

EnergyWatch



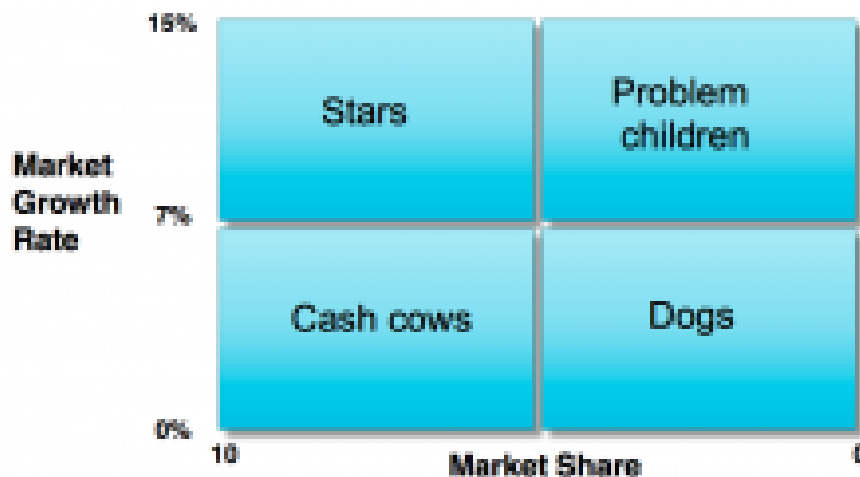
October 2017

<http://attardimarketing.com/>
<http://energywatchnews.com/>

Peter Drucker:

- *Systematic innovation requires a willingness to look on change as an opportunity...*
- *Do the right things rather than do things right...*
- *The best way to predict the future is to create it...*

Something to Think About... WHO ARE THE KEY PLAYERS IN THE CURRENT SMART LIGHTING INDUSTRY?



We defined the Boston Consulting Group's (BCG) Stars / Problem Children / Cash Cows / Dogs in our last two blogs.....Now it's time to put everyone in their place! Forget about Cash Cows and Dogs..... those still in the traditional no growth lighting business.....you know who you are (fuggeddabouddit). They live in the past, we need to look into the future. If we can identify the current Stars and Problem Children in the fast-growing Smart Lighting industry, maybe, with a little vision, we can project our future leaders. Will the Stars hang on, who are the Problem Children that will become Stars....how long will it take? All good questions but we must start with what is NOW! I'm first up....here are my picks. What's yours? Please, feel free to add to the list, as well as move any of my picks as you see fit. As Lincoln once said: *With malice toward none, with charity for all...*

LUMINAIRE STARS – fast-growing market (7%-15%) / superior market share (>10%)

- Acuity
- Cree
- Eaton / Cooper
- Hubbell
- Musco (sports lighting niche)
- Philips
- Others??????

LAMP STARS – fast-growing market (7%-15%) / superior market share (>10%)

- Cree
- GE / Current
- Osram / LEDvance / MLS
- Philips
- Others????????

PROBLEM CHILDREN – fast growing market (7%-15%) / low market share (<5%)

- | | |
|--------------------------|------------------|
| • Amerlux | • Rab |
| • Eiko | • Satco |
| • Feit | • Soraa |
| • Green Creative | • TCP |
| • Halco | • Ushio |
| • Leviton | • Westinghouse |
| • Lighting Science Group | • Zumtobel |
| • MaxLite | • Others???????? |
| • Prudential | |

PROBLEM CHILDREN – possible new entrants / no market share yet

- | | |
|----------|------------------|
| • Apple | • Oppl |
| • Amazon | • Qualcomm |
| • Cisco | • Samsung |
| • Google | • Verizon |
| • LG | • Others???????? |

Again, please add to any list as you see fit...but keep it to what's happening now!

One last point: I equate the Smart Phone with Smart Lighting all the time.....It ain't about light anymore....that having a light bulb that can only provide light – could look a lot like a cell phone that will only make phone calls. So in my opinion, generally speaking and from an industry evolution standpoint, I contend that when the lighting industry concluded – forced really – that it was in their best interests to convert every single lighting system out there to SSL, we started the evolution from Traditional Lighting to Smart Lighting: from incandescent / fluorescent / HID to SSL / sensors / controls. Everybody knew that if they did not make that conversion, they were out of lighting, forever. For this exercise, I make the assumption that everyone on my list are all in various stages of that Smart Lighting conversion / evolution. What do you think?

LED Energy Watch...

1. ***ENERGY STAR Partner Meeting Session*** - The U.S. EPA is hosting a session at the 2017 ENERGY STAR Products Partner Meeting (ESPPM) in Chicago, IL to address stakeholder questions on Lamps and Luminaires: Requirements, Testing, Certification, and Verification Testing. The meeting will be held at the Sheraton Grand Chicago on October 23-25, 2017. **ONLINE REGISTRATION IS OPEN UNTIL OCTOBER 10:**
https://www.energystar.gov/partner_resources/energy_star_products_partner_meeting
2. ***What the iPhone X Means for LED Industry*** - Apple's product launch event on 12th Sep. truly went with a bang at the Steve Jobs Theatre in Cupertino. It by turns introduced Apple Watch Series 3, 4K Apple TV, iPhone 8, iPhone 8 Plus, and, finally, the long-awaited iPhone X. The iPhone X sports a full-screen OLED display with a notch, or the sensor housing where Apple puts the sensors, cameras, and the speaker to create an iPhone that is all display. Apple has been seeking ways to obtain more OLED supply and even reportedly planning 'OLED for all new iPhones in the next couple of years'. The fact that it switched the display material from LCD, mainly provided by JDI, to OLED will have a significant impact on the LED backlight business, one of the main sources of income for the LED industry. The market of mobile LED backlight is shrinking and will be replaced by OLED. By the end of 2017, the percentage of OLED display adoption will rise from 22% to 27%. For now, the yield of OLED production still needs to be improved and its price remains relatively high. It might still need some time for OLED to fully take over the phone display market but it is happening. http://www.ledinside.com/news/2017/9/what_iphone_x_means_for_led_industry
3. ***Starbucks' Tech Partner Turns to Lighting*** - The analytics partner for big retail names including Starbucks and Walgreens is to focus on lighting as a platform for its advanced services. High tech US company Esri says it is teaming up with an indoor mapping firm to analyze the data collected by sensor-enabled overhead smart lighting systems and from opt-in mobile data from customers' smartphones. This will enable its retail customers to track behaviors, using information including customer locations inside the store and items selected for purchase. The store can then tap into the data to improve customer assistance and position merchandise in the places most likely to attract purchases. The company says that more than two-thirds of consumers use smartphones while shopping in brick-and-mortar stores and that retailers now have to deliver more relevant experiences by becoming more precise in how they interact with shoppers. Studies show that it can boost the probability of purchase by up to 70 per cent and increase basket size by up to 60 per cent for smartphone-enabled shoppers. <http://luxreview.com/article/2017/09/starbucks-tech-partner-turns-to-lighting>
4. ***All Eyes on Automotive LEDs*** - In the ever-growing LED market, automotive LEDs are witnessing a rapid development. This is driven by various regulations enforced by governments around the world for fuel-efficient gasoline vehicles. In addition, manufacturers of hybrid vehicles and electric vehicles have increasingly embraced new technologies. Also, with substantial development in automotive electronics, many LED manufacturers are now trying to gain their positions in this market. According to statistics from LEDinside, a division of TrendForce, the global automotive LED lighting market is projected to reach a total value of US\$ 2.817 billion, growing at a CAGR of 14.8%. In comparison, the overall LED industry will only grow at a CAGR of 3% from 2015 to 2021. http://www.ledinside.com/interview/2017/6/all_eyes_on_automotive_leds_epistar_prepares_to_shine



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5. ***Apple's iPhone X: New Smartphone Pushes Boundaries of Camera and Sensor Technology***

In honor of the 10th anniversary of the iPhone, Apple unveiled its new flagship model for the iPhone called the iPhone X on Sept. 12 in its new Cupertino headquarters. Here's a quick rundown on the game-changing innovations: <https://biztechmagazine.com/>

- 1) Apple Virtualizes the Home Button
- 2) OLED Makes Its iPhone Debut
- 3) Face ID Kicks Biometric Security Up a Notch
- 4) A11 Processor Paves the Way for AR, Machine Learning Future
- 5) Wireless Charging Goes Mainstream

6. ***The University of California and Its Partners Plan to Buy 1 Million LED Lamps*** - The Million

Lamp Challenge has officially been launched by the University of California system in consultation with the California State Department of General Services. With bids due September 22, the groups have issued their purchasing standards to encourage the purchase and installation of high-quality LED lamps in their buildings. It is expected that the bidders to be tight manufacturer/distributor partnerships. <https://bids.sciquest.com/apps/Router/PublicEvent?CustomerOrg=UCOP>

7. ***The University of California and its Partners Plan to Purchase One Million High-Quality LED Lamps*** - The *Million Lamp Challenge* has officially been launched by the University of California

system in consultation with the California State Department of General Services! The groups have issued their purchasing standards that follow the Voluntary California Quality LED Lamp Specification published by the California Energy Commission and used by California investor-owned utilities to determine which lamps are eligible to receive incentives.

http://www.energy.ca.gov/business_meetings/2016_packets/2016-12-14/Item_09.pdf

8. ***LiFi – Lighting Up The Digital Highway System*** - Using light to send digital data is 100 times

faster than Wi-Fi. The potential for this high-speed technology to change everything about the way we use the internet, and send and receive data is huge. Check out this video. LED lights send information to a baseball cap. Standing under the lights, and using headphones connected to the cap, a user wearing the cap can hear audio sounds -- like a voice narration or music. All that happens because of the light receiver fibers, with special detectors, that are woven into the top of the cap. The circuitry, similar to what's found in computer chips, processes pulses of light from these LED light panels, and transforms the light pulses into audio signals -- no radio or smartphone required. This could be a tool for the military too, where it would be safer to communicate with other soldiers by zapping their uniforms with a narrow beam of light rather than broadcasting an easily intercepted radio message. <https://www.youtube.com/watch?v=f-9azuPDEM4>

9. ***Top 2018 LED Market Trends Likely to Lead to New Biz Opportunities*** - A new report '2017-2021

LED Industry Demand and Supply Data Base- 3Q17' by LEDinside, a division of the market research firm TrendForce, has projected the LED market value in 2017 to increase by more than 7.4 % YoY to US\$ 17.16 billion. This is due to the fact that in 2017 the LED market price stayed stable, and the automotive and architectural lighting markets increased fast. LEDinside projects that 2018 would witness 10 major LED demand and supply market trends.....details at:

<http://bizled.co.in/top-2018-led-market-trends-likely-to-lead-to-new-biz-opportunities/>



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- 10. As Lighting Companies Morph into IT Firms, They Face Stiff Competition — From IT Vendors by Mark Halper** - Barclays Plc has deployed a series of heat and motion sensors that help analyze office space usage at investment banking facilities in London. It's the sort of system that lighting vendors are offering as part of their push into the Internet of Things (IoT), with one glaring difference: Barclays does not appear to be housing the sensors within the lighting infrastructure to turn this into a smart building. Rather, it is deploying black boxes mounted underneath employees' desks, according to a recent article by *Bloomberg*. The boxes, called OccupEye and provided by British company Cad-Capture, gather occupancy data and tie it into a cloud-connected dashboard system that helps Barclays decipher how efficiently or wastefully it is using space. The good news at Barclays for lighting companies is that Cad-Capture's OccupEye system validates the concept of IoT-linked facilities analysis. <http://www.ledsmagazine.com/>
- 11. Grow Light Market Size Worth \$8.64 Billion by 2025** - The global **grow light market** is anticipated to reach \$8.64 billion by 2025, growing at a CAGR of 14.1%, according to a new report by Grand View Research, Inc. The increased use of vertical farming and indoor cultivation, for producing crops, is likely to spur the market demand over the forecast period. Grow light helps in extending the hours of the natural daylight which further increases the health, growth rate and yield of the plants. The U.S. government has increasingly started to legitimize cannabis plantation across various states. With this initiative, cannabis cultivation is on a verge to become a big business in some parts of the country. Cannabis growers prefer Controlled-Environment Agriculture (CEA) to enhance product quality and yield. This set up consumes a high amount of electricity. As government officials and power companies are trying to convert this into a green industry, they are encouraging the use of LEDs to reduce power consumption and greenhouse gas emissions. 9/19 PRNewswire
- 12. DOE's SSL Technology R&D Workshop November 8, 2017 | Portland, Oregon** - The rapid rise of LED lighting makes it easy to forget that today's lighting revolution is just getting started. As industry innovators continue to explore the untapped potential of LED lighting, new opportunities to manipulate and control the spectrum, intensity, and distribution of light have created gaps in understanding and communicating lighting performance, including relevant metrics. At the same time, new and nontraditional lighting applications are emerging that raise important questions that need to be addressed. Register now at: <https://energy.gov/eere/ssl/2017-ssl-technology-workshops>
- 13. After Three Decades, OLED Technology Continues to Evolve by Sri Peruvemba** - Many of us tend to think of organic light-emitting diodes (OLEDs) as "new" technology, compared to LEDs, liquid-crystal displays (LCDs), and other display solutions. The fact is that more than 30 years have passed since the emergence of the first working OLED. Samsung and LG have been mass-producing OLEDs for mobile phones and TV applications; companies such as Visionox have been shipping passive-matrix OLEDs into wearable devices; and dozens of companies have begun making serious billion-dollar investments in OLED technology. LG continues to invest in OLED for its TV products, including curved, flat, and 4K screens. Another emerging application for OLEDs is transparent displays in semi-outdoor applications promoted by Samsung and Planar. Retail shop windows can be replaced with transparent displays, heightening the window shopping experience while providing information beyond conventional window cards. Providers of high-end retail goods can especially benefit from this implementation, as the entire window can be used to allow product comparison by shoppers. <http://www.ledsmagazine.com/>



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14. 4 Common Mistakes with LEDs by Eric Woodroof, Ph.D - From Bangladesh and Singapore to the U.S., [LEDs are replacing](#) most types of lights whether they are fluorescent, high-intensity discharge or standard A lamps. This article shares guidelines that will help you avoid common mistakes and capitalize on lessons learned.

#1: Test Sample Fixtures

#2: Buy Quality Products

#3: Understand Utility Rebates

#4: Budgeting for Replacements in 10 years

<http://www.buildings.com/article-details/articleid/21251/title/4-common-mistakes-with-leds>

15. Utility Rebates for Networked Lighting Controls by Craig DiLouie In May 2016, the DesignLights Consortium® (DLC) released V.1.0 of its Networked Lighting Control Systems Specification, which formed the basis of a new Qualified Lighting Products List (QPL). As of August 2017, more than 20 utilities and energy efficiency programs now require networked control systems be on the QPL, and about a dozen of these created new rebates for the technology. Most DLC Members and many other utilities are looking at how to incorporate the QPL into their rebate programs. The DLC's goal is to develop a unified, market-friendly incentive strategy that would simplify the rebate process and streamline it across multiple program territories, but for now, utilities are experimenting with approaches. <http://lightingcontrolsassociation.org/2017/09/19/utility-rebates-for-networked-lighting-controls/>

16. SSL Manufacturing Is Traveling Back to the US by Matt John - Is lighting manufacturing moving away from its traditional base in China? This question has been a hot topic for as long I can remember. China is not ready to relinquish the manufacturing throne just yet. The nation has massive production numbers, unparalleled infrastructure, endless backing by the Chinese government, and a still-evolving economy to support its position. However, there is a subset of the industry that is moving away from manufacturing in China to the US at a rapid pace: the modular lighting vertical. Modular lighting typically comprises a low-voltage lighting platform, light engine, profile or body, optics, mounting gear, and installation accessories pieced together to create a full lighting system. <http://www.ledsmagazine.com/>

Global LED EnergyWatch...

17. Connected Lighting Boosts Sales at Guess - Sales at stores of the American fashion brand Guess in Switzerland have been boosted by its connected lighting, the suppliers have claimed. Sophisticated internet-connected lights are engaging customers and coaxing them into spending more with offers and discounts. Bluetooth beacons embedded in the luminaires transmit signals to users of the retailers' mobile phone app, welcoming shoppers to stores and offering them tailored promotions and information based on individual buying habits, preferences, and loyalty schemes. Osram, the supplier of the Bluetooth chips, Osram Einstone, says shoppers have spent over 10 per cent more since the installation of the indoor-positioning technology. The chips were installed in the existing LED lighting. Osram rival Philips Lighting cited a forecast from ABI Research that the indoor-positioning market will triple by 2020 to over 1 million installations.

<http://luxreview.com/article/2017/09/connected-lighting-boosts-sales-at-guess>



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- 18. *Luxlive 2017 to Focus on Digital Future of Lighting*** - The lighting in our buildings and cities is set to form the backbone of a digital network which can engage and inform on an unprecedented scale. To help get a grip on these bewildering possibilities, LuxLive 2017 – Europe’s largest annual lighting event – is bringing together the experts and the technology at ExCeL London on 15-16 November. And it’s not just about technology. Advances in our knowledge about how light affects people are now allowing us to create human-centric spaces where wellbeing, comfort and productivity are paramount. <http://luxlive.co.uk/>
- 19. *University Facility Managers Trial IoT Lighting*** - to better allocate rooms and buildings and control both heating and lighting. The University of Oulu in Finland feature luminaires with built-in sensors which gather information about how occupants are using the space. University managers can use this information to allocate space to various departments. With around 16,000 students and 3,000 staff, Oulu is one of the largest educational facilities in Finland. The trial – funded by the Finnish government – is also testing a number of other emerging technologies. For instance, the lighting infrastructure is hooked up to a 5G network, the next generation of mobile phone connectivity that is set to supersede the 4G platform. Some pundits believe the leap will be necessary to support the billions of devices that will connect to the IoT — estimates vary wildly but several prognosticators expect around 20–30 billion devices to be part of the IoT by 2020, up from several billion today. Lights, windows, door locks, security cameras, refrigerators, heating systems, and many other items will be part of it. <http://luxreview.com/article/2017/09/university-facility-managers-trial-iot-lighting>
- 20. *LG and Samsung Invest €25 million in Cynora*** - German company Cynora, a leading provider of highly efficient organic emitter materials for OLEDs, announced that the two Korean tech giants have decided to support Cynora on its way to becoming a major player for OLED emitting materials. Cynora is developing a new type of organic emitting materials for OLED displays based on TADF (Thermally Activated Delayed Fluorescence) technology. With this technology, Cynora will be able to commercialize the first high-efficiency blue emitting material on the market, which is the most sought-after material by OLED display makers. High-performance blue materials will enable a significant reduction of power consumption and allow higher display resolution. The investment will lay the groundwork for enabling commercialization of advanced display technologies. <http://bizled.co.in/ig-and-samsung-invest-e25-million-in-cynora/>
- 21. *Street Lighting Key to Ambitious \$126 Million Smart City Scheme in Dijon*** - Dijon, famous for zesty mustard, is now spreading something else with vim and vigor: smart city technology. The Burgundy city in eastern France is joining with neighboring towns on a €105 million (\$126 million) information technology project intended to improve operations and save money on street lighting, traffic management and public safety, while generating data for other services across the metropolis. In an ambitious 12-year project led by the €31.7 billion (\$38 billion) construction and telecoms conglomerate Bouygues, Dijon Métropole will upgrade 34,000 street lights to LED, which it will connect to a central management system that will also tie into traffic lights, security cameras, buses, and other assets in an Internet of Things (IoT) scheme. <http://www.ledsmagazine.com/>



- 22. 10 European Cities Team Up to Test IoT Lighting** - Aarhus, Amsterdam, Aberdeen, Bergen, Bradford, Dordrecht, Ghent, Gothenberg and Hamburg will share the learnings from trials which they hope will cut their costs by 10 per cent. The first experiment will be the installation of smart sensors in dustbins so that they can request emptying when full, saving on wasted bin lorry journeys. Trials with lighting and parking are expected to follow. Street lights could, for instance, help motorists find parking places on city streets. The five-year project – dubbed Smart Cities and Open Data Re-use (SCORE) – is financed by the European Regional Development Fund.
<http://luxreview.com/article/2017/09/10-european-cities-team-up-to-test-iot-lighting>
- 23. ABB to Acquire GE Industrial Solutions for \$2.6 Billion** - The release said, “GE Industrial Solutions is headquartered in Atlanta, GA, and has about 13,500 employees around the world. In 2016, GE Industrial Solutions had revenues of approximately \$2.7 billion. ... As part of the transaction and overall value creation, ABB and GE have agreed to establish a long-term, strategic supply relationship for GE Industrial Solutions products and ABB products that GE sources today.” “With GE Industrial Solutions, we strengthen our #2 position in electrification globally and expand our access to the attractive North American market,” said ABB CEO Ulrich Spiesshofer.
<http://www.electricalmarketing.com/>

LED Technology Watch...

- 24. EW's Top 10 LED Picks for August 2017** - Congratulations to the product development teams from Nora Lighting, Sylvania Lighting, Forest Lighting, WAC Lighting, Shat-R-Shield, Elemental LED, Nora Lighting, Modern Forms, Acclaim Lighting and Legrand. If you have a new product that you would like considered for our monthly Top 10 LED Product Picks, please send a press release and high-resolution image (300 dpi or better) to Jim Lucy, Electrical Wholesaling's chief editor at jim.lucy@penton.com. <http://www.ewweb.com/>
- 25. GE Sol Lamp with Alexa Now Available** - Sol, which gets its namesake from the circular shape and illumination of the sun, combines functional illumination, visual indicators for everyday tasks, sleep-based light and all the skills you'd find in an Amazon Alexa product in a contemporary table lamp without the need for a stand-alone Alexa-device. In addition to using Sol to order your dinner, listen to the latest headlines, play music or respond to a host of other Alexa voice commands, the LED lamp with microphones and a speaker can control all Alexa-compatible products in your home, from connected light bulbs to thermostats to home appliances. It can also access more than 20,000 Alexa skills. <https://www.youtube.com/watch?v=NkJklkh7exs>
- 26. Sync Nanoleaf's LED Panels to Music with the Aurora Rhythm** - The Aurora Rhythm module is a small plug-in device that can connect to any Nanoleaf LED panel. Complete with an integrated sound sensor, the Rhythm is supposed to be able to detect "beats, sounds and melodies" and display them visually through Nanoleaf's color-changing LED panels. <https://nanoleaf.me/meetaurora> Available in stores in the US starting on September 25 and in Europe via Amazon and the Apple Store starting on October 1 for \$230. Beyond viewing and making changes to Rhythm settings in Nanoleaf's Android or iPhone app, this discreet module is also compatible with Siri, Alexa and the Google Assistant. https://www.youtube.com/watch?v=bFytRw_QSYk



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27. Active Grow SG300 LED Grow Light is the First to Receive the ETL Horticultural Lighting Certification - Active Grow's Sweet Grass Series™ 300W LED Grow Light is the first to receive the new ETL Horticultural Lighting Certification from Intertek. Intertek has recognized the Active Grow SG300 LED grow light as a significant development in horticultural lighting technology, allowing the SG300 luminaire to be eligible for big rebates in commercial grow facilities. The Active Grow SG300 LED grow light conforms to all of the ETL's Program requirements including; elevated ambient temperature requirements, corrosion resistance requirements, high humidity requirements, ingress protection requirements, UV protection requirements and supply connection requirements. <http://activegrowled.com/product/>



28. Osram Presents Innovative SMARTRIX Modules - New LED modules developed by Osram combine multiple emitters with silicone optics and driver electronics that deliver adaptive drive beam technology for automotive headlamps. Matrix headlights provide ideal visibility at night and poor weather conditions. The smart distribution of light ensures that the road is illuminated with a high level of precision and maximum light output without dazzling oncoming drivers. Several individually controllable LEDs are combined into a matrix (array) with common optics. The LEDs can be controlled individually, "pixel by pixel", so specific areas of the road and its environs can be illuminated or masked out as required. Osram said headlamps based on the Smartrix LED modules will be on the road in commercial vehicles this fall. <http://www.osram-group.com/en/media/press-releases/pr-2017/29-08-2017>



29. Focal Point Announces a New Approach to Connected LED Luminaires - The Internet of Things (IoT) has enabled a synergy between luminaires and controls like never before. Lighting control systems now integrate with whole building management systems and leverage the electrical power and ubiquitous presence of lighting to collect data for smart building management. Focal Point is proud to introduce the industry's broadest offering of connected luminaires with Connected Solutions: a program that enables dozens of luminaires to interface with industry-leading control solutions. These smart luminaires integrate with building lighting management systems through wired and wireless networks allowing occupants to control lighting for maximum comfort and energy efficiency. http://focalpointlights.com/sites/default/files/ConnectedSolutions_brochure.pdf



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30. Targetti Expands STORE Lighting Series - The STORE

Projector is a track mounted luminaire that features a 120V non-dimmable, phase dimmable and 0-10V dimmable 3+1 circuit Nordic Pulse Track, in which the luminaire can be vertically adjusted from 0° to 90° and horizontally up to 355° with secure locking for precise aiming. It is available in Spot, Flood, Medium Wide Flood or Wide Flood with the convex faceted precision optics housed in a painted die-cast aluminum optical chamber and power box and treated with a “Scratch Proof Formula”. Targetti products are sold in the U.S. exclusively through the Targetti Group North American headquarters located in Costa Mesa, CA. <http://targettiusa.net/indoor/store/>



31. Acuity Brands, Inc. Offers News Street Lighting Network Solution Using SSN Platform - Acuity Brands Lighting, Inc. has selected Silver Spring Networks, Inc. as a technology and channel partner for its smart street light and smart city solutions. Acuity Brands has developed and will market its DTL® DSN intelligent photocontrol, which will operate on a wireless network platform managed by Silver Spring Networks. The solution offers municipalities and utility companies enhanced functionality and adaptive control of their LED street lighting systems. LED street lighting system operators can leverage their lighting infrastructure assets by enabling IoT connectivity for smart lighting, smart grid and future smart city applications. <http://phx.corporate-ir.net/phoenix.zhtml?c=130194&p=irol-newsArticle&ID=2299707>

32. Verizon Intelligent Lighting Solutions: Smart Street Lighting System - Through the power of the ThingSpace platform, Verizon is creating a digital infrastructure for smarter city services and revenue generation opportunities. Smart lighting can become a central point of technology for other IoT solutions. This video shows current and planned functionality. Verizon Intelligent Lighting solutions gives you a cloud-based platform that allows wireless control to turn lights in the system on and off or to dim them, energy analytics to help manage usage, event-driven outage notifications to speed service and maintenance, sensor based analytics for notifications and geo-location by pole and district. To learn more about the future of smart cities and smart street lighting systems: <http://www.verizonenterprise.com/products/internet-of-things/smart-cities/intelligent-lighting/> https://www.youtube.com/watch?time_continue=54&v=4dqjYShTLXs

33. Lixf Unveils Three New Mini Smart Bulbs That Work with Siri - It's called Lixf Mini, and it comes in three varieties: a fully color-changing bulb for \$45, a color-tunable, white light bulb for \$30, and a fixed white light bulb at 2,700K for \$25. As the name suggests, each Mini bulb sports a slightly more compact design than before, but still puts out a healthy 800 lumens of light at peak brightness, which is roughly comparable to a 60W incandescent despite only drawing 9W each. The previous generation of Lixf bulbs put out a much more ample 1,100 lumens -- Lixf plans to continue making and selling them at a price of \$60 each you can dim them up and down or change their color using a **Siri** command. Beyond HomeKit, Lixf bulbs also work with Amazon's Alexa, the Google Home smart speaker, IFTTT, Logitech Harmony and more. Watch the showdown between Lixf and its top competitor, Philips Hue: https://www.youtube.com/watch?v=fNsg_TCRTOQ



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National EnergyWatch...

- 34. US Revised Second-Quarter GDP Up 3.0% Vs 2.7% Rise Expected in the April-June Period** - The U.S. economy grew faster than initially thought in the second quarter, notching its quickest pace in more than two years, and there are signs that the momentum was sustained at the start of the third quarter. Growth estimates for the third quarter are as high as a 3.4 percent. Consumer spending, which makes up more than two-thirds of the U.S. economy, grew at a 3.3 percent rate, the fastest in a year, reflecting more spending on motor vehicles, cellphones, housing and utilities than previously estimated. <https://www.cnbc.com/2017/08/30/us-revised-second-quarter-gdp.html>
- 35. Apply Now for a 2018 Readiness Challenge Grant** - Challenge Grants are awarded competitively upon completion of an online application. They are available to cities, counties, states, provinces and regional authorities (transit, port, etc.) within the United States, Canada, or Mexico. The Smart Cities Council will award five (5) Readiness Challenge Grants to North American cities, counties, states, provinces or regional authorities that wish to apply smart technologies to improve community livability, workability, and sustainability. For each winning city or state, the Council will deliver a one-day smart cities workshop. Participants will include approximately 150 government leaders, private sector and academic experts, and other key regional stakeholders. The Council will custom design each workshop to the special needs of that city. <http://smartcitiescouncil.com/scc-2018-readiness-challenge-info>
- 36. White Paper: How B2B Distributors Can Beat Amazon** - Whether they'll admit it or not, B2B distributors will soon be dominated by a marketplace. The question isn't when or if, but who will be leading this change. Established distributors could find themselves fulfilling orders for Amazon, or embrace the model for themselves. Free Download at <http://www.digitaljournal.com/> that covers:
1. Future of B2B Distribution - Understand how the market will be dominated by a marketplace, either by Amazon or an established firm.
 2. How B2B Distributors Can Play Offense - Established distributors have a handful of strategies to employ in order to embrace the marketplace model, including acquisitions and partnerships.
 3. 100 Day Strategic Plan to Dominate B2B Distribution - Learn the concrete steps distributors can take to build a marketplace and fend off Amazon's impending domination.
- 37. LEDVANCE Invests in U.S. Manufacturing** - LEDVANCE is upgrading its St. Marys, PA and Versailles, KY factories. The lighting leader is celebrating this announcement at its St. Marys factory today with Walmart, which has made a 10-year commitment to buy an additional \$250 billion in products supporting American jobs. New SYLVANIA LED light bulbs assembled in the U.S. are at Walmart stores nationwide and will be in additional retailers and sold via industrial commercial channel partners in the near future. Based on data from Boston Consulting Group, it's estimated that 1 million new U.S. jobs will be created through Walmart's initiative, including direct manufacturing job growth of approximately 250,000, and indirect job growth of approximately 750,000 in the support and service sectors. http://www.ledinside.com/news/2017/9/ledvance_invests_in_us_manufacturing



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Monthly Special Feature... *Within the Next 20 Years We Will Be Living in a Different World! And You Thought It Was Just in Lighting –*

An interesting talk by the Managing Director of Daimler Benz - a bit mind-blowing really. There have always been the same 3 constants... Death, Taxes and CHANGE! Our competitors are no longer other car companies but Tesla (obvious), Google, Apple, Amazon 'et al' ... Software will disrupt most traditional industries in the next 5-10 years. An interesting concept of what could lay ahead.

- Uber is just a software tool, they don't own any cars, and are now the biggest taxi company in the world
- Airbnb is now the biggest hotel company in the world, although they don't own any properties.
- Artificial Intelligence: Computers become exponentially better in understanding the world. This year, a computer beat the best Go player in the world, 10 years earlier than expected.
- In the US, young lawyers already don't get jobs. Because of IBM Watson, you can get legal advice (so far for more or less basic stuff) within seconds, with 90% accuracy compared with 70% accuracy when done by humans. So if you study law, stop immediately. There will be 90% less lawyers in the future, only specialists will remain. Watson already helps nurses diagnosing cancer, 4 times more accurate than human nurses. Facebook now has a pattern recognition software that can recognize faces better than humans. In 2030, computers will become more intelligent than humans.
- Autonomous cars: In 2018 the first self driving cars will appear for the public. Around 2020, the complete industry will start to be disrupted. You don't want to own a car anymore. You will call a car with your phone, it will show up at your location and drive you to your destination. You will not need to park it, you only pay for the driven distance and can be productive while driving. Our kids will never get a driver's license and will never own a car. It will change the cities, because we will need 90-95% less cars for that. We can transform former parking spaces into parks. 1.2 million people die each year in car accidents worldwide. We now have one accident every 60,000 miles (100,000 km), with autonomous driving that will drop to one accident in 6 million miles (10 million km). That will save a million lives each year.
- Most car companies will probably become bankrupt. Traditional car companies try the evolutionary approach and just build a better car, while tech companies (Tesla, Apple, Google) will do the revolutionary approach and build a computer on wheels. Many engineers from Volkswagen and Audi; are completely terrified of Tesla.
- Insurance companies will have massive trouble because without accidents, the insurance will become 100x cheaper. Their car insurance business model will disappear.
- Real estate will change. Because if you can work while you commute, people will move further away to live in a more beautiful neighborhood.
- Electric cars will become mainstream about 2020. Cities will be less noisy because all new cars will run on electricity. Electricity will become incredibly cheap and clean: Solar production has been on an exponential curve for 30 years, but you can now see the burgeoning impact.
- Last year, more solar energy was installed worldwide than fossil. Energy companies are desperately trying to limit access to the grid to prevent competition from home solar installations, but that can't last. Technology will take care of that strategy.
- Bitcoin may even become the default reserve currency ... Of the world!



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- With cheap electricity comes cheap and abundant water. Desalination of salt water now only needs 2kWh per cubic meter (@ 0.25 cents). We don't have scarce water in most places, we only have scarce drinking water. Imagine what will be possible if anyone can have as much clean water as he wants, for nearly no cost.
- Health: The Tricorder X price will be announced this year There are companies who will build a medical device (called the "Tricorder" from Star Trek) that works with your phone, which takes your retina scan, your blood sample and you breath into it. It then analyses 54 biomarkers that will identify nearly any disease. It will be cheap, so in a few years everyone on this planet will have access to world class medical analysis, nearly for free. Goodbye, medica establishment.
- 3D printing: The price of the cheapest 3D printer came down from \$18,000 to \$400 within 10 years. In the same time, it became 100 times faster. All major shoe companies have already started 3D printing shoes. Some spare airplane parts are already 3D printed in remote airports. The space station now has a printer that eliminates the need for the large amount of spare parts they used to have in the past. At the end of this year, new smart phones will have 3D scanning possibilities. You can then 3D scan your feet and print your perfect shoe at home. In China, they already 3D printed and built a complete 6-storey office building. By 2027, 10% of everything that's being produced will be 3D printed.
- Business opportunities: If you think of a niche you want to go in, ask yourself: "in the future, do you think we will have that?" and if the answer is yes, how can you make that happen sooner? If it doesn't work with your phone, forget the idea. And any idea designed for success in the 20th century is doomed to failure in the 21st century.
- Work: 70-80% of jobs will disappear in the next 20 years. There will be a lot of new jobs, but it is not clear if there will be enough new jobs in such a small time.
- Agriculture: There will be a \$100 agricultural robot in the future. Farmers in 3rd world countries can then become managers of their field instead of working all day on their fields. Aeroponics will need much less water. The first Petri dish produced veal, is now available and will be cheaper than cow produced veal in 2018. Right now, 30% of all agricultural surfaces is used for cows. Imagine if we don't need that space anymore. There are several startups who will bring insect protein to the market shortly. It contains more protein than meat. It will be labelled as "alternative protein source" (because most people still reject the idea of eating insects).
- There is an app called "moodies" which can already tell in which mood you're in. By 2020 there will be apps that can tell by your facial expressions, if you are lying. Imagine a political debate where it's being displayed when they're telling the truth and when they're not,
- Longevity: Right now, the average life span increases by 3 months per year. Four years ago, the life span used to be 79 years, now it's 80 years. The increase itself is increasing and by 2036, there will be more than one-year increase per year. So we all might live for a long long time, probably way more than 100.
- Education: The cheapest smart phones are already at \$10 in Africa and Asia. By 2020, 70% of all humans will own a smart phone. That means, everyone has the same access to world class education. Every child can use Khan academy for everything a child needs to learn at school in First World countries. There have already been releases of software in Indonesia and soon there will be releases in Arabic, Swahili and Chinese this summer. I can see enormous potential if we give the English app for free, so that children in Africa and everywhere else can become fluent in English and that could happen within half a year.



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