly billed as GUV might fail to meet a strict definition critical to effective and safe use. https://www.ecmweb.com/lighting-control/article/21137313/interest-in-germicidal-uv-lighting-spreads

2. **Lighting's Next Big Thing** - After nearly saturating the energy efficiency angle with solid-state options, lighting's future may lie in discovering its deeper powers by focusing on health, safety, functionality, and control. Research that sparked the solid-state lighting revolution is now moving on, seeking to uncover new qualities in light that can lead to greater understanding of how it can be better produced, deployed, controlled, and used. Assessing the current state of the lighting industry, speakers spanning multiple industry sectors played off the theme that what's driven so much lighting innovation and growth — the quest for energy efficiency — is receding and slowly being replaced with a focus on tapping deeper into lighting's functionality and controllability. https://www.ecmweb.com/lighting-control/article/21137312/lightings-next-big-thing

3. **NEMA Lighting Systems Division Endorses Global Lighting Association Safety Guidelines for Ultraviolet Disinfecting Devices** - According to GLA, germicidal ultraviolet irradiation is a proven methodology for inactivating viruses on solid surfaces, in water, and air. As such, it is expected to be a useful tool in the fight against the COVID-19 pandemic. UV-C is a category of ultraviolet light with wavelengths between 100-280 nanometers and is the most effective UV light for disinfection. UV-C devices are considered safe if they meet the applicable safety requirements provided in the International Electrotechnical Commission and/or Underwriters Laboratories Standards or other regional safety requirements. https://www.globallightingassociation.org/images/files/publications/GLA_UV-C_Safety_Position_Statement.pdf

4. **Lighting Industry Leaders Team Up to Offer UVC Light Safety Guidance** - Due to an increased demand for sanitizing and germicidal capabilities in the face of COVID-19, UL, the American Lighting Association (ALA), and the National Electrical Manufacturers Association (NEMA) have released a new position paper, "Ultraviolet-C (UVC) Germicidal Devices: What Consumers Need To Know." The paper has two goals: to bring attention to ultraviolet light device safety risks; and to help manufacturers, retailers, and consumers understand which devices are safe and under what conditions they can be operated safely. It provides a deeper look at the UVC germicidal devices available to consumers and their potential to cause severe injuries to humans and pets, as well as damage to plants and materials. https://facilityexecutive.com/2020/08/lighting-industry-leaders-team-up-to-offer-uvc-light-safety-guidance/

5. **Ultraviolet-C (UVC) Germicidal Devices: What Consumers Need to Know** - UVC radiation (the most energetic in the UV spectrum; 180nm to 280 nm) is proven to have sanitizing and germicidal effects, and first proof of effectiveness against SARS-CoV-2 is emerging. Like many high energy devices, however, there are risks due to UVC exposure. Consumers currently have no assurance against the risks of UVC over-exposure from consumer oriented UVC devices that do not provide proper containment of the UVC emissions. When used improperly, these types of devices may present an undue health risk. In this document, 'certification' only addresses device safety and does not make any statements regarding product effectiveness in sanitization and germicidal capabilities, or other manufacturer claims. https://alamembers.com/Portals/1/CT%2026219573_UVC-Germicidal-Devices-PP_digital_FINAL_073020.pdf

6. **United Now Cleaning Flight Decks with UVC Lighting** - United Airlines is now cleaning pilot flight decks with Ultraviolet C (UVC) lighting technology on most aircraft at its hub airports to disinfect the flight deck interior and continue providing pilots with a sanitary work environment. The airline is using handheld, AUVCo blades from the American Ultraviolet company to kill any viruses that may reside on sensitive switches and touch screen displays within the flight deck. United has tested a variety of uses for UVC lighting as a disinfectant and consulted with its United CleanPlus partners at the Cleveland Clinic to determine that the flight deck was the most effective use of the technology. https://www.insidernj.com/press-release/united-now-cleaning-flight-decks-uvc-lighting/

7. **Signify CEO Reports Strong Demand for UV-C But Refrains from Quantifying Sales** - Signify's CEO has reported "strong demand" in the company's all-out ramp up of UV-C products aimed at killing the coronavirus, although it is too early to forecast sales, which in the second quarter did not prevent a 22.5% decline in overall corporate revenue amid the pandemic. Cost cutting enabled a profit. Sales of conventional (non-LED) products tumbled 25.2% on a comparable basis in the second quarter ending June 30, but UV-C and conventional horticultural lighting products mitigated the fall. https://www.ledsmagazine.com/

8. **The Rise of UV-C LEDs by Mike Krames** - Recent technology breakthroughs entitle ultraviolet-C-band LEDs to a performance/cost roadmap akin to that of LEDs for solid-state lighting, just at a time when we desperately need it. Market analysts, even prior to COVID-19, predicted a UV LED market exceeding $1 billion in a few years, to be compared with the lighting LED market, which was $5.8 billion in 2019, after growing for many years now. In addition, large LED players, including Nichia and San'an, are notably investing in the UV-C LED market, no doubt in expectation of healthier profit margins compared to today's general lighting LEDs. This sets up an interesting dynamic, since these large companies have capital and established sales channels, but do not necessarily have access to the technology or intellectual property that pure-play UV-C LED startup companies have, similar to the situation that red LED companies experienced when GaN-based blue LEDs came on the scene in 1990s. However, there remain peculiar challenges for UV-C LEDs compared to their blue LED counterparts. https://www.ledsmagazine.com/

9. **TVA Aids Businesses Installing Virus-Killing Light Technology** - As schools prepare to resume classes this fall and more of the economy reopens even as the coronavirus pandemic worsens, America's biggest public utility is backing a decades-old technology that could zap the virus pathogens out of the air in public places to help limit the spread of the infection. The Tennessee Valley Authority is offering financial aid for schools, restaurants, nursing homes and other buildings with public places to install ultraviolet germicidal irradiation lights in air ducts to minimize the spread of airborne microorganisms such as COVID-19. https://www.timesfreepress.com/news/

10. **ATM with Disinfecting LED Light for Safer Withdraw and Deposit** - To address the disinfecting demands across the globe, Hyosung America, an ATM supplier, announced a disinfection kits for its products to help fight against the COVID-19 pandemic and to help ease consumers' safety concerns with using ATMs. Starting this fall, the company will equip the disinfection upgrade kits for its ATMs with features of silver ion antimicrobial touchscreen and keypad, plus "violet blue LED sterilization lights." The violet blue LED lights that Hyosung will use, according to the company, are not UV light which harms people with direct exposure but still provide 99% sterilization. Utilizing silver ion technology, which provides a 99.9% microbe growth reduction rate, and germicidal LED light to disinfect the touchpoints of ATMs, Hyosung is dedicating to offer better protection for the ATM users. https://www.ledinside.com/news/2020/7/atm_disinfecting

11. **What to Know about Germicidal Lighting and Coronavirus** - Being able to eradicate the SARS-CoV-2 virus at the flip of a switch is about as attractive a concept as they come. UVGI (ultraviolet germicidal irradiation) technology, chiefly UV-C, has a proven record at killing or deactivating a variety of pathogens. And the technologies which can emit these wavelengths have been used in facilities for decades. However, facility managers must still be judicious in selecting and applying the UVGI technology in their facility for a variety of factors, including achieving maximum efficacy while reducing harm to facility occupants, and the facility itself. UV-C is not safe for human exposure. It will cause damage to the skin and eyes. The far UV-C technology under development is purported to be safe for human exposure, because the wavelength does not penetrate beyond the upper dead layer of skin cells. This is its selling point, as it could potentially provide continuous disinfection of occupied space. https://www.facilitiesnet.com/

12. **ESPC: The Remedy Schools Need During the COVID-19 Pandemic** - For nearly 40 years, Energy Savings Performance Contracts (ESPC) have assisted public and private sector entities to address their deferred maintenance and facility recapitalization projects. The ESPC approach to facility retrofits is the ideal method to implement disinfection strategies particularly in funding-strapped government and educational buildings. It will likely be necessary for commercial, industrial, governmental, and especially educational entities to establish disinfection strategies to mitigate the impact. These strategies should include:

1. Surface disinfection (chemical and/or using ultra violet – UV lighting)
2. Suspended particulate air filtration
3. Thermal screening (temperature) of entering individuals

https://facilityexecutive.com/2020/08/espc-remedy-schools-need-during-covid-19-pandemic/

13. **General Lighting Market to Grow by $30.50 Billion From 2020-2024** - Technavio has announced its latest market research report titled Global General Lighting Market 2020-2024. Technavio has been monitoring the general lighting market and it is poised to grow by USD 30.50 billion during 2020-2024, progressing at a CAGR of 5% during the forecast period. The report offers an up-to-date analysis regarding the current market scenario, the latest trends and drivers, and the overall market environment. Technavio suggests three forecast scenarios (optimistic, probable, and pessimistic) considering the impact of COVID-19. https://www.technavio.com/

14. **Our Human-Centric Lighting 'Boosts Patient Recovery'** - LEDVANCE has introduced a range of so-called human-centric lighting products which it claims will improve patient recovery in hospitals. The Biolux HCL range provides 'biologically optimised' day-to-night lighting which the company says reflects natural circadian rhythms to benefit both patients and medical staff, improving sleep regularity, concentration and mood. Besides supporting the sleep rhythms of patients, the lighting can also improve the wellbeing and productivity of hospital staff, especially in rooms which are often without natural daylight such as X-Ray or MRI rooms. Furthermore, specific lighting designed for night shifts keeps staff active and alert at the late hour without desynchronising their body clock. The range consists of a control unit, panel and downlight which communicate wirelessly with each other. https://www.luxreview.com/2020/07/28/our-human-centric-lights-boost-patient-recovery-says-ledvance/

15. **New Lighting System Reduces Deer-Vehicle Collisions** - Deer-vehicle collisions account for about 1 million accidents each year that kill 200 Americans, cause more than 10,000 personal injuries and result in $1 billion in vehicle damage, reports the National Highway Traffic Safety Administration. The light bar illuminates a larger portion of the vehicle's front surface than standard headlights alone, USDA said. In fact, the likelihood of dangerous interactions decreased from 35% to only 10% of vehicle approaches when using a rear-facing light bar plus headlights versus just headlights alone. Researchers attribute this to reduced instances of "freezing" behavior by deer when the light bar was used. https://www.bovinevetonline.com/

16. **Strategies in Light Moves to June 22-24, 2021 in Santa Clara, CA** - Endeavor Business Media and the Strategies in Light event team have closely monitored the developments around the COVID-19 pandemic with the highest intention of protecting the health and safety of its attendees, speakers, exhibitors, sponsors and employees. In these efforts to host a safe and productive event, the decision has been made to move Strategies in Light 2021 from February 9-11 to June 22-24 at the Santa Clara Convention Center in Santa Clara, CA. Attracting attendees from around the world, the annual in-person Strategies in Light conference and expo will maintain its focus on educating the lighting sector through peer-reviewed sessions, panel discussions, forums and an exhibition showcasing more than 100 vendors. https://www.strategiesinlight.com/sil2021/639303

17. **EC&M's 2020 Top 20 Electrical Contractors** -Every fall, the staff of EC&M unveils its highly anticipated Top 50 electrical contractors list, ranked specifically by electrical and datacom revenue. For the past decade, Top 50 players have managed to top their previous year's performances each year (as a collective group), typically with an increase of at least $1 billion per year. This year was no exception, with the Top 50 companies pulling in $33.1 billion in total electrical revenue in 2019, beating the $28.8 billion mark from 2018. Here are the Top 5:

No. 1 — Quanta Services: $7.1 billion, Houston, TX
No. 2 — MYR Group, Inc.: $2.071 billion, Rolling Meadows, IL
No. 3 — Rosendin Electric: $1.866 billion, San Jose, CA
No. 4 — MDU Construction Services Group, Inc.: $1.517 billion, Bismarck, ND
No. 5 — Cupertino Electric, Inc.: $1.462 billion, San Jose, CA

https://www.ecmweb.com/

18. **Ledvance Unveils Range to Challenge Signify's Hue** - Ledvance has unveiled a range of smart lamps and controls in a clear targeting of the market enjoyed by the hugely successful Signify Hue offering. The Professional Smart for Residential series includes smart Parathom lamps in a wide variety of shapes, smart luminaires, products for indoor and outdoor use or plugs for integrating conventional light sources. The products can be controlled optionally by voice command or app and offer a suitable solution for a wide range of requirements. The portfolio also has features such as colour and colour temperature change and dimming capabilities. In addition, the Professional Smart for Residential portfolio enables the creation of different light scenarios – dimmed, from warm to cool white and multicolour for choosing from 16 million colours. https://www.luxreview.com/2020/08/07/ledvance-unveils-range-to-challenge-signifys-hue/

19. **DC Lighting Systems Evaluation** - The California Lighting Technology Center (CLTC), sponsored by San Diego Gas & Electric, conducted a multi-year study to identify and evaluate DC lighting systems for commercial interior spaces. This study aimed to quantify DC lighting system electrical performance, validate manufacturer claims, and document benefits/challenges under both typical and worst-case design scenarios. The study included two components: 1) a market assessment of available commercial DC lighting systems, manufacturers and applications; and 2) a laboratory evaluation of representative DC lighting systems. https://cltc.ucdavis.edu/sites/default/files/files/publication/LDA%20DC%20Lighting%20Evaluation_0.pdf

20. **NEMA Electrical Standards & Products Guide (ESPG)** - The Electrical Standards & Products Guide lists NEMA Standards, product categories, and the Member manufacturers of those products. ESPG is the guide to electrical products and is read by buyers, specifiers, contractors, and distributors—your client base. Each year, ESPG lists all NEMA Standards and other publications, as well as sales contact information, by product type, for hundreds of electrical manufacturers. Product listings are available to members only. Download: 2020 Electrical Standards & Products Guide

21. **NEMA Revised Lighting Industry Standard for LED Drivers Adds New Methods of Measurement** - The scope includes, but is not limited to, LED drivers with these characteristics:

- General lighting, exterior lighting, and roadway lighting applications
- Input supply voltage up to 600 VDC or 600 VAC (50 or 60 Hz)
- Output open-circuit voltage of 600 V or less
- Constant-current or constant-voltage DC output
- Fixed, variable (dimmable), pulse width modulation, or programmable (tunable) output power
- External (standalone) or internal (enclosed in luminaire)

Revisions include the addition of standby power methods of measurement, revised LED driver efficiency methods of measurement, and the addition of the uncertainty calculation. ANSI C82.16 is available for $176 at: https://www.techstreet.com/nema/standards/ansi-c82-16-2020?product_id=2121495

22. **NEMA Launches Automotive Component Council** - To increase manufacturer collaboration in the changing and expanding automotive component market. The ACC will develop a deeper understanding of the automotive supply chain market, advocate for policies and regulations that impact the market, and develop baseline Standards qualification programs in its key aspects. The ACC will enlist NEMA Members and interested parties that share its goals for broader collaboration in a market that is increasing in sensor technology and component electronics as well as transitioning to electric vehicles. The ACC will unite companies that provide products and systems that make up the internal components of passenger vehicles, vans, commercial and industrial trucks, buses, and more. https://www.nema.org/

23. **Public Health Pushes the Needle on UV Partnership Opportunity by Carrie Meadows** - The coronavirus pandemic has perhaps heightened the profile of ultraviolet germicidal irradiation, but the demands of the application mean pushing UV LEDs beyond current limitations for more widespread and sustainable solutions. While we do not deny the validity of other UV-C sources such as conventional mercury discharge lamps or excimer lamps for UVGI, this is a publication established around the idea that the LED continues to advance into complex applications beyond the production of visible light. So we remain certain that as engineering and performance challenges are met and costs come down, the UV-C LED will become more established in disinfection systems. And certainly there are industry players who want to make that happen. https://www.ledsmagazine.com/

24. **The Secret Ingredient of Virus-Fighting Panel: Titanium Oxide** - A light panel with a photocatalytic coating of titanium oxide which is claimed to eliminate 99 per cent of airborne viruses, bacteria and bad air odour is being marketed as an alternative to UV-C luminaires in the fight against Covid-19. The TiO2 LED Panel – made in China and distributed in the UK and Europe by Maltese from UVTIO – is said to prevent cross contamination of viral infections in workplaces and reduce employee absence. TiO2 is an antibacterial, anti-fouling, antiviral, deodarisation and self-cleaning coating material, which has been widely used in China. It's widely used in paint and for the purification of water in the developing world and is inert, odourless and non-toxic. However, when used as a surface coating and excited by ultraviolet light it has some very unique properties, says its proponents. Nanosized TiO2 incorporated into outdoor building materials, such as paving stones or paints, can substantially reduce concentrations of airborne pollutants such as volatile organic compounds and nitrogen oxides. https://www.luxreview.com/2020/08/20/the-secret-ingredient-of-virus-fighting-panel-titanium-oxide/

25. **IALD Enlighten Events Go Online for 2020** - The International Association of Lighting Designers (IALD), announces Enlighten Americas 2020 and Enlighten Europe 2020 events will be held online for the first time. Enlighten Americas 2020 Online will be held on 21-22 October 2020 and Enlighten Europe 2020 Online will be held 18-19 November 2020 this year. IALD Enlighten events are leading international lighting design experiences that bring the international lighting design community together for inspiration, learning and connections. https://www.iald.org/Events/IALD-Enlighten/IALD-Enlighten-Events-2020-Online

26. **What to Consider When Switching to LEDs by Ellen Helm** - Frustrated by frequent maintenance, poorly lit areas, and high-energy consumption, you've decided to upgrade your facility's lighting. You've obtained the manager's approval for the retrofit and are eager to begin the switch to LEDs, but before you purchase the luminaires and jump into installation, here are the top 10 factors to contemplate before performing an LED retrofit. https://www.ecmweb.com/

Global LED Market Observer:

27. **Ushio Care222® Far UV-C Excimer Mercury-Free Lamps** - The filtered Care222 lamps can be safely used not only in unoccupied spaces but also in occupied spaces without posing a health risk to humans when used within the current exposure limits recommended by the American Conference of Governmental Industrial Hygienists (ACGIH®) or the requirements of IEC 62471. Exposure within the current ACGIH recommendations and IEC requirements allow microbial reductions using 222nm far-UVC light sources in occupied spaces. Recent studies indicate that higher doses of filtered UV light emitted from the Care222nm lamps pose a minimal health risk to human skin or eyes. https://www.ushio.com/product/care222-mercury-free-far-uv-c-excimer/ Watch the video: https://www.youtube.com/watch?v=XZn4-6Fh60k&feature=emb_logo

28. **Signify Partners EDZCOM to Accelerate LiFi Adoption in the Manufacturing Industries** - Signify and EDZCOM, the Nordic market leader in Edge Connectivity, will join forces to introduce Trulifi by Signify, two-way wireless network connectivity through infrared and visible light, into industrial applications. The partnership will apply to Signify's LiFi solutions, branded Trulifi, in the manufacturing industries. Trulifi uses infrared and visible light waves to enable a highly reliable, secure two-way wireless communication at speeds far above most conventional wireless technologies. Trulifi offers immunity to interference, unlike conventional radio technologies such as WiFi and 4G/5G. Together, Signify and EDZCOM will accelerate the adoption of reliable, secure and high-speed network connectivity in the most challenging environments. https://www.ledinside.com/press/2020/8/signify_trulifi_edzcom

29. **AMS Supplies Spectral Sensor to Create Rapid Test for COVID-19** - Spectral sensing can be applied for medical testing for COVID-19 virus. Austrian sensor expert AMS recently announced its collaboration with two German medical companies for such applications. AMS said that it is providing its AS7341L spectral sensor to midge medical, a German medical technology startup from Berlin, to develop a disruptive technology for science-backed rapid genetic and blood testing in a home and professional healthcare environment at a lower cost. midge medical's current focus is on developing a pocket-sized COVID-19 (SARS-CoV-2) genetic test. Test results can be read-out using a smartphone in as little as 15 minutes.In June, AMS also reported a partnership with Senova, a manufacturer of in vitro diagnostic medical devices based in Germany. https://www.ledinside.com/news/2020/8/ams_spectralsensing

30. **Audi Fields Next-Generation OLED Technology** - - In June 2020, the next generation of a lighting technology premiered in the Audi Q5: digital OLED technology. With organic light-emitting diodes (so-called OLEDs), Audi was a pioneer as far back as in 2016. Now digitalization is ringing in a new age. This technology promises to improve road safety and is the first to allow for personalization of the taillight signature. The benefits of OLEDs: Their light is extremely homogeneous. It is infinitely dimmable and achieves very high contrast. It can be split into segments. These segments are individually controllable and can develop diverse levels of brightness, with minimal gaps between the segments. The lighting unit does not require any reflectors, optical fibers or similar optics. This makes OLED units very efficient, lightweight and flat, which considerably increases design freedom. https://www.automotiveworld.com/

31. **Eaton Says Lighting 'No Longer Viable' as Doncaster Plant Closes** - One of the UK's biggest lighting factories is set to close due to pressure on margins in the commercial lighting sector. Electrical giant Eaton is quitting the main lighting market in Europe, the Middle East and Africa and closing the 50,000 square metre former Cooper Lighting and Safety plant in Doncaster, which it acquired in 2012. Luminaires for commercial, retail, education and industrial applications are designed and manufactured at the site, which employs 390 people. Some 300 jobs are set to go, with the remaining 90 transferring to the emergency lighting operation which will continue on a separate location. In 2019, Signify bought Cooper Lighting from Eaton for £1.1 billion, acquiring its mostly North American assets and brands, but the Doncaster operation was not included in the deal and remained with Eaton. https://www.luxreview.com/

Monthly Feature:

Opinion: The Lighting Industry Needs an Efficiency Revolution, by Michael Kershner, Lighting Designer - All sectors of the lighting industry must come together and embrace innovation in order to survive today's business climate, according to Michael Kershner. As the founder and principal of Innovating Lighting Consultants (ILC), a lighting design and procurement firm based in Denver, Colorado, Kershner recognizes expansion opportunities for lighting designers, specifiers and manufacturers alike. However, leaders across these sectors must join forces in adopting new technologies to enhance their operational, communication and collaboration efforts. Until then, they will lack the resources needed to reduce operational waste and increase profit margins.

Read Kershner's opinion piece below to learn about the "Efficiency Revolution" required to take the entire lighting industry to the next level.

The 2000s brought us LEDs, a revolution in lighting manufacturing technology. That revolution came with a lot of fight from the more traditional part of the industry.
"Will these LEDs last as long as they say?"
"How will you replace them?"
"They don't have the same quality as incandescent light."

This revolution has ended, and like most revolutions, the winning side (LEDs) created a new normal. What is the next revolution in our industry? In my opinion, it has to be how all our businesses are run operationally, as well as how we communicate internally and externally with all the other parts of the supply chain. This is not focused on just the entities in the middle; specifiers and manufacturers need to look deep into how efficient their own business and communications processes are with other businesses. The next revolution is still a technological one, but this time, it's about making our businesses and industry more efficient as a whole. How many lighting companies are utilizing the latest and greatest business technologies that other industries are using? How many have implemented cutting-edge software like low-code, no-code applications? Revit? Dynamo? Computational design? The full list of software and approaches would take 1,000+ words if I listed them all.

A lot of us thought that IOT would be the next revolution. That's possibly why the stocks of some large lighting manufacturers soared at the beginning of that craze. Maybe IOT wasn't meant to just change the technology we use inside fixtures; perhaps it was also supposed to help an antiquated B2B industry evolve. If we as an industry have already proven we want to interconnect different technologies from different industries, then why can't we take that approach to connecting different entities inside our industry?

How many companies in the lighting industry have chief automation officers, chief innovation officers and chief technology officers, rather than just IT managers? What I mean is how many companies have technologically savvy people trying to analyze and design solutions for complex operational issues?

How many companies in quickly advancing industries, such as software, work with these forward-thinking people?

As the philosopher Eric Hoffer said, "In times of change, learners inherit the earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists."
Now is the time for deep change in our industry; not just because of new technologies, but because of behemoth companies forcing change to happen. If we don't change, there is a possibility that one of the giants out there may take over our industry without a friendly warning.

My friend and mentor Chris Brown (former CEO of Wiedenbach Brown) talked about this concept years ago within his articles for Illumigeddon. He spoke about how this event was bound to happen, and it already has. In the last 20 years, how many small, highly efficient manufacturers and distributors have popped up compared to the previous 20 years? The revolution required is one where all players in our industry strive to automate and connect as many processes and communications as possible—both internally and externally. The entire value chain needs to make information more easily accessible and instantly visible to others who require it. For example, my background is in lighting design and distribution. For designers, the act of specifying products should be much less complicated so we can spend more time being creative. As for distribution, we need to strive to build internal systems that compare to the large e-commerce platforms in terms of simplifying order processes and increasing transparency.

The last revolution I mentioned earlier involved introducing LEDs as a main light source, which really only required participation from manufacturers to achieve a lasting impact. It was much easier for one entity in the supply chain to implement this large shift in thinking rather than numerous entities. In turn, the industry quickly moved from more traditional light sources to LEDs over a decade or so. The process revolution I am proposing is more difficult because it involves every member in the chain, but in the end, it will lead to higher profit margins across the industry if accomplished. As author and brand futurist for Nike and other well-known brands, Simon Mainwaring, said, "Effectively, change is almost impossible without industry-wide collaboration, cooperation, and consensus."

We must collaborate as an industry so that our players in our industry can stay relevant. The open-source concept used in software is applicable to business: the idea that open innovation between many companies can lead to the amount of innovation occurring to be exponentially larger. For context, The Harvard Business Review wrote about how open innovation is needed to help solve some of the world's largest problems today.

Let's use technology to enhance and automate processes in our supply chain.
Let's reduce the operational waste.
Let's breathe some life back into our industry and make it easier for everyone in the supply chain to do their job.

https://www.luminii.com/live-light/article/the-lighting-industry-needs-an-efficiency-revolution/