

# LIGHTING

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Credits Sean Fennessey on behalf of Electrolight.

**Bringing the outdoors, indoors at the Crown Towers Perth shows how deeply greening, or biophilic design, is resonating within contemporary design thinking.**

# LIGHTING DESIGN AND THE PANDEMIC-STRUCK HOSPITALITY INDUSTRY

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## PENNY JONES

With the fallout of the pandemic continuing to ripple through the hospitality industry, it's relatively hard to find any firm statistics on its impact globally, but the word 'catastrophic' would not be an overstatement. To get an inkling, according to Forbes, the pandemic had cost the global tourism industry \$935 billion (that's \$935,000,000,000) by Jan 2021, with much of that figure formally destined for the world's hotels.

There are exceptions, but a 50-100% drop in revenue is a common story and this has obvious implications for related professions and industries. The hospitality lighting industry is no exception but is being as nimble as possible as it grapples with the changing landscape.

Donn Salisbury is the Director of Electrolight, an independent lighting design firm with studios in Sydney, Melbourne and San Francisco. Electrolight undertakes projects for a wide variety of sectors and in pre-pandemic times, Salisbury says they'd usually be working on upwards of 10 creative lighting projects for hotels at any one time.

"Hospitality was certainly the industry we saw the biggest shift in as soon as the pandemic struck," he says. "I'd say about 50% continued unchanged, but the rest of our restaurant and hotel projects went on hold."

With Australia faring better than most other countries, and the local tourism industry picking up again, Salisbury says things are looking up.

"One of the most obvious things we've seen recently, and this is not necessarily a result of the pandemic but is definitely reinforced by it, is the concept of

lighting for wellbeing. Human centric lighting has been a buzzword for a while now, but I think the pandemic has solidified it," he says.

"While many large hotel operators have committed to lighting for wellbeing to some degree, it's a discussion we have with just about everyone now."

The benefits include personally-tailored lighting solutions for guests encompassing things like day and night mood lighting, but also more sophisticated concepts like lighting for circadian rhythms.

"Lighting for circadian rhythms is part of a CRC [Cooperative Research Centre] project we've been working on with Monash University for seven years. It specifically involves investigating blue-end-spectrum lighting and how it impacts peoples' physical and psychological balance," he says.

"This is relevant to many different applications, but in hospitality lighting, we can use it to create a supportive environment for international travellers experiencing jetlag, for example."

This might include an app where a newly-arrived guest can input information about their country of origin which automates the lighting setup, by either introducing or limiting blue-end spectrum, to help wake them up or make them drowsier, depending on the time of day.

"Lighting for jetlag can start syncing your body clock to your current or upcoming location in a scientifically proven way with a marked benefit in terms of attention, focus, alertness and productivity," Salisbury continues.



A bar at QT Melbourne. The role of the lighting designer is to integrate the lighting with the architecture to create a sophisticated design with a good balance between indirect and direct lighting.

"This is not necessarily a new idea, but we now have the lighting controls and LED technology to apply it in a user-friendly and considerate way."

In the creation of mindful and atmospheric outdoor spaces, Salisbury says there is an increasing awareness of the environmental and ecological challenges we face.

"There is a definitive shift towards accepting and encouraging nature throughout all habitable spaces and this resonates with design thinking. Call it what you want, be it greening or biophilic design, it's all part of a bigger picture that goes beyond ecolighting or saving energy. It's about being environmentally aware, embracing the nature of a night-time setting and using only what is necessary," Salisbury says.

"We are inherently built to cope with night and our eyes can adapt surprisingly well if we give them a chance. You can have darkness, as long as it's balanced thoughtfully with well-placed lighting. This approach gives us opportunities to create theatre and tell stories that simply are not possible when everything is excessively lit."

Salisbury says a push away from cooler colour temperatures at night is another shift he has noticed. "Now there's movement towards warmer colour temperatures and limiting the blue-end spectrum which, again, is good from a wellness perspective given it helps your body know it's night-time."

Another trend Salisbury mentions is the uptake of sensor-based lighting in more spaces. This is typical for intermittent-use spaces (storage locker rooms, gyms and health clubs), but is now extending to breakout spaces and corridors. Although in these cases, the system has to be clever.

"You'd never want to walk out of a lift into complete darkness, but having corridors permanently partially lit, say at 5-10%, with a rapid, although not jarring, ability to ramp up when needed seems an obvious solution," he says.

While Australia has been, and continues to be, badly impacted by the pandemic, there is little doubt that most other parts of the world are suffering more. Beatrice Witzgall lives in New York State in the U.S. and owns

a design and consulting firm called In3design which specialises in lighting controls, personalised lighting, and smart building controls.

Previous to that she founded LumiFi, a wireless smart lighting control management platform that, interestingly, was one of the first to design and start pitching a jetlag lighting feature to their clients. Having been in lockdown for many months, she says the hospitality lighting industry in the U.S. and Europe, where she does most of her work, is in tatters.

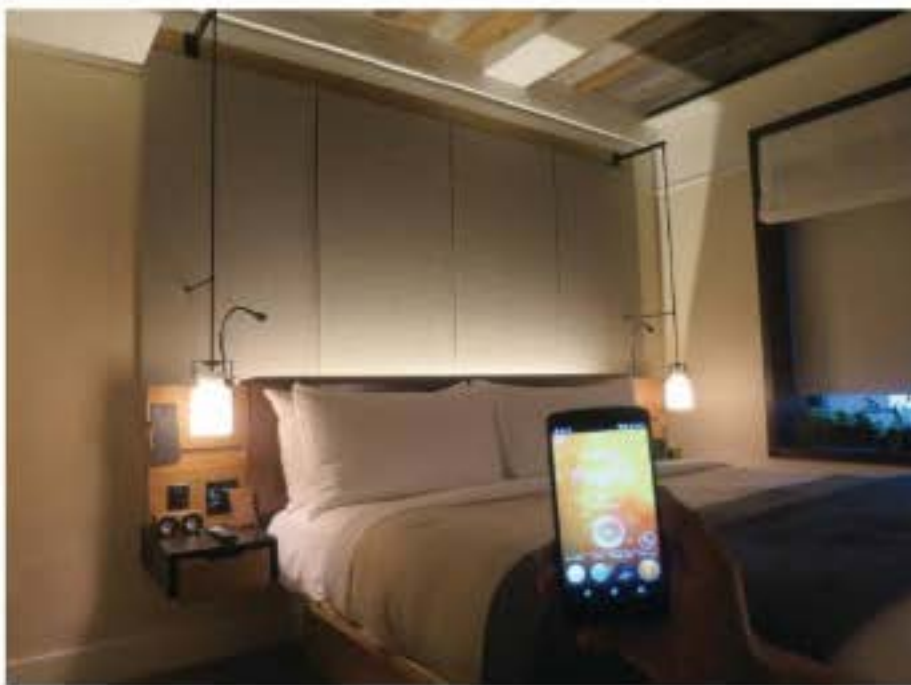
"Unless construction was well advanced, most projects have been put on indefinite hold and the vast majority of hotels are clamping down on spending or even closing their doors completely. The residential side of things, on the other hand, has seen a major uptick due to city dwellers moving away from the big centres," she says.

However, with the vaccine rollout going well in the U.S., Witzgall says things are starting to look up for hospitality and lighting has a few different roles to play in the recovery of the industry. Firstly, there is the move to touchless technologies. Secondly, there is the movement towards smart buildings, with the lighting infrastructure potentially harnessed to get actionable data for applications beyond lighting. Lastly, and perhaps most urgently, she says there will be the widespread introduction of UV-C lighting.

This last point provides quite a stark contrast to the Australian experience where Salisbury says that while he has been aware of some chatter about UV-C lighting for sterilisation purposes, it's not something he's seeing as a vital ingredient of the industry's pandemic recovery plan in Australia.

UV-C 'lighting' isn't a light fixture as such, it's more a device that uses non-visible light from the photobiological UV

LumiFi's guestroom app has several lighting pre-sets which guests can easily tap to select. Here is the control system in action at 1 Hotel Central Park in New York.



*The wake-up setting.*



*In energize mode.*



*Time to play.*



*Time to relax*

spectral band to inactivate germs, including the Covid-19 virus. Because UV-C is dangerous if humans are directly exposed to it, these devices require sensor integration to make sure they turn off when humans are present, as well as having specialised installation and operational requirements.

"I'm currently seeing a big push in the lighting industry, from both manufacturers and designers, towards using existing UV-C products in things like hotel air ducts, as well as creating new UV-C devices to sterilise high usage areas like sinks and bathrooms," she explains.

Witzgall says that while many hotels are investigating these options, it essentially comes down to economics. "If a hotel is operating at a fraction of regular occupancy and fighting for survival, they're in no position to invest heavily in new technology. However, I believe this will increasingly feature as things start to open up again," she says.

"It depends on the hotel of course, the ones focused on health and wellness are obvious initial contenders, but I wouldn't be surprised if UV-C lighting starts to get incorporated into standards or certification programs in the near future."

A restaurant at the Rosetta, Sydney. Creating the right personality, identity and mood is all in the remit of the lighting designer whose job it is to make sense of a space and match the lighting to what the client wants to accomplish.



Credit: Rohan Venn on behalf of Electrolight.

A restaurant at the Raku, Canberra. Good lighting design is more about what isn't lit as opposed to what is lit and the most successful projects almost always exercise precision and restraint.



Credit: Rohan Venn on behalf of Electrolight.

Economics is the biggest question currently, but Witzgall is optimistic that her hospitality work pipeline will pick up again because the role of the lighting designer is so vital to the industry.

"When it comes to creating the right mood and atmosphere, lighting is essential and so, therefore, is a lighting designer. It's our job to take all the tools at our disposal, which include fixtures, fittings, sensors and controls etc, to create an objective, up to date, coherent design completely independent of manufacturer influence. Although we also provide a much larger service set too," she continues.

"We integrate the lighting with the architecture to create a sophisticated design with a good balance between indirect and direct lighting. Only a lighting designer has the experience to make sense of the space in that way and match the lighting to what the client wants to accomplish."

Salisbury agrees and says engaging a lighting designer is also a no-brainer in terms of cost benefit analysis. "Cost and the technology labyrinth are both big risks for people who decide not to use a lighting designer. Of course there is the design fee, but that's peanuts compared to the benefits for the client, both initially and in terms of ongoing operations," he says.

"A good lighting designer knows how to use light to tell a story, to create personality, identity and mood. This is an obvious struggle for the inexperienced, and there will always be the danger of overdesigning lighting, or over-specifying lighting products, which ultimately costs the client money. At the end of the day, good lighting design is more about what's not lit as opposed to what's lit. The most beautiful lighting projects almost always exercise precision and restraint." ■

## PENNY JONES

Penny is a freelance writer, editor and communicator. She has written her way through the business world and is highly adept at interviewing academics and industry experts with a natural ability to tease out factual and accurate information. She has covered a variety of topics ranging from commercial lighting to solar cars and much more in-between. She also loves nothing more than recounting personal travel tales for lifestyle publications. She has lived in the UK, New Zealand and Japan, and is currently based in Sydney.

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