



IST and Siemon Illuminate Radisson Blu Royal Viking Hotel



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IST Ltd is a professional lighting company that specialises in developing innovative lighting solutions for the general, wide area, architectural and entertainment lighting industry. Our products include highly efficient and worldwide patented LED drivers, LED lighting products, optical systems and a variety of lighting products such as controllers and luminaires.

The Internet of Things (IoT) and the emergence of smart buildings is allowing low-voltage building systems such as smart lighting, voice, data, security, AV and HVAC to communicate with each other via Internet Protocol (IP) over a converged ICT infrastructure. This concept of network convergence provides significant cost savings and sustainability over the life of a facility, while improving overall user experience, well-being and productivity.

“The IST lighting solution combined with Siemon cabling has led to a first-class lighting solution.”

- Miguel Perez, Radisson International International Project Manager

Smart Lighting has been at the forefront of this change and the benefits that smart lighting technology brings to building operators and owners are enormous. For the prestigious Radisson Blu Royal Viking Hotel in the heart of Stockholm, a new smart lighting installation meant an estimated 89% in annual lighting energy savings and more than 100,000 Euro savings in lighting maintenance costs. Cutting edge lighting solutions from Integrated System Technologies (IST) and high-performance structured cabling from Siemon have made this reduction in the hotels carbon footprint possible.

Headquartered in Lichfield UK, digital lighting and IoT experts IST has been delivering large scale global lighting and control solutions for over 23 years. The company's solutions portfolio comprises of iDrive®, a centralised LED driver concept that reduces maintenance and commissioning costs, Serenity Lighting™ bespoke LED luminaires, lamps and iMune®, an integrated control solution that provides advanced building analytics, security and scalability to thousands of devices.

Having been introduced to Radisson through an energy consultant and later awarded the project, IST was tasked to replace traditional halogen lights across the hotel lobby, restaurant, bar and the breakfast area and installed approximately 500 LED luminaires into bespoke architectural lamps. Changing from halogen to LED lighting has resulted in tremendous energy savings of 68%, but that's just the beginning.

IST also implemented their smart power system iDrive® that drives multiple LED fixtures from three central points. This allows drivers to be installed remotely from the LED luminaires at ground-level in easy to access areas. For Radisson this meant that the lobby, restaurant, bar and the breakfast areas can now be controlled individually. With IST's smart control system, Radisson was able to reduce energy consumption down further to an estimated combined total of 89%.

According to IST, the LED fixtures don't show typical maintenance failures that clients experience with traditional halogen lamps. Before the smart lighting installation began, Radisson would spend approximately 100,000 Euros per year on replacing light fittings, lamps, tubes and DALI drivers.

Both, LED luminaires and the control system connect to an IP-based network that relies on high performance structured cabling from global network infrastructure specialists, Siemon. The cabling enables communication and information exchange between all systems and devices connected to the network. At the same time, it delivers low SELV voltage power via Power over Ethernet (PoE) technology to these devices.

Having worked with Siemon on a number of smart lighting projects for reputable clients around the world, IST specified Siemon's Category 6A copper cabling for the hotel. The new cabling infrastructure replaces the individual power runs traditionally required with DALI and 230Vac lighting systems. This lowers CapEX due to reduced material and labour costs. Recent IST projects have demonstrated CapEX savings of close to 30% compared to a traditional DALI lighting system installation.

Remote power delivery over structured cabling was optimised by specifying a shielded cabling solution that reduces power losses. Siemon's Category 6A shielded cabling mitigates power losses and Siemon's IEC 60512-99-001 compliant connectivity reduces potential damage to the physical connectors contacts when lighting devices are disconnected under PoE load.

Results and Analytics

With a single unified cabling infrastructure supporting multiple applications, Radisson were also able to connect the lighting with the hotel's integrated fire alarm system. In case the fire alarm is raised the luminaries will automatically activate and in case of power failure emergency lighting will assist patrons safely evacuate the hotel.

Finally, the cabling had to comply with the Construction Products Regulation (CPR) to protect occupants and reduce the rapid spread of fire and harmful emissions. Siemon's Category 6A cable boasts the highest standard of flame resistance - Bca.

“Despite the tangible benefits an intelligent lighting approach can bring, many organisations have been slow to adopt this technology. Radisson is a great example of how IP enabled intelligent lighting supported by high performance structured cabling provides a great opportunity for building owners to realise significant cost savings on energy consumption and maintenance whilst meeting carbon commitments.”

- Dr. Geoff Archenhold, director at IST

Reflecting on the successful installation, Miguel Colomo Perez, International Project Manager Architecture & Interior Design EMEA at Radisson, concludes: “IST's lighting solution combined with their willingness to accept additions and changes to the program of works led to a first-class lighting installation at our hotel. I look forward to working with IST and Siemon on future projects”.