Q+A

RICK SCHUETT

MaxLite's new Senior VP of Business Development on how lighting fits into the Internet of Things, potential growth markets and how to manage the hype

How would you define "IoT" in terms of what it means for the lighting industry?

One word that comes to mind immediately is "opportunity." Some of the largest tech companies in the world (Apple, Amazon, Alphabet, Microsoft, Facebook and Alibaba) all use software in some manner to create value for their customers by monetizing data, either as part of their core business or for gathering customer-specific information to facilitate the sale of other products or services. IoT has the potential to allow specifiers, distributors, contractors and manufacturers to differentiate themselves from their competitors and create increased value for their customers and shareholders by entering into new data collection and analytics businesses. More importantly, IoT may represent one of the best opportunities within the lighting industry for the Holy Grail of all companies—recurring revenue.

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Are luminaire manufacturers, in general, prepared for the emergence of IoT?

Yes and no. The "yes" part is easy because lighting is ubiquitous, and fixtures are powered and in general located overhead where they have an excellent field of view. So if one thinks of lighting as a platform to gather information and then process/analyze it at the edge where it is collected—or pass it on to another location where it can be analyzed—nearly every luminaire manufacturer can be prepared for the emergence of IoT because their products will be *the* backbone of any lighting IoT project.

The "no" part comes from the fact that few lighting manufacturers have any in-house software capabilities, and even lighting control manufacturers that may understand software may not understand how to leverage software and sensors to create a business centered around collecting data, moving and storing data securely, understanding privacy concerns and ultimately making money with IoT.

An industry observer noted that IoT is now in the second stage of the six-stage development process for digital technologies ("the hype cycle"). Would you agree?

If "hype" means a disproportionate number of articles, conferences, courses, seminars, job postings, etc. within the lighting and electrical industry as compared to actual sales, then we are definitely in that cycle. I've told more than one person that if one could monetize all of the "buzz" surrounding IoT lighting we would have a multi-billion-dollar market at our disposal, but that clearly is not the case.

Which market sectors will represent the greatest opportunity for lighting in IoT?

Any market sector where IoT lighting can solve an existing problem better than the incumbent solution. There are ongoing pilots and some real city/municipality projects in Europe and, to a lesser extent, the Americas where wireless street lighting control is being utilized as a communications and data analytics platform to measure air quality, count cars and pedestrians, locate and communicate open parking spaces, communicate whether trash cans are full or not, etc.

There are existing solutions that do all of these things, so why might using smart streetlights "win" over any platform such as "smart trash cans" that could also collect, aggregate and communicate other nearby data beside trash information? Because streetlights are already in place everywhere, they are mounted up high and have power. So I think we will see significant adoption within the next two to five years.

Retailers may also take an "early adopter" lead with merchandising analytics. Hospitals will use IoT lighting for asset tracking purposes, and once some of the concerns around wireless communications in hospitals have been solved, we will see rapid adoption in existing hospitals. In assisted living facilities, work is being done to use radio field disruption analytics to determine if a patient is moving without needing to wear any type of device; combined with circadian lighting

we could see rapid adoption in this sector as well.

What factors could hinder IoT adoption?

First is "customer mismatch"—the people that the lighting industry traditionally works are not the people making decisions on the problems that IoT lighting solves. The head of street lighting for most cities has nothing to do with traffic management or waste management. A merchandising manager cares about color temperature, beam distribution, contrast ratios and aesthetics but isn't used to talking to lighting people about shopper paths, number of shoppers, conversion rate effectivity, shopper dwell time, etc. The VP of compliance for a hospital, who is responsible for making sure all of the portable equipment is calibrated every six months and therefore needs to know where it is at all times, isn't currently being called on by most lighting reps. So right now we aren't calling on the right people, and when we find them, they don't know who we are or why they should be talking to us.

Number two is training and education. The type of sale that needs to be made with IoT lighting is a solution sale—remember, you are solving problems with IoT lighting and not just selling lighting fixtures that people already understand.

I'll close with one final hurdle—the need for at least one "winner" to emerge within the IoT lighting sector that people can point to and say, "Look at those guys, they are hitting it out of the park." I believe that might happen sometime in 2019. Or perhaps 2020. Probably by 2021. For sure by 2022.