Hilton
HOTELS & RESORTS

Aura

Final Report

February 2020

"Hotels deal with a wide range of potential indoor air quality problems that can lead to a negative effect on overall customer satisfaction" Lodging Magazine, 2019

Odors

Airborne Germs

Dust, Mold spores, Pollen

Volatile Organic Compounds (VOC)

Hospitality Trends

Personalisation

"The need for personalisation is a major trend. A growing number of hotel guests want to be treated as individuals, rather than just another anonymous customer"

Revfine Magazine, 2020

Sustainability

"Will be a key factor in successful brand management of hotels, as it's one of the most important global issues facing the world right now"

Trivago, 2019

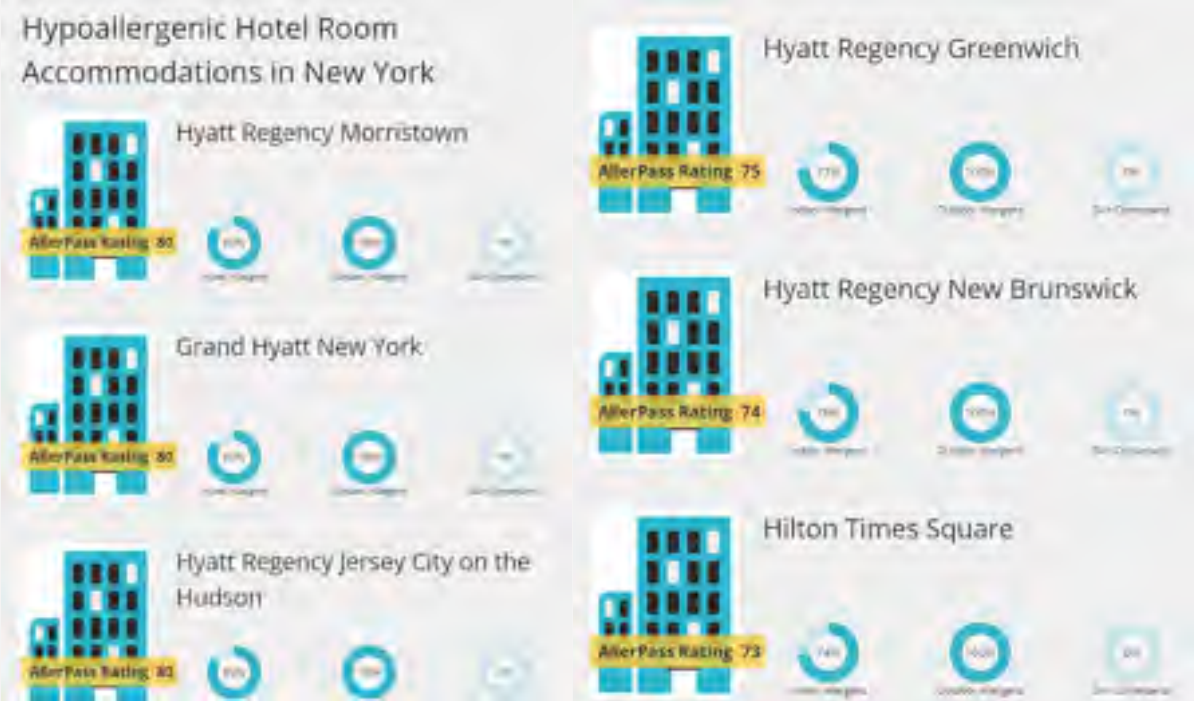
"Bleisure Travel"

"Millennial prioritise and experiences, and they bring this mentality to business travel. They want the best bang for the buck, rather than the cheapest options available"

Maxim, 2019

Wellness Hotels

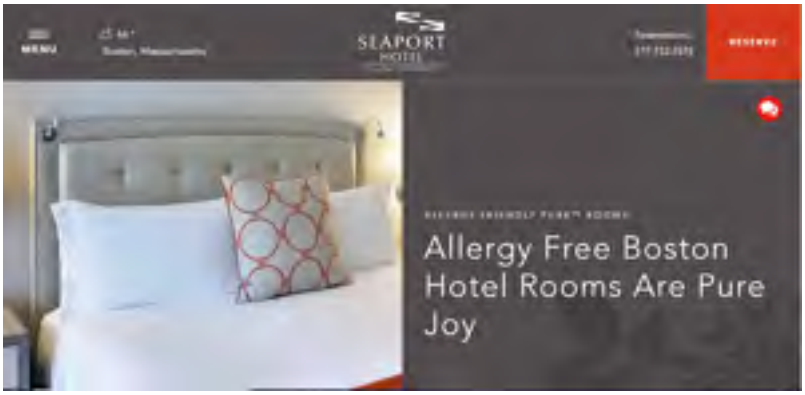
"More hotels are adding air purifiers and filters to their guest rooms. Either because the outside air is prone to smoke or pollution, or because guests demand them for health reasons" The New York Times, 2019



FOUR SEASONS
Hotels and Resorts

Royalton

HYATT



Hilton HONORS

Radisson

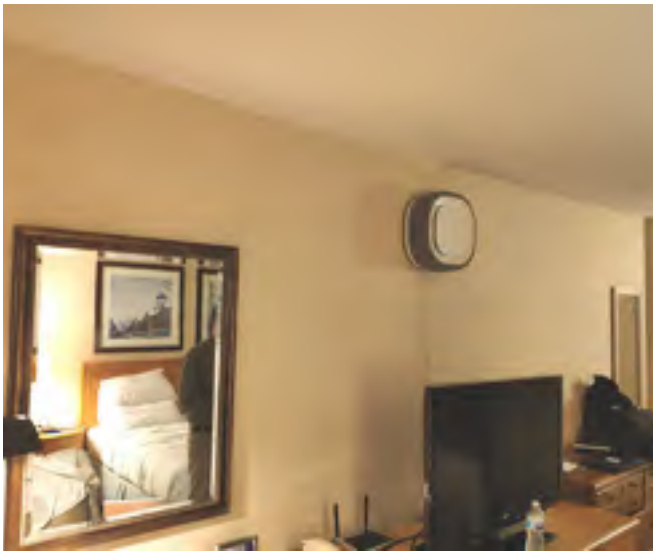
Sheraton

The Pilot

Provide a comprehensive solution for improving and managing the air quality in a room in Hilton Hartford hotel, while increasing awareness of air quality in the entire hotel. The pilot will be executed through an interactive data-based approach providing recommendations for the hotel staff and visitors.

Schedule:

Week 1	End of week 1	Weeks 2-3	Week 4
Installation and Measurements	Comprehensive Report	Full Operation Dashboard and Display Screen	Feedback & Summary



Picture: Aura in the hotel guest room

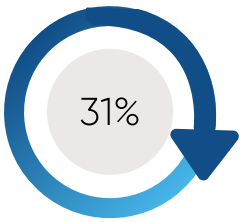
Picture: Dashboard and screen in Hilton's lobby

The Results

Air Quality Improvement:

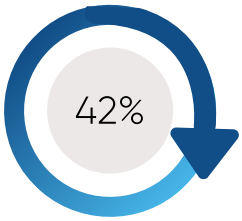
In weeks 2-3, Aura operated in a hotel guest room. The device disinfected and purified the air, significantly reducing the amount of harmful particles and parameters in the room:

VOC



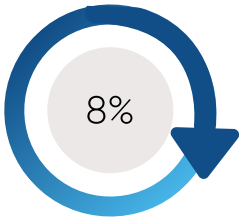
VOC levels were decreased by 31% as a results of the Ray Filter's Carbon layer

PM 2.5



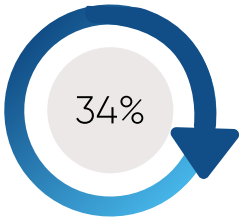
PM 2.5 levels were decreased by 42% as a result of the Ray Filter's HEPA layer

PM 10



PM 10 levels were decreased by 8% as a result of the Ray Filter's HEPA layer

CO2



CO2 levels were decreased by 34% as a result of our recommendations

Dashboard:

Survey

Throughout the pilot we placed a short questionnaire in the lobby of the hotel, which was directed at hotel guests.
Below are some of the results of the 96 people who answered the questionnaire.

91%

"I take interest in air quality in general"

82%

"It is very important for me to stay in a hotel room that has clean and purified air "

70%

"I would very likely choose to buy the product for my personal use"

74%

"I would agree to pay more to stay in a room with better air quality"

Users Feedback

Nick Lorusso
General Manager at
Hilton Hartford

"I believe the hospitality industry is hyper competitive. Aura Air could be the next brand differentiator. Every hotel brand is selling a story or a life style and Aura fits all life styles. During the pilot process, our guest woke up refreshed and Aura air made it possible".

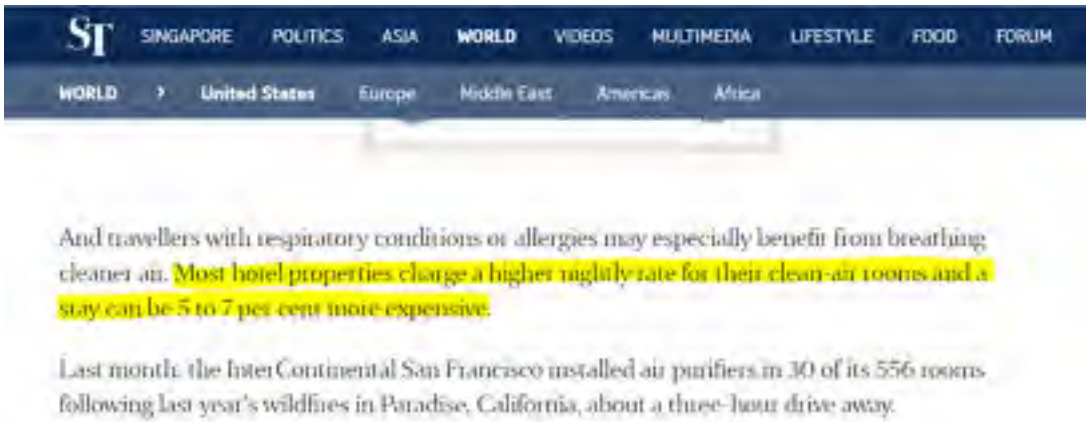
Luis Antonio B. Silos
Deputy Consul General
of Brazil in Hartford

"The quality of the air has vastly improved due to Aura Air. Hotel rooms are notoriously stuffy due to all the traffic. The air in my room smells like fresh air all the time now. I have been living in the hotel over the last two years and with Aura Air it is a different experience!"

Our Value

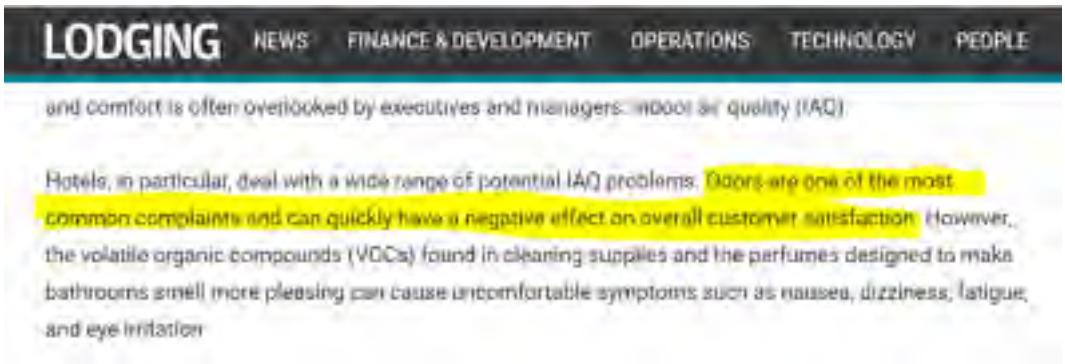
Financial

Fast ROI for a room with Aura will lead to a new revenue stream



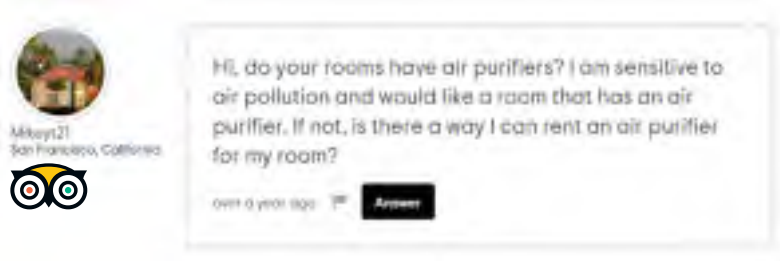
Branding

Improving user satisfaction and adding value for the guests



New Audience

Exposure to a new audience that suffers from respiratory illnesses and often choose not to stay in hotels



Operation

Real-time control on air quality parameters including energy efficiency

Our Filters Test Results

(From the Aura Air white paper)

The efficiency of the Sterionizer in removing different types of pollutants is presented in Table 2.

Table 2- Sterionizer efficiency tests

Substance	Substance name	Removal
Bacteria	Escherichia Coli	99%
	Escherichia Coli ATCC	91%
	Staphylococcus aureus	91%
	Pseudomonas aeruginosa	99%
	Staphylococcus aureus (MRSA)	99%
Fungus	Aspergillus Niger	97%
	Candida albicans	36%
	Dichobotrys abundans	90%
	Penicillium	95%
Mold	Cladosporium cladosporioides	97%
Spores	Bacillus subtilis var Niger	89%
Viruses	Influenza H1N1	99%
	Influenza H5N1	99%

Table 2 shows that the Sterionizer decreased the amounts of bacteria for at least 1 order of magnitude (more than 90%) for all the strains tested. It also decreased the amounts of fungus for at least 36% and the amounts of mold, spores, and viruses for at least 89% for all the tested strains.

Examples of the plates after incubation are presented in Figures 12-13:

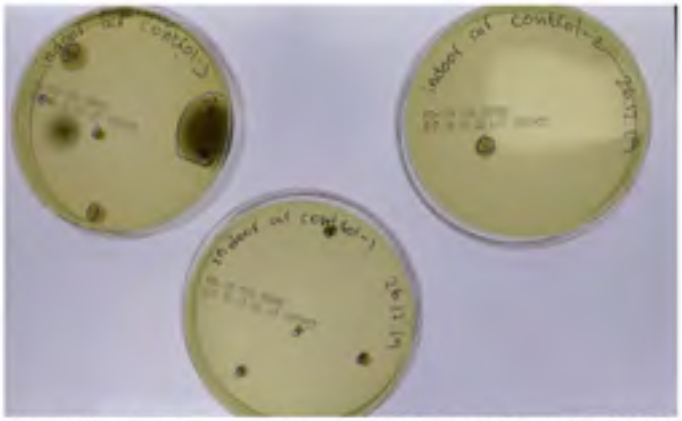


Figure 12: incubation results of the control plates on December 31st,2019

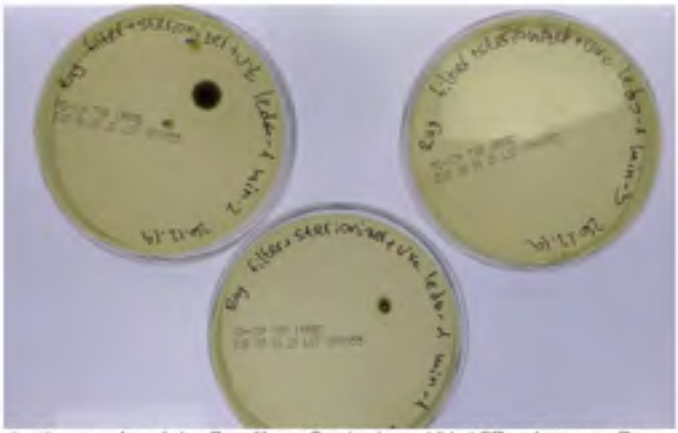
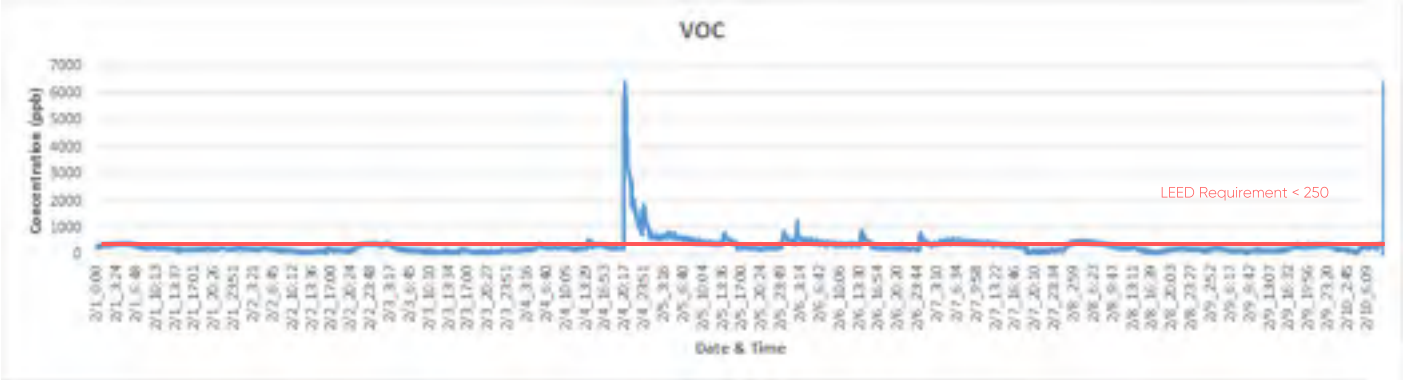
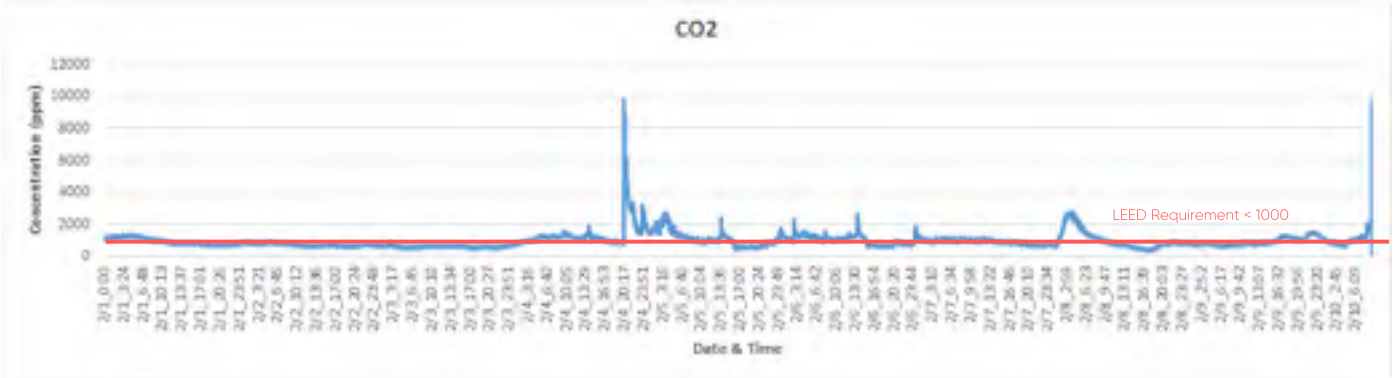
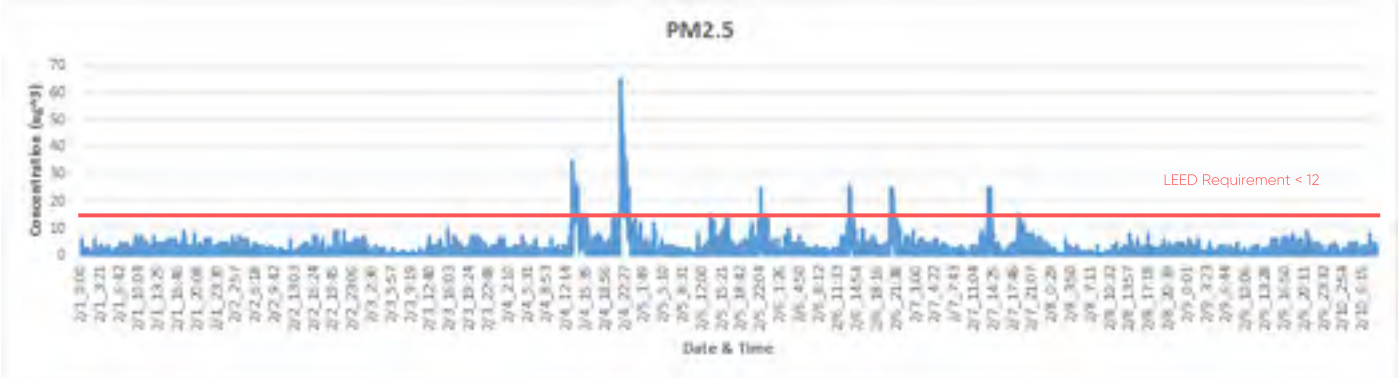


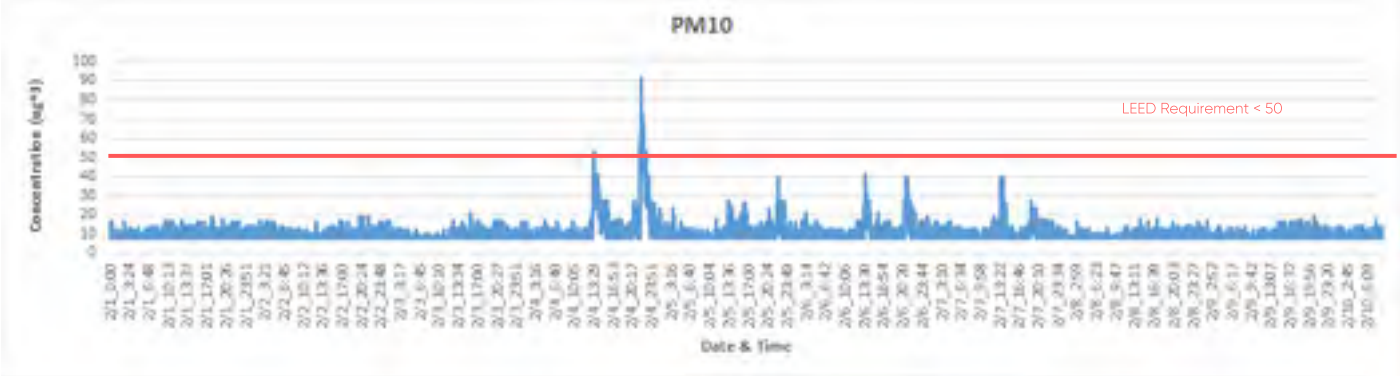
Figure 13: incubation results of the Ray filter+ Sterionizer+ UVc LEDs plates on December 31st,2019

Only Measurement Data









Active Measurement Data