

Amerlux Corporate Video - Amerlux creates bold lighting solutions that add warmth and brilliance to the world. The design-and-manufacture company builds long-term relationships with architects, facility managers and lighting designers by taking every complex problem personally. Its award-winning portfolio includes innovative interior and exterior lighting products that deliver striking aesthetics and rich performance through advanced engineering. Fueled by passion, Amerlux® lighting elevates design. Innovating with the power of independent thinking, our sophisticated lines reflect your demands for fine retail, hospitality, supermarket, commercial and exterior lighting. Obsessed with performance, Amerlux products boast breathtaking precision, unprecedented energy savings and smart, streamlined good looks. Amerlux brings your vision to life. With light, reimagined. For more information, visit Amerlux.com. <https://www.youtube.com/watch?v=8RMZpOOp3Qo&feature=youtu.be>



LED Energy Market Observer:

1. **95 Grants Will Advance National and Energy Security** - DOE announced that it will award 95 grants totaling \$95 million to 80 small businesses in 26 states. Funded through DOE's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs, today's selections are for Phase II research and development. Small businesses that demonstrated technical feasibility for innovations during their Phase I grants competed for funding for prototype or processes development during Phase II. In addition, prior Phase II awardees competed for sequential Phase II awards to continue prototype and process development. The median Phase II award is \$1,000,000 for a period of two years. <https://www.energy.gov/articles/department-energy-announces-95-million-small-business-research-and-development-grants>

2. Lighting Vendors Should Target IT Departments More Than Facilities Managers by Mark Halper - As the lighting industry attempts to morph from its conventional role of illumination and become more of a provider of smart networks that collect data through chips and sensors embedded in the lighting infrastructure, it should focus its sales efforts on IT groups rather than on the customary facilities departments. That is the takeaway from an informal survey conducted by GE's Current smart lighting group, which asked via Twitter: "Who do you think holds the keys to smart buildings of the future?" A plurality of 1500 respondents weighed in with the answer "IT," which got 44% of the nods, well ahead of "facilities and operations," which was second at 22%, a nose ahead of "CEOs" at 21%, and all in front of "finance" at 13%. While facilities managers and site supervisors still "play a pivotal role in building smart facilities," the industry's relationship with them is in the balance. <https://www.ledsmagazine.com/>

3. Cloud-Based Light Control Cuts Energy at Volvo - In the manufacturing area the legacy 480W metal halide lights were replaced with 520 200W HBX LED luminaires from CRT. Each luminaire has an integrated occupancy and ambient light sensor, plus an enModus Node to control the DALI driver. Nodes communicate using enModus' powerline communications (PLC) technology – Wattwave – across the existing powerlines to an enModus Hub. The Hub connects to the enModus Cloud Platform to collect data and control lighting. The Cloud-based platform allows configurable occupancy-based lighting schemes, daylight dimming and customisable lighting schedules. Volvo can now also automate regulatory compliant emergency light testing of the maintained emergency lights too. <http://luxreview.com/article/2018/07/cloud-based-light-control-cuts-energy-at-volvo>

4. Diversified Tech Firms with Lighting Divisions Switching Focus Away from General Lighting - Some of the major LED Lighting makers are switching their focus as the LED lighting technology matures. Cree is switching its focus to power electronics and RF. Osram is now increasing its focus on automotive LED lighting, and 3D identification technology for smartphones, and advancing the Internet of Things. Overall, such diversified tech companies with lighting businesses apparently anticipate a profitable future in the IoT realm. Some such as GE and Osram are also now working on horticultural LED lighting. Additionally, these companies are looking to new technologies including autonomous and electric vehicles as well as smartphone 3D identification measures. In the short term, these companies expect to reduce profits in general lighting but gradually increase profits in other technology areas. <http://www.solidstatelightingdesign.com/>

5. Get A Grip On Lighting: Bill Attardi - tED magazine has teamed up with Greg Ehrich and Michael Colligan of the "Get A Grip On Lighting" podcast www.getagriponelectronics.com to create exclusive content for lightED. In this episode, Ehrich and Colligan talk with me. They discuss the changes I have witnessed, and where I see lighting in the future. Thank you for this abbreviated podcast, first showed on June 12: NAILD Podcast #29. <http://lightedmag.com/get-a-grip-on-lighting-bill-attardi/>

6. San Francisco's Historic Cable Cars Get LEDtronic LED Lighting - The cable cars in San Francisco, California have been in operation for over 140 years. Since way back in 1873, only relatively dim incandescent headlights served as an indicator that a cable car was coming. LED lighting firm, LEDtronics changed that when the company's LED lighting was used to upgrade the lighting for the historic cable cars. The old incandescent lights would quickly burn out, or could break from the constant vibrations. Even when they were working, they would drain the batteries quickly. However, since the city switched to using LEDtronics LEDs, those issues are a thing of the past. <http://www.solidstatelighting.net/san-franciscoos-historic-cable-cars-get-ledtronic-led-lighting/>

7. Research Report Explores the IoT Sensors Market Worth \$22.48 Billion by 2023: Shelly Singh IoT sensors refer to the sensors used in smart applications, which require connectivity, real-time analytics, and common connecting platform for collecting and analyzing data. It is a computing concept where every physical object is connected to the internet, and all such objects are able to communicate with each other. the IoT sensors market is expected to be valued at USD 5.28 billion by 2018 and is projected to reach USD 22.48 billion by 2023, at a CAGR of 33.60% between 2018 and 2023. Major factors that drive the growth of the IoT sensors market include increased use of sensors in IoT devices and other applications owing to their reduction in size, plummeting costs, and technological advancements. <https://www.whatech.com/market-research/it/499629-iot-sensors-market-worth-22-48-billion-by-2023>

8. **LED Lighting Pioneer Accuses Employee of Stealing Secrets Worth More Than \$100M** - An attempted theft at Durham manufacturer Cree in May could have given “a competitor or foreign entity” copies of 32,000 files that covered virtually all there is to know about something the company’s been working on for 30 years, a Durham County Sheriff’s office search warrant says. The warrant sought the cell-phone records of Coy Brevard Bell, a 47-year-old Cree staffer arrested by authorities on June 18 and charged with larceny by an employee. <https://www.securityinfowatch.com/news/12423963/led-lighting-pioneer-accuses-employee-of-stealing-secrets-worth-more-than-100m>
9. **MIT Develops Method to Weave LED into Textile for Smart Clothes** - A research team at Massachusetts Institute of Technology (MIT) has produced a fiber-based “soft hardware” with embedded LED and diode photodetectors which can be used to make clothes. In this research, tiny LEDs were added to the preform to produce the fibers. When being heated during the fiber-drawing process, the preform partially liquefied, forming a long fiber with the diodes lined up along its center and connected by the copper wires. The completed fibers can then be made into fabrics and are waterproof. The team demonstrated a test by putting some of the LED and photodetectors embedded fibers into a water tank and transmitting optical signals to them outside the tank. The fibers in the tank converted the light pulses to electrical signals, which were then converted into music. <https://www.ledinside.com>
10. **Webcast: Full-Spectrum LEDs and Indoor Daylight Support for Health and Wellbeing** - September 11, 2018 at 12:00 PM EDT / 11:00 AM CDT / 9:00 AM PDT / 4:00 PM GMT Dr. Octavio L. Pérez holds a PhD in multidisciplinary science from Rensselaer Polytechnic Institute (RPI), Troy, NY, USA. His field of interest is HCL (human-centric lighting) and its application in the healthcare environment. Perez conducted his doctoral research at Mount Sinai Hospital in New York City, focused on the effects of lighting in clinician wellness and performance, and patient safety. Our webcast speaker will summarize the current state of science and technology used to commercialize human-centric lighting and will explain how the findings on light effects have inspired full-spectrum LEDs and lighting designs that benefit the human condition indoors. https://event.webcasts.com/starthere.jsp?ei=1205305&tp_key=995c3d314a&sti=blog
11. **LC Study Group Open for Registration** - Boost your work opportunities and stature in the lighting community by becoming lighting certified. This year’s test for lighting certification, given by the National Council on Qualifications for the Lighting Professions (NCQLP), is on November 4. The Illuminating Engineering Society’s LC Study Group provides support for those already registered to take the test. Classes begin Sept. 11. For more information and to sign up for the study group: <https://www.ies.org/education/>
12. **Mandalay Bay Convention Center Taps Wireless Lighting Controls Across 1 Million ft²** - In a lighting now and maybe data later deal, Las Vegas’ Mandalay Bay Convention Center has tapped GE’s Current division for a wireless control system that allows fine tuning of 1600 luminaires across the expansive 1 million ft² of exhibition space. Mandalay Bay is using Current’s Intel-based Daintree controls and software to alter lighting levels from 0–100% brightness, thus eliminating the need for supplemental lighting over individual booths, according to Current. The convention center’s owner, MGM Resorts International, is also considering integrating data from the lighting system into its corporate building analytics software, Current said. Some people in the lighting industry believe that smart lighting’s greatest value lies in gathering data that can be analyzed to reveal how to better run and allocate space in a building. <https://www.ledsmagazine.com/>
13. **15 Recognized by DOE Better Buildings Lighting Campaign** - The U.S. Department of Energy’s (DOE’s) Better Buildings Interior Lighting Campaign (ILO) recently recognized 15 organizations for performing projects to upgrade their interior lighting and control systems. These partners, along with those recognized in the last two years, have newly installed or upgraded more than 2.8 million lighting fixtures and controls system — reducing energy use on average by 54% and saving \$68 million on energy bills. DOE is recognizing the following organizations this year for a combined self-reported \$33 million in energy cost savings by upgrading almost 1.4 million lighting systems to high efficiency systems.....see the list at: <https://interiorlightingcampaign.org/2018-recognition>

14. **Chicago Installs 76K LED Streetlights in First Year of Upgrade Program** - In the year since the Chicago Smart Lighting Program began, the city's Department of Transportation has installed 76,000 LED smart streetlight fixtures in all of the city's 50 wards. The four-year modernization program entails replacing 270,000 lights by 2021 and installing a citywide lighting management system. The system will notify the city when lights need servicing once it becomes operational later this year. The city estimates the energy efficient lights will save up to \$1 million in electricity costs the first year and \$100 million over 10 years, and that the savings will offset the cost of upgrading. <https://www.smartcitiesdive.com/news/chicago-installs-76k-led-streetlights-in-first-year-of-upgrade-program/530529/>

15. **Signify Still Sells Lights! Unveils Some 20 New Hue Models** - Many of them will connect to the Internet, so there's still a data play. But it's a reminder that the lighting industry is still tending to illumination, even as reaches for the IoT brass ring. Now, something for readers who might be heartened to know that lighting companies are still providing, errr, lights, despite their obsession with becoming Internet and data firms: Signify is adding a number of snazzy models to its color-changing Hue home line, both for indoor and outdoor use. Of the 19 new Hue LED lights, one is aimed squarely at the home entertainment and gaming community, two are intended for outdoor use, and the others are targeted at living rooms, dining rooms, kitchens, and bathrooms. <https://www.ledsmagazine.com/>

16. **A Closer Look at Software by Craig DiLouie** - Software plays a central role in commissioning, operating, and analyzing data collected by networked lighting control systems. As connected lighting becomes more popular, manufacturers continue to make their software simpler, more robust, more portable, and require less training. Software is a major touch point regarding the lighting control system serving either as a platform or an integral part of implementing the Internet of Things in commercial buildings. Using software, we can designate control zones, assign network nodes (control points) to the zones, and establish schedules and profiles. Control profiles are essentially sequences of operation, typically time slots in a schedule featuring adjustable variables for luminaire control—e.g., vacancy sensor time delays, daylight response set-points, manual overrides, etc. <http://lightingcontrolsassociation.org/2018/08/24/a-closer-look-at-software/>

17. **Lighting Controls in the Time of Low Lighting Power by James R. Benya** - There was a time when lighting was not controlled well, if at all, but that was 1973. With current technology and new construction codes, the primary causes of poor lighting control today are bad design, unenforced codes, and worst of all, improper commissioning. By requiring certified controls acceptance testing, California's Title 24 significantly improves the likelihood that controls will be built per code and work as designed. Now what? Meanwhile industry, looking ahead to develop new products that can offer irresistible benefits, still defaults to the efficiency drumbeat. But with the current codes this means trying to save only a few milliwatt-hours of energy per square foot, because the big savings are already being produced by occupancy/vacancy sensors, manual switching and dimming, and daylight harvesting. It's reasonable to doubt that additional savings can be achieved cost effectively, especially when lighting power density will soon be less than 0.35 w/sf for most non-retail space types. If you can't save energy and controls already can easily dim and change color, what other new tricks can "smart" controls perform that building owners understand, care about, and will pay for? <http://lightingcontrolsassociation.org/2018/08/14/lighting-controls-in-the-time-of-low-lighting-power/>

18. **White Paper: Intelligent Buildings: Smart Lighting as the Backbone for Buildings Automation by ARM** - With a growing focus on human-centric workspaces, building owners and operators are looking beyond energy efficiency, and considering smart lighting as the backbone for advanced building automation applications.

- Advanced applications based on a smart lighting system
- Critical factors for a successful smart lighting deployment
- Arm's processor technology and Mbed IoT platform enable chip-to-cloud security

<https://app.smartsheet.com/b/form/f7ab1f0cc0f84f5cb3679e4d63b216e8>

19. **White Paper: TALQ Specification 2.0** - The TALQ Consortium published a White Paper that offers insights into its global interface standard and certification scheme for managing smart city applications such as outdoor lighting networks. The document explains the system architecture and data model, as well as its functions and services. The consortium contends that the Whitepaper helps cities, solution providers, project planners and other stakeholders understand the concepts and advantages of the Smart City Protocol. The full TALQ Specification Version 2.0, which the consortium says, lets vendors easily integrate the protocol into their systems, is available for TALQ member companies along with a Test Suite. Furthermore, the consortium contends that TALQ provides a comprehensive certification program and associated test tools to verify interoperability, giving end-customers, such as cities, the assurance that the selected solutions are genuinely compatible. While the detailed TALQ Specification is available only for TALQ member companies, the White Paper resides in the public domain of the TALQ website. <https://www.talq-consortium.org/>

20. **More Than 100 Ways to Improve Your Electric Bill** – This booklet offers you more than 100 ways to improve your electric bill by saving energy in the major areas of home heating, cooling, lighting, cooking, dishwashing, water heating, clothes washing, clothes drying, refrigeration, and consumer electronics. These simple, low- or no-cost tips can assist you in making your energy decisions and in gaining greater control over your electric bill. By following these tips, you also will improve the comfort and convenience of your home. <http://www.eei.org/issuesandpolicy/efficiency/Documents/100Ways.pdf>

21. **IES Featured Webinar Live 9-20: Lighting for Horticulture** - September 20th 12:00 PM EDT. Humans see visible light; plants perceive and respond to electromagnetic radiation. For all that we have learned and know about lighting design for architectural and roadway applications, surprisingly little of this is relevant to horticultural lighting design. Horticultural lighting design is a fascinating and ongoing discussion between lighting designers, luminaire manufacturers, horticulturists, and floriculturists. Participants to this webinar are eligible for one (1) IES Continuing Education Unit (CEU). Free to IES members. <https://www.ies.org/education/>

22. **Zhaga Spec Allows IoT Upgradability** - The Zhaga Consortium, a global association of lighting companies that is standardizing interfaces of components of LED luminaires, has published Edition 1 of a new specification that helps to bring the Internet of Things (IoT) to outdoor LED lighting fixtures. The specification, known as Zhaga Book 18, makes it easy to upgrade LED fixtures by adding or changing modules that provide sensing and communication capabilities. Smart LED luminaires with sensing and communication capabilities can significantly improve the efficiency, maintenance, and running costs of outdoor lighting networks. <https://www.zhagastandard.org/data/downloadables/1/0/8/1/20180704-zhaga-book18-ed10-for-publication.pdf>



23. **LEDucation 2019 Issues Call for Speakers** - LEDucation 2019 is accepting submissions for presentation proposals to be given during the 2019 conference taking place March 12–13, 2019, at the New York Hilton Midtown in New York City. All submissions must be received by November 12, 2018. <https://ww4.aievolution.com/led1901/>

Global LED Energy Market Observer:

24. A Manufacturing Revolution for the LED Lighting Industry - Western business investments in local manufacturing facilities have been declining since the 1980s due to partnering with contract manufacturers in Asia. But with increasing and hidden costs in Asia, companies are now seeking to bring manufacturing back home. When also considering all hidden costs of overseas contract manufacturing, including the import taxes, customs fees and freight expenses, many companies have realized that it is more reasonable to bring the manufacturing back home to automated factories, instead of searching for another low-cost labor country. US Manufacturers are voicing concerns about the downside of the import tariffs the Trump administration is slapping on \$50 billion worth of Chinese products. At the same time, there are talks about potential changes in NAFTA. And who knows, maybe even EU relations will become volatile if the worst-case trade-war scenarios play out. <https://www.led-profession-al.com/resources-1/articles/a-manufacturing-revolution-for-the-led-lighting-industry>

25. Switch On to LED Lightbulbs Before September's Halogen Ban - From the end of this month halogen lightbulbs are to be removed from the market across Europe, with households expected to switch to LED lights. According to Philips, the average UK household has 10 halogen bulbs and uses them for 2.7 hours a day. If that is correct, then hundreds of millions of halogens are going to have to be replaced. Halogen light bulbs could disappear from Australian stores within two years. Old-fashioned incandescent bulbs were the first to go, in 2009, and in 2016 the phased removal of halogens began in an EU-wide effort to improve energy efficiency and cut carbon emissions. <https://www.theguardian.com/money/2018/aug/11/switch-led-light-bulbs-halogen-ban>

26. UV LED Market to Boom as UV-C LEDs Increasingly Used for Water Sterilization and Purification - Yole Développement (Yole) forecasts that UVA-LED powered curing, the primary application in the UV LED market, will be worth \$320M in 2020, approximately double from its 2017 level of \$160 million. Furthermore, Yole's analysts predict that the market for UV LEDs will then boom, towards \$1B in 2023, driven by UVC applications. While UVA LEDs are used mainly for curing applications, such as nail dryers and printing, UVC LEDs are beginning to be integrated into products for water disinfection and purification. Yole anticipates that water disinfection and purification will become a major driver of the UV LED market within 3-5 years. A new legal battle has already begun about this technology. <http://www.solidstatelighting.net/>

27. Swiss Helicopter Gets Lighting as a Service from ZGS - With 14 locations, Swiss Helicopter AG serves as Switzerland's leading helicopter company. As well as offering conventional transport and passenger flights, Swiss Helicopter also provides flights for sightseeing, giving customers the opportunity to experience the Swiss alpine landscape from above. Instead of purchasing a lighting solution for its lighting refurbishment, Swiss Helicopter has chosen to implement light as a service. As part of its no-hassle, full-service package German firm Zumtobel Group Services (ZGS) intends to optimize the lighting. According to ZGS, this arrangement will ensure the lighting is always in line with the state-of-the-art. Also, a fixed monthly rate eliminates the standard initial investment for such an installation. Under the terms of a flexible service contract, Swiss Helicopter will essentially lease the lighting and will continue to benefit from the latest lighting technology, including all installation and maintenance of the lighting for the duration of the contract. <http://www.solidstatelightingdesign.com/swiss-helicopter-gets-lighting-as-a-service-from-zgs/>

28. The Impacts of the U.S. - China Trade War on Global LED Lighting Business - In April, the U.S. government has proposed a list of 1300 Chinese exports and announced to impose 25 percent tariffs on these products, following the Section 301 investigation. Later in July, the Trump administration released the second tranche of additional tariffs on US\$ 200 billion worth of Chinese goods. The first tranche of tariff has come into effect on July 6. According to previous analysis of LEDinside, the LED products included in the first list are mainly intermediate goods such as wafers and backlight products. The tariff would influence U.S. based companies who have factories in the U.S. and has to buy the intermediate products from China for manufacturing. The second tariff will come into effect on August 23rd and it will influence a wider range of LED lighting products as the tariff list included more than ten categories of LED lighting products. These products account for 75 percent of the Chinese lighting exports and the export value of the listed lighting products has reached US\$ 5 billion in 2017. Since the U.S. has been an important export market for China made LED lighting products, the impacts of tariff on lighting products will be unavoidable. <https://www.ledinside.com/>

29. **Volkswagen Recalls Tiguan SUVs Due to LED Short-Circuiting Risk** - German automobile manufacturer Volkswagen has been recalling 700,000 of its Tiguan and Touran cars around the world due to the possible short-circuiting risk of their LED lights. Volkswagen said that humidity may cause the short circuit in the LED modules in the vehicles' panoramic sunroof which may lead to a fire. The company is reportedly working on a solution to fix the problem and hopes to complete testing soon to help customers to repair their cars. <https://www.ledinside.com/>

30. **NEMA Urges USTR to Hone China Tariffs with Narrow Targets and Time Limits** - On August 21, the National Electrical Manufacturers Association (NEMA) testified on behalf of its Member companies that would be materially affected by additional tariffs proposed by the Office of U.S. Trade Representative (USTR) on products made in China. The Administration is considering whether to place 10 or 25 percent additional tariffs on \$200 billion in Chinese goods, of which \$18 billion are of direct interest to NEMA Member companies, in its efforts to bring about changes in China's intellectual property and industrial policies and practices. "NEMA agrees with the Administration's intent to pursue and produce negotiated outcomes that restore and, whenever possible, advance market openness and fairness," NEMA President and CEO Kevin J. Cosgriff concluded. "We encourage U.S.-China discussions in Washington, DC, this week to earnestly construct a path toward those outcomes." <https://www.nema.org/pages/default.aspx>

31. **Global LED Lighting Products Price Trend** - According to the latest report of LEDinside, LED lighting market scale will reach US\$ 33.3 billion in 2019 and LED lighting market penetration will come to 63 percent in 2022 from 22 percent in 2017. LEDinside has been tracking the street prices of LED bulbs. The data collected during January 2011 to July 2018 shows that the average price of 60-watt equivalent LED products has dropped from around US\$ 45-50 in January 2011 to below US\$ 10 by July 2018. The current price for LED lamp product is only one fifth compared to the price seven years ago. The profit of producing LED lighting products has therefore become flat for lighting manufacturers. https://www.ledinside.com/news/2018/8/global_led_lighting_products_price_trend

32. **O2 Trials Data Transmission through LED Bulbs** - Telecom operator O2 has announced its partnership with pureLiFi for a trail network using LED lights to provide high-speed wireless connection for data transmission. The technology, known as LiFi (lighting fidelity), uses visible light instead of radio waves to transmit data. O2 UK conducted the trial with PureLiFi, a Scottish technology start-up company as a part of a series of network tests for paving the way for 5G launch in the UK. O2 has installed PureLiFi's LiFi-XC system which comprises nine LED bulbs emitting white light and enables data transmission from a LED light bulb and back at high speeds through adjustments in the bulb's brightness. According to O2, LiFi has the potential to offer a safer, more reliable and more secure wireless data communication than Wi-Fi with its reliance on the visible light spectrum, while reducing infrastructure complexity and energy consumption. <http://luxreview.com/article/2018/08/o2-trials-data-transmission-with-light>

33. **Royal Navy Orders 100,000 LED Tubes** - The UK's Royal Navy has ordered 100,783 LED tubes in a £1 million deal in what will be widely seen as a vote of confidence in the technology. The light sources will be installed in 21 ships of the fleet, including six Type 45 destroyers, 13 Type 23 frigates and the two recently-acquired flagship aircraft carriers, HMS Queen Elizabeth and HMS Prince of Wales. Royal Navy engineers are said to have tested some 3,000 individual pieces of LED lighting before giving Coventry-based Voltacon its biggest-ever order. <http://luxreview.com/>

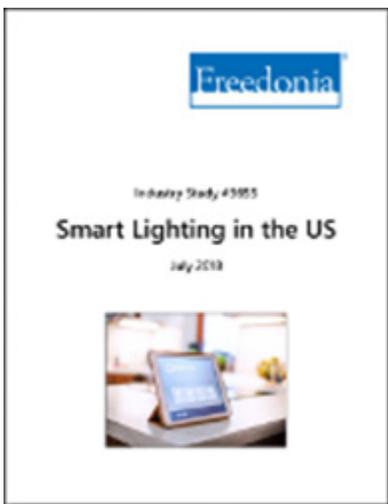
34. **Telensa to Deploy Smart Street Lighting and IoT Infrastructure for Sunshine Coast Pilot Project** -The Sunshine Coast Council of Australia has selected Telensa, a UK-based maker of connected streetlights, to deploy its PLANet intelligent street lighting system, for a 24-month pilot project. The pilot project will create, demonstrate, and test a smart infrastructure in the Maroochydore City Centre development, and in nearby Evans Street. With the pilot project, Telensa intends to demonstrate the social, environmental, and financial benefits of adaptive street lighting. The project is also intended to show the potential for adding smart city sensors like those for measuring air quality, monitoring and analyzing traffic, as well as waste monitoring and management. The system provides services beyond just lighting and lighting analytics to add value. Telensa plans to deploy the system in September. <http://www.solidstatelightingdesign.com>

35. **Global Industrial Lighting Category** – Procurement Market Intelligence Report - Supply selection criteria insights, global and regional category spend opportunities, and category management insights are offered in this industrial lighting procurement report. The report which is a part of SpendEdge's facility management category, predicts a decelerated spend growth momentum for the category in the coming years. However, the increasing replacement of incandescent lights with energy-efficient LED lights will drive demand of the industrial lighting. Additionally, stringent regulations against manufacturers are also leading to the adoption of industrial lighting sources such as LED lights and HIDs. This procurement report also offers detailed insights into the supply market and identifies the key category growth drivers to help the buyers reduce spend. <https://www.spendedge.com/>

36. **LED Lighting Used in Worldwide Vertical Farms to Boost Local Food Supply** - By deploying LED lighting, agricultural activities can be carried out in places with difficult environment conditions for providing food locally and diminishing the food miles. Vertical farms have been established worldwide with the aim of producing food with more efficiency and less resource waste. <https://www.ledinside.com/>

Monthly Feature:

Freedonia Group Research Forecasts Growth of Smart Lighting - Demand for smart lighting in the United States is forecast to increase to \$945 million by year-end 2018. By 2025, demand is expected to reach \$4.4 billion, according to a recent report by The Freedonia Group, Cleveland.



Of that overall smart lighting market, Freedonia estimates that controls account for 63% of sales. The smart controls segment is made up of lighting-specific control devices separate from the light source or fixture, such as centralized lighting system control boxes, lighting-specific smart home hubs and bridges, and smart light switches and dimmers.

Rapid growth in sales of smart lighting systems, including light sources, fixtures and controls, is being driven by several factors, including rapid growth in the broader smart tech and IoT markets, including smart home devices, nonresidential building automation, and smart city infrastructure; consumer interest in the convenience of smart lighting capabilities, such as wireless, away-from-home, and voice control; and energy saving initiatives, especially in nonresidential applications.

The report, titled "Smart Lighting in the US," points to some overall market dynamics that lighting suppliers should keep in mind in addressing the market. Smart lighting will benefit from the burgeoning smart tech and IoT markets, the report said, but while smart lighting is seen as an energy-saving upgrade in nonresidential applications, residential users adopt smart lighting as a convenience and novelty.

The report looks at smart lighting controls as critical technology for energy savings in nonresidential applications, using large networks of sensors and advanced analytics to reduce energy consumption. Some of the conveniences of consumer smart lighting (e.g., voice control, away-from-home remote control) often require a bridge or hub. Building control suppliers have readily expanded their product offerings to incorporate smart lighting capabilities into broader building automation and Internet of Things (IoT) systems, Freedonia said. <https://www.freedoniagroup.com/smart-lighting.html>