

EnergyWatch



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<http://energywatchnews.com/>

It's a whole new world out there, with new playing fields, rules, and players. Your choice is to either learn this new game or continue to be the very best player in a game that is no longer being played.

Larry Wilson

In times of change, learners inherit the earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists.

Eric Hoffer

Something to Think About

AI & the Annual SWOT Analysis - Time to Adjust to the New Normal - The SWOT (Strengths /



Weaknesses / Opportunities / Threats) Analysis is an important tool in the strategic marketing planning process and is taught in every graduate and undergraduate business course in academia. My view is that this should be an annual event, to spend the time during the planning process to ask your key people the select critical questions in each quadrant because it starts us to gather the most viable internal and external information to plan and run a successful business. *How you gather, manage, and use information will determine whether you win or lose.*

Bill Gates.

Crucial: today, you win or lose if you do not understand and use artificial intelligence. Let me explain...

The lighting industry has been my life and something happened that just does not happen ever in any industry. Seven major lighting categories will soon be one: LED! Every lighting source out there will be replaced by LED over the next 5 to 10 years. Everything! That means every Taco Bell, every Home Depot, every Olive Garden, every Walmart, every home, office, hotel, hospital, streetlight, supermarket, et al will be upgraded to Intelligent Lighting and to all the advanced technologies that connect everything we do. When your customers learns about the advantages and benefits of the new



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technologies, and there will be many, will they buy them from you? Why not? What are you telling them? Where do you want to dominate? Not just in a leadership position but in a dominant leadership position....

Well, in my travels in the lighting world, I offer a shortcut guideline to effectively conduct a SWOT Analysis that could help us maneuver through the intelligent lighting combat zone and be on the winning side. This is directed to your Sales Force. What happens here at the sales level is where we keep score.....face-to-face with the major income generating source of any business, the customer. Important then that we understand Strengths / Weaknesses / Opportunities / Threats (SWOT) at the Sales level.

SWOT Categories

1. Strengths – INTERNAL – inside your business

- **What are your core competencies?** Those unique strengths, embedded deep within your business that allow you to differentiate your offerings so profoundly that they create higher value for your customers than anyone else. Identify them... Can you identify SUSTAINABLE COMPETITIVE ADVANTAGES, those not easily duplicated by your competitors.
- **What's motivating your customers to buy from you?** The focus of all your marketing activities is the customer. When they understand the advantages and benefits of the new technologies, will they buy them from you? Why?
- **What are you doing to your existing competitors that's working for you?** Not just in a leadership position but in a dominant leadership position...

2. Weaknesses – INTERNAL - – inside your business

- **What weaknesses are holding you back?** Can they be corrected / overcome? If they cannot, what must you do to compensate?
- **Identify and address internal limitations.**
- **What are your existing competitors doing that's working against you?** Your first responsibility is the day-to-day operations of your business to win in a very competitive market. What's holding you back?

3. Opportunities – EXTERNAL -what's happening g in the marketplace

- **What business opportunities tie right into your strengths?** Short-term and long-term?
- **What are the key technologies shaping your industry?** Every lighting source out there will be replaced over the next 5 to 10 years. Everything! Where do you want to dominate?

4. Threats - EXTERNAL -what's happening in the marketplace

- **What changes in the marketplace offer the most significant challenges?**
- **Who are your major competitors?**
- **Who are the new entrants in the industry that are a key threat?**



Artificial Intelligence – Is AI an integral part of your strategic thinking? Why not?

It's important to recognize that AI technology will be, if not already, the most significant development to aid businesses to solve problems and make sound decisions. In fact, my students, future decision-makers, will absolutely need to become proficient in using such tools as they enter the workforce after graduation. Fact: 64% of marketers are more likely to hire a new employee with AI certification compared to someone without? You have to use it....you have to get better at using it....you must be exceptionally skilled at using it. It's the most powerful search engine ever developed. If there are or will be problems with AI, let them figured it out. Progress can be painful. In today's hyper-connected world, we have at our finger-tips the computer, the internet, social media, cell phones, email, text messaging, now AI, ChatGpt, Claude, on and on and on. (I'm not going to explain ChatGPT or Claude....if you don't know, you should.) Sometimes taking advantage of opportunities is a choice. AI is not going away. So where do you want to address AI: under opportunity or under threat?

Guidelines for Conducting a SWOT Analysis for a Sales Team

1. Individual input, everyone participates:

- Include all levels of sales responsibility
- For small businesses: conduct at a national level
- For multinational businesses: conduct at local sales level (Branch / Region / District...)
- Email input to the Team Leader - five or six points for each SWOT category

2. Assign a Team Leader that is AI-proficient.....AI Certified if possible.

- Responsible for gathering input from all participants
- Prompts AI tools (e.g., ChatGPT or Claude) to consolidate and prioritize the input
 - Highlight most important points for each SWOT category
 - Remove duplicates

3. Final Document - two-page report (it's really that simple)

- Page 1: Strengths & Weaknesses (Internal)
- Page 2: Opportunities & Threats (External)

4. Team Review:

- Conduct a meeting with all participants (virtual is fine)
- Review the consolidated report
- Reach consensus on the final SWOT analysis

5. Implementation:

- Use the finalized SWOT analysis for strategic planning and decision-making

*If the rate of change on the outside is greater than the rate of change on the inside,
the end is near.*

Jack Welch



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National LED EnergyWatch...

1. ***Lighting Rebates: Bonus Programs Present Big Opportunity*** - As we approach the end of 2024, businesses have a prime opportunity to save on lighting upgrades through limited-time bonus rebate programs. Across the US, a record number of utilities are boosting their incentives, offering special year-end bonuses for commercial lighting projects. These programs are designed to push facilities to upgrade before the year ends, making now the perfect time to lock in increased savings for a wide range of lighting improvements. Bonus programs offer additional financial incentives on top of existing rebate measures, but only for a limited time. The bonus amount varies by program and utility, with some offering an extra 10% - 20%, while others can double the original rebate amount. [Lighting Rebates: Bonus Programs Present Big Opportunity \(briteswitch.com\)](https://www.briteswitch.com)
2. ***Changes are Coming – Lighting Legislation Bans*** - Between a federal law phasing out CFLs by 2025 and a flurry of new state restrictions, it's clear that fluorescent lamps are on the way out. Energy-efficient, environmentally-friendly LEDs are the lamps of the future. And the best time to switch is now. Unlike the Federal EISA legislation that went into full effect last year, which banned the sale of inefficient general service lamps (like A19s), the fluorescent lamp bans are issued by individual states. See the state-by-state legislation bans by NAED code at: [Switch Now Legislation Changes | LEDVANCE \(ledvance.com\)](https://www.ledvance.com)
3. ***tED magazine's Digital Edition September 2024*** - The 2024 *tED Lighting Trends Survey* finds optimism in a cooling economy. [LIGHTING LINE-UP /THE SHIFT CONTINUES](#)
4. ***Smart Buildings are Reducing Energy Costs*** - Integrated technology can drastically improve an office's energy efficiency. When areas of the office aren't used from 9 a.m. to 5 p.m. every day, occupancy sensors conserve energy by automatically adjusting lighting, heating and cooling systems. Integrated technology also aids in seamless collaboration with colleagues at offsite locations. Fast Internet connections and integrated audiovisual systems help make virtual meetings as productive as in-person gatherings. Ensuring any problems are fixed before they cause a disaster, intelligent maintenance systems monitor the building's performance and can alert management to opportunities for preventive maintenance. Smart buildings benefit the bottom line through energy savings and preventive maintenance, while promoting collaboration between onsite and offsite teams. [11 Office Design Trends For 2025 - Facility Executive](#)
5. ***Tech Giants Make Nuclear Investments to Keep Up with AI*** - Amazon on Wednesday said that it was investing in small nuclear reactors, coming just two days after a similar announcement by Google, as both tech giants seek new sources of carbon-free electricity to meet surging demand from data centers and artificial intelligence. The plans come as the owner of the shuttered Three Mile Island nuclear power plant said last month it plans to restart the reactor so tech giant Microsoft can buy the power to supply its data centers. All three companies have been investing in solar and wind technologies, which make electricity without producing greenhouse gas emissions. Now they say they need to go further in the search for clean electricity to meet both demand and their own commitments to cut emissions. The International Energy Agency forecasts that data centers' total electricity consumption could reach more than 1,000 terawatt hours in 2026, more than doubling from 2022. [Tech Giants Make Nuclear Investments to Keep Up With AI – electrifiED \(tedelectrified.com\)](https://www.tedelectrified.com)



6. ***Using LED Lights for Seed Germination*** - Opel Growers installed LED grow lights in its germination chamber and tissue culture acclimation room to increase the number of useable, uniform plants that could be transplanted. Opel Growers in Hudsonville, Mich., specializes in the production of over 1,000 perennial varieties along with woody ornamentals, annuals, ornamental grasses, succulents, and herbs. Its finished crops are marketed in a variety of container sizes to independent garden centers and landscaper wholesalers. The benefits of using the LED grow lights in the germination room include eliminating early stretch, more consistent germination, and shorter germination times. https://www.ledinside.com/news/2024/10/2024_10_16_04
7. ***Superior LED Technologies Unveils Industry's Most Efficient Lights, Setting a New Standard*** - Superior LED Technologies announced the launch and availability of its new Peak PRO line of full spectrum LED lighting technology for cannabis flower, which features the highest efficiency and performance of any other LED lights in the industry. This innovation sets a new standard for energy savings, sustainability and performance in cannabis LED grow lighting. Available in 680W, 840W and 1050W configurations, the new Superior LED Technologies Peak PRO line promises up to a 12% bump in performance over existing LED technologies in the industry, along with an incredible 90% increase in performance over traditional HPS lights (based on the 1050W model). https://www.ledinside.com/news/2024/10/2024_10_23_02
8. ***New Advancements in Greenhouse Lighting Mean Increased Flexibility*** - LED lighting has come quite a long way in the past few years. What began as a simple energy-efficient replacement for high-pressure sodium (HPS) legacy systems has become a customizable solution to better yields, faster cycle times, and even higher energy efficiency. What's coming soon? Expect more integration between the greenhouse lighting controllers and sensors, steered in real time. Combining dimmable, spectrum-controllable LEDs with sensors in the crops and smart controllers that integrate the sensor data, weather forecasts, energy prices, and more will yield further savings and provide an even more precision-managed crop. https://www.ledinside.com/news/2024/10/2024_10_22_03
9. **RESEARCH: *Tracking the Sun by Berkeley Lab*** - Berkeley Lab's annual *Tracking the Sun* report describes trends among grid-connected, distributed solar photovoltaic (PV) and paired PV+storage systems in the United States. For the purpose of this report, distributed solar includes residential systems, roof-mounted non-residential systems, and ground-mounted systems up to 5 MW-AC. Ground-mounted systems larger than 5 MW-AC are covered in Berkeley Lab's companion annual report, *Utility-Scale Solar*. The latest edition of the report is based on 3.7 million systems installed through year-end 2023, representing roughly 80% of systems installed to date. [Tracking the Sun | Energy Markets & Policy \(lbl.gov\)](https://www.lbl.gov/Tracking-the-Sun-Energy-Markets-Policy)
10. ***Acuity Brands, Inc. (NYSE: AYI) launched today, Nightingale™*** - A new brand of innovative, patient-centric lighting solutions that focuses on the patient experience while balancing the functional needs of professional caregivers. Drawing on decades of lighting expertise, Nightingale solutions combine the best of design and illumination engineering to provide a more comforting and reassuring patient experience that emphasizes wellness. The investment in Nightingale reinforces Acuity's focus on growth in key vertical markets such as healthcare. https://www.ledinside.com/news/2024/10/2024_10_17_04



- 11. *Laser-Based Stage and Architectural Lights Bring New Capabilities and Benefits*** - New Laser Illuminated Lighting Instruments (LILIs) are revolutionizing intelligent lighting by giving fresh artistic choices and improved operating parameters. Laser illuminated lighting offers numerous advantages, including brighter, laser-like beam effects, smaller beam and spot diameters, and an increased color gamut. LILI light engines have lifetimes measured in tens of thousands of hours, provide white points unattainable with other lamps, and deliver uniform illumination with little color change over time. Like the addition of LEDs to lighting, an improved set of benefits from LILIs are so great, there is no stopping the changes they will bring to the lighting industry. [Laser-Based Stage And Architectural Lights Bring New Capabilities And Benefits | Live Design Online](#)
- 12. *Lighting Controls: Achieving Energy Efficiency and Visual Comfort by Barry Reeb*** - Lighting is often overlooked as merely a functional fixture in building design. However, it plays a critical role in shaping both the ambiance and comfort of spaces we live and work in every day. Over the last few decades, the adoption of advanced lighting control strategies has grown to be a powerful tool for both lowering energy consumption and increasing the well-being of its inhabitants. The key is in the design. There is a fine balance and intersection between lighting controls' mandate to lower a building's overall energy consumption and enhance the work/life environment through visual comfort. Lighting controls that empower people to personalize their lighting experience contribute to overall health and well-being. [Lighting Controls: Achieving Energy Efficiency and Visual Comfort - Facilities Management Insights](#)
- 13. *The Lagging Transition to LEDs in Schools – Part 1 of 3 by Jessica Kelly, Andrea Wilkerson, Dan Blitzer*** - This article series looks at the current situation from the perspective of school facility personnel. Part 1 covers the transition to LED technology. Part 2 will identify changes coming to the lighting market, and Part 3 will offer thoughts for practical paths forward for LED systems in schools. Although commercial LED lamps and luminaires have been available for more than a decade, educational facilities have been slow to adopt LED technology. As of 2020, 78% of the lighting in U.S. educational buildings was still fluorescent, according to the most recent estimates from the U.S. Department of Energy (DOE) Solid-State Lighting program in the “2020 U.S. Lighting Market Characterization” report. The general feeling of, “We have fluorescent, we’re fine,” may change as the situation evolves. Stay tuned for Part 2 of this series where we discuss these upcoming changes to the lighting market regarding fluorescent availability and utility rebates. [The Lagging Transition to LEDs in Schools – Part 1 of 3 | EC&M](#)
- 14. *Nature's Miracle Holding Inc. Launches Wholly Owned Subsidiary, NM Rebate Inc. to Complement Core LED Lighting Segment*** - Due to the Inflation Reduction Act, many utility companies offer rebates to commercial customers who upgrade to more energy efficient lighting, such as LED lights. These rebates can help offset the initial cost of installation and future electric bills. They can also apply to new construction and upgrades, and even LED replacements. NM Rebate is a complementary business to Nature's Miracle's core business as a distributor of LED lights to the commercial vertical farming space. Within the structure of the rebate program, the Company partners with financial institutions to provide rebate financing for commercial indoor growers across the country. https://www.ledinside.com/news/2024/10/2024_10_25_04



Global LED EnergyWatch...

15. *Pack River Farm Selects Sollum's Dynamic LED Lighting for Advanced Tomato Cultivation* -

Sollum Technologies, Montréal, Québec, Canada, announced that Pack River Farm, in Northern Idaho, a certified organic vegetable and microgreen farm, chose Sollum's state-of-the-art LED lighting solution to enhance its tomato, lettuce and microgreens production. Pack River Farm distributes its organic produce to local restaurants, grocery stores, and directly to consumers. Pack River Farm's decision to partner with Sollum was driven by the exceptional versatility of Sollum's dynamic spectrum lighting and the advanced zone control features. These capabilities empower growers to tailor their lighting to each crop and quickly adapt to changing crop demands, ensuring optimal growth conditions at all times. [Pack River Farm selects Sollum's dynamic LED lighting for advanced tomato cultivation - LEDinside](#)

16. *Samsung Shifts Focus: Exit from LED Business to Prioritize Semiconductor* - Samsung's LED business encompassed three primary areas: LED lighting for illumination devices, TVs, and automobiles. Initially, Samsung will halt the production of LED chips for illumination devices and gradually wind down the lighting business within its CSS division by the first half of 2026. Subsequently, in the second half of the same year, the TV LED lighting business will also be discontinued. Ultimately, Samsung aims to fully exit the automotive LED lighting sector by the end of 2030. These measures signify Samsung's steadfast commitment to executing its business restructuring strategy, redirecting resources from less profitable areas towards more growth-oriented directions. Samsung's gradual exit from the LED business and resource reallocation to the semiconductor sector represent significant strategic adjustments in response to market challenges and business development needs. With the continuous rise of China's LED market and the ongoing transformations in the global technology industry, we can anticipate that more companies will undertake similar strategic adjustments to adapt to market changes and advancements. [Samsung Shifts Focus: Exit from LED Business to Prioritize Semiconductor - Semicon electronics](#)

17. *Rice Grown in Xinjiang Desert* - In an agricultural industrial farm in Hotan, Xinjiang Uyghur Autonomous Region, rice is thriving on three-tiered cultivation racks in a plant factory, thanks to



vertical, multi-layered space utilization and soilless culture technology, which significantly boosts yield per unit area. The seedling period for the new variety is 15 days, and after transplanting the rice seedlings into the vertical cultivation slots, the entire growth cycle only takes 60 days. Inside the plant factory, numerous LED lights help with rapid rice breeding. In addition to rice, they also grow corn, tomatoes, ginseng fruit, and other

different crops and are continuing to explore the key technologies for rapid breeding of staple crops such as soybeans, corn, and wheat, as well as rapeseed, cotton, and alfalfa in the desert greenhouse.

[Rice grown in Xinjiang desert - LEDinside](#)



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LED Technology Watch...

- 17. Amerlux Finch Collection** - A marvel of engineering, this masterfully crafted 1.25" surface mount fixture emits more than 1000 lumens, surpassing competitors with a single gentle beam of discreet quality illumination. There's a reason why the upcoming Finch, named after its small 1.25-inch aperture, was selected as a "Top 10 must-see" lighting solution at this year's LightFair. It's the same reason why visitors at Amerlux's booth were awed when they looked up at the pipe organ like display of fixtures coming straight down from the ceiling, then bending inward, illuminating a wall display. The quality was easy, even impressive, to see. When architects held Finch, the craftsmanship of the indoor and outdoor extruded aluminum fixture was more evident to feel. The elusive beauty of Finch includes its capacity to generate a focused beam of light without any glare. This essential design feature ensures the visual comfort of individuals, resulting in a cleaner and more visually appealing ceiling design. Finch's adaptability goes beyond meeting diverse lighting needs. It offers customizable features such as direct/indirect lighting, wall-mounted options and round/square downlights, providing a comprehensive lighting solution for any environment.

 **FINCH**
collection



[Amerlux DeltaDigest Finch rev.pdf](#)

- 18. Signify Small Track Lighting** - Lightolier 3D Crown Series Small Track, from Signify's Genlyte Solutions business was developed for retail, gallery and restaurant applications. The luminaire offers spec-grade performance, with interchangeable optics and accessory compatibility; a sleek, compact design (2-in. aperture) that's easy to specify; excellent lumen maintenance for more consistency over time; sustainable 3D printing production; and eight different color options (with the possibility to mix and match the rim colors, too) to suit the interior design. The fixtures are made from 55% recyclable polycarbonate and are designed to support circularity at end of life. The Lightolier 3D Crown Series Small Track is scheduled for commercial release on Sept. 27. [3D printed lighting products | Lightolier | Signify](#)



- 19. Electrical Wholesaling's September 2024 Top 10 Product Picks** - Congratulations to the marketing and product development teams from Earthtronics, Electri-Flex, FLIR, Keystone Technologies, KNIPEX, Legrand, Lucent Lighting, Milwaukee Tool and Signify for having their products selected in this month's product picks. Interested in having one of your company's new products selected as an *EW* Top Product Pick? Send a brief description and high-resolution photo to Jim Lucy, editor-in-chief, of *Electrical Wholesaling* magazine at jlucy@endeavorb2b.com. [Electrical Wholesaling's September 2024 Top 10 Product Picks | Electrical Wholesaling \(ewweb.com\)](#)



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20. Stay Connected with STARFISH® by SATCO - Introducing SATCO|NUVO's latest additions to our



STARFISH line of smart home products. Control everything remotely from lighting, security, and outdoor devices, all from the STARFISH app. Our new STARFISH cameras are also compatible with Google Home, Siri, SmartThings, and Alexa, including the Alexa Show. A 32GB SD card is included with each camera and best of all, no subscription fees, ever. Control its power status remotely via the STARFISH app, allowing you to schedule, turn devices on or off, and more.

- **Video Doorbell** - receive motion detection alerts directly to your mobile device.
- **Indoor Camera** - review motion-activated events from anywhere and engage in conversations directly through the camera.
- **Indoor Pan & Tilt Camera** - stream live and use the two-way talk feature from anywhere.
- **Outdoor Pan & Tilt Camera** - monitor activity in real-time or review past events.

<https://satcostarfish.com/>

<https://satcostarfish.com/collections/cameras>

<https://satcostarfish.com/products/starfish-indoor-smart-pan-tilt-camera>

<https://satcostarfish.com/products/starfish-smart-doorbell-security-camera>

21. LED Bollards with Selectable Wattages by naturaLED -

naturaLED® has LED Bollards with customizable wattage capabilities. 8" diameter for easy retrofits and 4 configurations. Perfect for your area lighting, pathway, or perimeter lighting projects! BLD bright pathway lighting is important for the safety of pedestrian foot traffic. Ensuring that sidewalks and pavement are well-lit reduces the risk of people tripping and falling. The superior quality of our DLC Bollard light fixture provides glare-free lighting that replaces 100-watt metal halide fixtures and produces 2000 lumens. [led bollards – naturaLED](#) Watch the Frank Grobmeier video: [Discover the Difference between Pathway & Bollards \(youtube.com\)](#)



22. Leviton LED Baffle Slim Downlights with Selectable CCT - Leviton Baffle Slim Downlights are



designed for a wide range of applications: Single- and Multi-Family-Residential, Hospitality, and Light Commercial spaces. A direct mount downlighting solution that does not require an existing housing or junction box that can be used in Retrofit, Remodel or New Construction applications. The Baffle Slim Downlights are ideal for remodeling or new construction. existing housing or junction box. The Regressed Lens with Baffle and field selectable color temperature (CCT) help reduce glare and improve visual comfort. [Baffle Slim Downlights \(leviton.com\)](#)



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Monthly Special Feature...*Innovative Types of Lighting System for Smart Homes in*

2024 by Sam Allcock - In the ever-evolving landscape of smart home technology, lighting systems have emerged as a cornerstone of innovation. As we step into 2024, the types of lighting systems available for smart homes have expanded dramatically, offering homeowners unprecedented control, efficiency, and ambiance. This article delves into the cutting-edge types of lighting system that are transforming our living spaces into intelligent, responsive environments.

The Evolution of Smart Home Lighting

Before we explore the latest innovations, it's essential to understand how far we've come. Traditional lighting systems were simple: a bulb, a switch, and perhaps a dimmer. Today's smart lighting solutions are a far cry from these basic setups. Modern types of lighting system integrate seamlessly with our digital lives, responding to voice commands, adjusting to our routines, and even contributing to our overall well-being.

Types of Lighting System: A Comprehensive Overview

Let's dive into the various types of lighting system that are making waves in the smart home industry this year:

1. Adaptive Circadian Lighting Systems

One of the most exciting developments in smart home lighting is the advent of adaptive circadian lighting. These systems mimic the natural progression of sunlight throughout the day, adjusting color temperature and intensity to support our body's natural rhythms.

How it works:

- Morning: Cool, energizing light to help you wake up
- Midday: Bright, neutral light for maximum productivity
- Evening: Warm, soft light to prepare for rest

Benefits:

- Improved sleep quality
- Enhanced mood and energy levels
- Reduced eye strain

2. Gesture-Controlled Lighting

Among the different types of lighting system, gesture control stands out for its futuristic appeal. This technology allows users to control their lights with simple hand movements, eliminating the need for physical switches or even voice commands.

Key features:

- Intuitive gestures for on/off, dimming, and color changes
- Customizable gesture settings
- Integration with other smart home devices

3. Li-Fi (Light Fidelity) Systems

Li-Fi represents a groundbreaking convergence of lighting and data transmission. This technology uses light waves to transmit data, offering an alternative to traditional Wi-Fi in certain applications.

Advantages:

- Faster data transmission speeds
- Enhanced security (light doesn't penetrate walls)
- Reduced electromagnetic interference

While still in its early stages, Li-Fi is poised to become a game-changer in how we think about types of lighting system and data infrastructure in smart homes.



4. Bioadaptive Lighting

Bioadaptive lighting takes personalization to the next level. These systems use sensors to monitor individual occupants' physiological states and adjust lighting accordingly.

Applications:

- Stress reduction through calming light patterns
- Concentration enhancement in work areas
- Mood elevation in living spaces

5. Smart Skylights and Light Tubes

Natural light plays a crucial role in our well-being, and smart skylights are bringing this element into the fold of controllable lighting systems. These advanced fixtures can adjust their opacity, filter UV rays, and even display artificial sky scenes.

Features:

- Automated adjustment based on weather conditions
- Integration with home climate control systems
- Customizable "sky" displays for windowless rooms

6. Holographic Lighting Displays

Pushing the boundaries of what we consider lighting, holographic displays combine illumination with information and entertainment. These systems can project 3D images, create virtual windows, or display useful information right in your living space.

Potential uses:

- Virtual art galleries
- Immersive gaming experiences
- Dynamic workspace displays

7. Micro-LED Lighting Systems

Micro-LED technology is revolutionizing the way we think about display and lighting. These tiny LEDs offer unprecedented control over light output, allowing for incredibly precise and efficient lighting designs.

Benefits:

- Ultra-high resolution light patterns
- Improved energy efficiency
- Longer lifespan compared to traditional LEDs

8. AI-Powered Predictive Lighting

Artificial Intelligence is making its mark on types of lighting system by learning and predicting user preferences and behaviors. These systems can anticipate lighting needs based on historical data and real-time inputs.....

Conclusion

The types of lighting system available for smart homes in 2024 represent a quantum leap forward in how we illuminate and interact with our living spaces. From circadian rhythms to data transmission, from energy efficiency to personalized well-being, smart lighting is touching every aspect of home life.

As these technologies continue to evolve, we can expect even greater integration between lighting and other smart home systems, creating living environments that are not just illuminated, but truly intelligent. Whether you're building a new smart home or upgrading an existing space, considering these innovative types of lighting system is a bright idea that can transform your daily life. The future of home lighting is here, and it's smarter, more efficient, and more personalized than ever before. As we continue to push the boundaries of what's possible, one thing is clear: the humble light bulb has come a long way, and its journey is far from over. [Innovative Types of Lighting System for Smart Homes in 2024 | FeastMagazine \(feast-magazine.co.uk\)](https://www.feastmagazine.co.uk)

