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2020 BEST PRACTICES AWARD

Helvar

2020 EUROPEAN ARTIFICIAL INTELLIGENCE-POWERED LIGHTING CONTROLS COMPANY OF THE YEAR AWARD

Contents

Background and Company Performance

Industry Challenges

Artificial intelligence (AI) in the lighting controls market continues to experience steady growth due to demand for energy-saving solutions, government facilitation of AI development, and accelerating penetration of transformative intelligent lighting technologies in commercial and residential sectors. Specifically, governments across both developed and developing economies adopt regulations on the more active application of energy-efficient products like intelligent lighting controls. They concentrate on implementing more comprehensive measures to maintain compliance with higher sustainability norms and standards to ensure the transition towards a more practical application of intelligent lighting controls. Emerging AI technology is a key element that fuels innovation on the supply side, while concomitantly ensuring value-based outcomes for intelligent lighting control on the customer's side.

An increasing number of companies have employed smart lighting controls to minimize energy consumption while also reducing adverse environmental impacts of their business activities. In this regard, there are a growing number of smart city projects across different countries, and more active adoption of intelligent lighting systems in smart city applications like smart traffic lights and electric vehicle charging stations. Overall, there is also a surge in awareness among consumers as to the effectiveness of intelligent lighting controls in managing both electricity consumption and costs.

Nevertheless, several significant hurdles have encumbered industry players from increasing market share in the intelligent lighting controls industry, particularly manufacturing and installation costs. Intelligent lighting controls manufacturing can be expensive as it requires several extra components, such as light-emitting diodes (LEDs), smart switches, sensors, and controls; all of which increase the overall manufacturing costs. Moreover, current installation costs and the payback period of LED light systems hinder active market growth. However, the forecasts expect the introduction of low-price sensors and decreasing prices for LED products to drive down installation costs in the medium term.

Visionary Innovation and Performance/Customer Impact

Excelling in the Artificial Intelligence-powered Lighting Controls Industry

With a rich history of innovation and leadership dating back to 1921, Helvar manufactures industry-leading, intelligent lighting control solutions and luminaire components that enable its customers to save energy and improve people's comfort. Helvar's cutting-edge ActiveAhead solution enables the company to continuously outpace its competitors while also maintaining a superior reputation among its customers in real estate, education, healthcare, and a number of other verticals.

To aid in its success, Helvar has been at the forefront utilizing new technologies. In 2013, Helvar introduced artificial intelligence (AI) to its stand-alone solutions, first Active and then Active+. In 2015 and 2016 Helvar introduced Bluetooth Mesh technology to its connected lighting control solution, ActiveAhead. This allowed Helvar to build an advanced AI-based algorithm based on learning's gathered and its extensive knowledge in lighting controls. In

2020, ActiveAhead evolved and Helvar released the second generation of the solution to continue the journey. The second generation ActiveAhead solution can be connected to a cloud service, through which building owners or facility managers can optimize costs involved in monitoring and maintenance of the building.

Frost & Sullivan is quite impressed with how Helvar exceeds its customers' needs and expectations; in fact, many clients proudly testify to the value, best-in-class performance, and positive business impact that the ActiveAhead solution delivers:

> *"The ActiveAhead luminaires adjust as slowly or as fast as needed, so the human eye does not even notice these subtle changes – it always feels like the same level of lighting. Our people have been very happy with the way the lighting level adjusts so smoothly, and when they've been told the system is adjusting itself to daylight too, it has delighted them even more."*

> —Director of Facilities Services, YIT

> *"After the lights are on and people start using the premises, ActiveAhead starts learning and adapting the lighting levels according to human behavior. One thing I like about ActiveAhead control is that it is based on Bluetooth mesh, so it is an open system that could be included with several other systems and controls using the same mesh network. We have received good feedback from the people who work here, and it is also believed that proper lighting has a direct impact on wellbeing, which is very important to us."*

> —Support and Development Director, Ramboll Finland

The Cornerstone of Helvar's Success: ActiveAhead

Helvar's ActiveAhead solution boasts self-learning capabilities, which provides unparalleled efficiency and reliability in setup and operations. By continually learning and providing valuable insights, this solution meets and exceeds the needs of customers across different industries worldwide. Specifically, the ActiveAhead solution has several advantages over its competitors:

Enhanced comfort: Customers can install ActiveAhead's luminaires to their intended position and switch on the mains very quickly. They do not have to ensure control wiring, programming, or configuration and can customize and group luminaires via the ActiveAhead mobile application. At the same time, they can adjust all the light settings to their own needs, leading to better productivity and relaxation.

Superior functionality and intelligence: The ActiveAhead solution can learn patterns right after its launch, depending on the actual space usage. Its wireless networked nodes apply a smart algorithm to best understand the usage of space and respond to the amount of light in the area. In turn, the luminaires collect data from their sensors while communicating with each other and learning the patterns of space usage. As a result, customers do not have to conduct manual reconfiguration because the system adjusts lighting automatically.

Improved energy efficiency: By dimming the lights in a predictive and smart manner, the ActiveAhead solution delivers substantial energy savings to customers.

Use Cases Confirming Unrivalled-performance and Ultimate Reliability

A few recent case studies offer strong evidence of the high quality and efficiency of Helvar's ActiveAhead solution:[1]

Ramboll

In 2019, Helvar helped Ramboll, a global engineering, architecture, and consultancy company to optimize the lighting usage and lower energy consumption at its office building in Finland. Specifically, Ramboll needed a solution to ensure smart lighting-control while also collecting occupancy data for all the spaces at the head office. In addition, the company was seeking an easy-to-install solution that also required as little configuration as possible. Thus, they deployed Helvar's ActiveAhead solution comprising of 2,800 ActiveAhead wireless luminaires, Imagine DALI routers for wired-lighting controls, and remote digital services at its three buildings and six-floor parking garage. As a result, the client was able to adjust luminaires quickly, according to occupancy levels, and optimize the usage of the space within the building. Moreover, Helvar's solution also enabled daylight to filter through, helping Ramboll to save energy on sunny days.

YIT Finland

In 2019, Helvar helped YIT, the largest Finnish construction company, to reduce energy consumption and achieve better lighting usage at its headquarters in Helsinki, Finland. Namely, YIT Finland needed a solution to ensure better illumination, control, and energy efficiency at its newly renovated building. Moreover, the client was looking for a technology that was easy to install, could adjust lighting automatically as employees move within the building, and would also ensure individual control over lighting functionality. They chose Helvar's ActiveAhead solution due to its self-learning system that delivered on each of these important needs.

Conclusion

Frost & Sullivan's independent analysis of the lighting controls market shows the ActiveAhead intelligent wireless lighting solution to be unparalleled in the industry. In short, Helvar's solution delivers best-in-class energy efficiency, comfort, and cost savings to its customers. The company has built a sterling reputation for product quality but also as a trusted partner to various technology companies, ultimately helping its customers to become more sustainable and achieve better work environments.

For its strong commitment to developing innovative solutions, Helvar is recognized with Frost & Sullivan's 2020 European Company of the Year Award in the artificial intelligence-powered lighting controls market.

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[1] https://helvar.com/case-studies/, accessed June 2020

Significance of Company of the Year

To receive the Company of the Year Award (i.e., to be recognized as a leader not only in your industry, but among non-industry peers) requires a company to demonstrate excellence in growth, innovation, and leadership. This excellence typically translates into superior performance in three key areas—demand generation, brand development, and competitive positioning—that serve as the foundation of a company's future success and prepare it to deliver on the 2 factors that define the Company of the Year Award: Visionary Innovation and Performance, and Customer Impact).

Understanding Company of the Year

Driving demand, brand strength, and competitive differentiation all play critical roles in delivering unique value to customers. This three-fold focus, however, must ideally be complemented by an equally rigorous focus on Visionary Innovation and Performance to enhance Customer Impact.

Key Benchmarking Criteria

For the Company of the Year Award, Frost & Sullivan analysts independently evaluated two key factors—Visionary Innovation & Performance and Customer Impact—according to the criteria identified below.

Visionary Innovation & Performance

Criterion 1: Addressing Unmet Needs
Requirement: Implementing a robust process to continuously unearth customers' unmet or under-served needs, and creating the products or solutions to address them effectively

Criterion 2: Visionary Scenarios through Mega Trends
Requirement: Incorporating long-range, macro-level scenarios into the innovation strategy, thereby enabling "first-to-market" growth opportunity solutions

Criterion 3: Implementation of Best Practices
Requirement: Best-in-class strategy implementation characterized by processes, tools, or activities that generate a consistent and repeatable level of success.

Criterion 4: Blue Ocean Strategy
Requirement: Strategic focus on creating a leadership position in a potentially "uncontested" market space, manifested by stiff barriers to entry for competitors

Criterion 5: Financial Performance
Requirement: Strong overall business performance in terms of revenues, revenue growth, operating margin, and other key financial metrics

Customer Impact

Criterion 1: Price/Performance Value
Requirement: Products or services offer the best value for the price, compared to similar offerings in the market.

Criterion 2: Customer Purchase Experience
Requirement: Customers feel they are buying the most optimal solution that addresses both their unique needs and their unique constraints.

Criterion 3: Customer Ownership Experience
Requirement: Customers are proud to own the company's product or service and have a positive experience throughout the life of the product or service.

Criterion 4: Customer Service Experience
Requirement: Customer service is accessible, fast, stress-free, and of high quality.

Criterion 5: Brand Equity
Requirement: Customers have a positive view of the brand and exhibit high brand loyalty.

Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan analysts follow a 10-step process to evaluate award candidates and assess their fit with select best practice criteria. The reputation and integrity of the awards are based on close adherence to this process.

STEP		OBJECTIVE	KEY ACTIVITIES	OUTPUT
1	**Monitor, target, and screen**	Identify award recipient candidates from around the world	• Conduct in-depth industry research • Identify emerging industries • Scan multiple regions	Pipeline of candidates that potentially meet all best practices criteria
2	**Perform 360-degree research**	Perform comprehensive, 360-degree research on all candidates in the pipeline	• Interview thought leaders and industry practitioners • Assess candidates' fit with best practices criteria • Rank all candidates	Matrix positioning of all candidates' performance relative to one another
3	**Invite thought leadership in best practices**	Perform in-depth examination of all candidates	• Confirm best practices criteria • Examine eligibility of all candidates • Identify any information gaps	Detailed profiles of all ranked candidates
4	**Initiate research director review**	Conduct an unbiased evaluation of all candidate profiles	• Brainstorm ranking options • Invite multiple perspectives on candidates' performance • Update candidate profiles	Final prioritization of all eligible candidates and companion best practices positioning paper
5	**Assemble panel of industry experts**	Present findings to an expert panel of industry thought leaders	• Share findings • Strengthen cases for candidate eligibility • Prioritize candidates	Refined list of prioritized award candidates
6	**Conduct global industry review**	Build consensus on Award candidates' eligibility	• Hold global team meeting to review all candidates • Pressure-test fit with criteria • Confirm inclusion of all eligible candidates	Final list of eligible award candidates, representing success stories worldwide
7	**Perform quality check**	Develop official award consideration materials	• Perform final performance benchmarking activities • Write nominations • Perform quality review	High-quality, accurate, and creative presentation of nominees' successes
8	**Reconnect with panel of industry experts**	Finalize the selection of the best practices award recipient	• Review analysis with panel • Build consensus • Select winner	Decision on which company performs best against all best practices criteria
9	**Communicate recognition**	Inform award recipient of recognition	• Announce award to the CEO • Inspire the organization for continued success • Celebrate the recipient's performance	Announcement of award and plan for how recipient can use the award to enhance the brand
10	**Take strategic action**	Upon licensing, company able to share award news with stakeholders and customers	• Coordinate media outreach • Design a marketing plan • Assess award's role in strategic planning	Widespread awareness of recipient's award status among investors, media personnel, and employees

The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan's 360-degree research methodology represents the analytical rigor of the research process. It offers a 360-degree view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often companies make important growth decisions based on a narrow understanding of their environment, resulting in errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry participants and for identifying those performing at best-in-class levels.

360-DEGREE RESEARCH: SEEING ORDER IN THE CHAOS

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, helps clients accelerate growth and achieve best-in-class positions in growth, innovation, and leadership. The company's Growth Partnership Service provides the CEO and the CEO's growth team with disciplined research and best practices models to drive the generation, evaluation, and implementation of powerful growth strategies. Frost & Sullivan leverages nearly 60 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on 6 continents. To join Frost & Sullivan's Growth Partnership, visit http://www.frost.com.