Notes from conversation with

Lawrence Harrison, LightPlanet

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In this conversation, Lawrence explains how he combines access to a range of manufacturers - and a pragmatic approach - to help his clients achieve more sustainable, affordable - and high-quality- lighting solutions in a range of sectors from educational to industrial, large and small, new build and retrofit projects.

Lawrence background

Lawrence started his career in construction 13 years ago. He worked in cable for Prysmian Cables for six years, and then moved into lighting. He worked for a leading LED lighting manufacturer for four years, the role was project based with a lot of specification and contractor management. It became clear that even though one manufacturer can be very good at the parts of lighting that they do, it's almost impossible for any one company to excel in all areas of product and project, ranging from architectural all the way through to industrial, educational and health.

So Lawrence set up an LED lighting project specialist to bring together products from a range of manufacturers and offer them to end-user, distributor, the contractor, or the consultant.

Clients include education bodies, health partnerships, commercial premises, industrial premises, public bodies and county councils. They have different product and application needs. But what tends to be bad about the existing lighting is relatively universal across the board: highly inefficient lighting in all those areas, fittings that have deteriorated beyond their useful life. Lawrence aims to offer improved lighting quality, massively improved efficiencies, and long warranties, regardless of sector.

What is the level of awareness of the impact of lighting on health and performance among your clients?

It's a mixture. Like anything, there are people who really engage with the benefits of LED. People who understand that before we even get to them, people who are massively open to learning.

And then there are people who, like in any sector of construction and indeed anyone anywhere, who really aren't interested in finding out about quality, but are mainly interested in price.

So we have good relationships with the people who are very interested in it. Some of our big education clients, certainly. And for education, with LG5 and the regulations surrounding it, there's certain regulations and parameters that this light has to conform to in order to meet the requirement.

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So when you're talking about how children need to get the light, whether it be electric, light, or natural daylight into the learning environment, we pride ourselves on offering solutions which meet all of those criteria.

And is sustainability is high on their list?

It's a mixture but it is in the forefront of a lot of people's minds.

First of all, from an efficiency point of view, with the scale of some of these estates that we're talking about, Boroughs of London, huge health estates, whole counties, all of these people have fixed sustainability targets by a certain date - 2030 or 2050. Along with heating as well as lighting, they're really being both targeted and incentivized to reduce.

There is a corporate responsibility or social responsibility dimension too. The carbon reduction targets you see on the most efficient forms of LED are huge. And it's not just about money, it's about the benefit to the planet of reducing carbon emissions.

We do return on investment calculations for all of our projects, and the savings range from 30%. And in some cases where you've got lights burning 24/7, you can achieve an 80% reduction in carbon and 80% saving on their energy bills.

So the majority of what we're still replacing on these sites is a mixture of fluorescent fittings of halogen, of metal halide or sodium fittings. When you're dealing with T8's (fluorescent tubes), one fitting can be using 80-90 Watts. We're replacing it with panels that use 16-17 Watts.

You don't have to be a mathematician to work out that if you times that by 300 panels in an office, the savings are enormous.

What about the cost of better-quality products?

There are lots of different levels of quality and cost in LED.

LED probably more now than a lot of other areas in construction, is subject to what is just plain fraud: you get LED on the market which is just simply not fit for purpose. The very lowest cost base and from disreputable sources.

So taking that completely out of the equation you then move into the varying degrees of legitimate LED. And really even then we probably don't operate in the budget realm because our key focus is on performance and sustainability.

Why would you bother taking an inefficient form of light and then replacing it with the lowest form of the next most efficient? It's a false economy.

We want to strike a balance between finding the best cost and efficiency. So an older fluorescent light might be 70-80 lumens per Watt. We work with some extremely good manufacturers at the forefront of LED technology, who are able through economies of scale, and the way that manufacture, to deliver 140-160 delivered lumens per watt and above.

That way we can achieve those efficiencies without blowing people's budgets sky-high.

Would you say there was a trade off between lumens per watt and the quality of the light?

In some areas of the industry, sure. Not from the sources we use, because there are a lot of established manufacturers in the higher 'budget' bracket that are also extremely competent at making highly efficient LED products, and some which aren't, you can pay a lot more and receive no improvement in efficacy. It's also worth pointing out that lumens per watt expectation varies significantly between fitting application, decorative vs commercial for example.

Efficacy is so crucial to our education and publics works projects in particular, because the projects have to meet specific payback criteria.

If a supplier was trading off efficacy in favour of cost, we would no longer be able to offer them as a viable solution.

Obviously if you go into the lower quality LED segment of the market, you will see massive tradeoffs in any number of things in favour of cost: efficacy, colour rendering, materials, colour temperature and colour uniformity, availability, rated life and in some cases safety.

You can avoid these tradeoffs as long as you make sure, which not a lot of people do, that they are achieving quality across the manufacturing range.

So in addition to their efficiencies, the good manufacturers also have excelled in the quality of their LED chips and the binning of their LED chips. Which means that when you buy a hundred or a thousand units from that manufacturer, the colour rendering will not only be high, but you'll be confident that they'll be uniform across all of them. And there are measurements for every single aspect of quality in LED, and we do check and other reputable suppliers will check.

And if you're dealing with good quality, if we don't check, you can be sure that consultants will, and you can be sure that contractors will too.

What about the role of the designer in your work?

Where we enter the project can vary massively. We do design turnkey from conception all the way through to installation. Those are favourite projects where we can design the area from scratch.

We always engage with the designer - or multiple designers if we need to because elements of a project can be very functional and elements of the same project which can be completely architectural. We can collate those designs together.

We also come in at a value engineering stage where a design has already been done, and they want to achieve it, but they want to achieve it for a certain budget which the original design doesn't have.

We can usually achieve exactly what the original design set out to do in terms of aesthetic and performance whilst providing it for a better cost, without a compromise on quality. And that's just through a combination of mixing suppliers and knowing where to buy the best versions of what they get for the best price, but also having a bank of commercial suppliers that we know offer the same level of quality, but for a lower cost.

Value engineering has a bad name - how would you respond?

I'm constantly surprised at how a lighting project gets completely designed through design stage all the way through. And a huge amount of time and effort has gone into the project. But no one has really asked the question: A. Can people afford this and, B. Is this specification actually what they want and need?

So it's almost like a runaway train by the time anyone's stopped and realized that the thing has got away from them, it's too late. And that's where we come in.

It’s never about reducing quality, it's about retaining it and being able to do the project in the first place, because that's a project that then would have been sidelined or postponed for months, years, potentially.

What’s the main stumbling block to people understanding why they should invest in better quality lighting?

Capital cost is far and away the biggest stumbling block.

Because even when you have something that pays back incredibly quickly and will reduce your ongoing energy bills, we appreciate that a capital cost is still a huge hurdle for a lot of people, particularly in this environment.

We do lighting projects from £2,000 all the way up to the hundreds of thousands. And some people get it immediately and have the capital to spend. Some people have access to finance schemes, or they have trusts or in some cases diocese funding.

But that's always a problem.

You're asking somebody to trust you and spend what is a lot of money for them. And they can't always make the connection. Or they want to, and they simply can't afford it.

And even when you show somebody the payback and how much their existing lighting or whatever it will be - heating, lighting, is costing them, sometimes the status quo and the level of spending that they have against their bottom line is still preferable.

At least it's an element they can control as opposed to the unknown.

But the way we engage with people on that is complete transparency and in many cases, to explain that the condition of a lot of existing lighting, particularly in schools across the country is just so subpar that there are real health and safety issues, particularly in emergency lighting.

This approach gives people clear information so that they can know that they are safe and can understand the financial implications.

Do you see your role as an 'honest broker' between a client and all these new manufacturers?

That certainly is part of our remit in my mind, we never claim to be completely impartial. We're not a government body like citizens advice for example. We do turn a profit and we're a private company and we're here to make money as well as to deliver exceptional lighting projects.

But we also want to reduce people's financial commitments. We want to make people greener. Like anything in construction, it's about building relationships and being honest with people and thankfully a lot of people are engaging and trusting us to do it. Some people think we're trying to get them to fork out cash for another scam, but for the vast majority, our approach is working so far. The proof of that is shown in our long term client relationships.

Would you say there is a lack of understanding or interest in the value of good lighting?

There's a lack of understanding about how much benefit good lighting can have. But it's very hard to say uniformly that you can provide people with benefits of lighting because anybody who's ever done this job and has been to an office will know that within the same office environment you can have 20 people who have different lighting requirements, people who get headaches by bright light, people get headaches by low light, people who have eyestrain.

We can't tell people how they want to work with the light, it's completely personal. So we offer people what the experts believe to be the best model of lighting for the majority, and that works well.

The feedback is that once we've done it properly, our clients immediately do see the benefits. Not so much the intangible benefits - there are a lot of people out there claiming that you'll have this much

increase in productivity if you choose this way to light your room. Completely immeasurable. But certainly, we get positive feedback in terms of comfort, cost and aesthetic value

And what about the image or value of the building?

Yes for sure. The great thing about realizing the space well is that it provides immediate visual enhancement. It's great for case studies and great for before and after pictures. And certainly helps people who own buildings, and the people that work in buildings, and people who live in buildings, they see an immediate change.

The downside is that a lot of people then have to paint their buildings and recarpet their buildings because it shows things on walls and ceilings that they haven't seen for 20 or 30 years.

What are your thoughts on controls?

If you're completely gutting a building and you're doing a full refurbishment, taking everything out, and rewiring it, and putting everything back in - we're talking mainly about offices and industrial premises and things like that - then absolutely it makes sense if you've got the budget to have control systems with your lighting including LED.

So if you've got a 200,000 square foot warehouse, as much as people can turn off lights and turn on lights, it's going to not happen.

And even if it does happen, it won't be as intelligent as a system controlling it. So yes, controls have a massively important part to play.

What people need to understand, I think, a bit more particularly when you have third parties engaging education projects, is that, you have to look at the individual requirements of the project.

So while things like LG5 call for a certain amount of control and dimming, daylight harvesting, which is really important, in the real

world a lot of the time, we're talking about retrofit projects, we're talking about the local authorities, and we're talking about old rundown buildings, and people who just simply can't afford the capital layout to rewire.

So we do an awful lot of controls installations. We've just done at school, a brand new private school with a full wireless Bluetooth control system. And it's really interesting, how easy some of the new control systems are to use.

But we also do a lot of schools where they have site managers and premises managers, and they are super vigilant about turning lights off. And at that point, can you really ask them to shell out what might be another £20- 30,000 across these educational estates when you can't necessarily guarantee that the payback will still be there?

The most important part about control is maintenance over time.

Particularly older forms of lighting control systems, as time goes on, when you change lighting positions or change ballast or other elements, a lot of the commissioning of a lighting system can go completely out of whack.

So we go back to old buildings all the time, big buildings, some 11-storey building in central London and things like that, where they've had incredibly expensive control systems, but aren't highly intelligent.

You get daylight dimming timers with infinite levels of control. But none of it is functional because FM companies change, new people come in, nobody retrains, the cost of getting commissioning visits out is cost prohibitive.

So you've got the world's most expensive on-off system in a lot of these places.

So it's really important now that the new wave of control systems are incredibly easy to commission and in many cases, open source. It’s very

easy to provide training initially, and then software updates, firmware updates, retraining etc. can be delivered over the system. You don't have to have full day commissioning visits. So it's definitely an area that has progressed massively.

Technology progresses in every industry so that eventually everything becomes obsolete and is replaced by a new protocol or standard.

So what's important now is that the control systems that we're implementing have the least structural requirements. So they are wireless, so they are easily adaptable. So hopefully in the future, when things need to be updated it's a much more straightforward process and they can keep up up-to-date for much longer.

The benefit of wireless is not only huge from a time and labor point of view, but also in terms of materials point. With the rising price of copper and cable, you want to be running as little as possible.

If there is one thing you would like to say to potential clients, what would that be?

Because of our sustainability bias, the first thing I'd want people to focus on is how much their lighting impacts on the environment.

And then the second and equally as important thing is how is their light negatively or positively impacting the people that have to be under it.

There are a million different ways that companies can incentivise their employees to want to work harder for a company, and lighting isn't one of those things.

I can't tell people that they're going to get better performance out of it, but what they will get is a better environment for those people to be incentivised by whatever they're going to incentivise them with.

It's not just about a nice light level, it's about an aesthetic space, so it can provide really interesting, desirable places to work. If you look at some

of the, the offices now in London, particularly remote working offices, they're just a really, really pleasant place to be from all the furniture and all of the facilities available and then also the way that they're lit.

And the way that the controls work and everything. It's such a far cry from decades ago when offices were small booths and standardized zones.

What have you done in your own offices?

So obviously everywhere that I live and work is LED. And we've done everything in the offices as well like full LED set up, like any other place. Like most lighting companies, we have lighting showcases with some of the most impressive things that the LED can do now - which is a lot.

We can't even afford some of the really fancy stuff for our own offices.

But anybody with a home or an office where they can afford to put in LED and they haven't yet, in my opinion, they should really think about it.

Thank you!