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SENSORFLOW



SensorFlow



*The annual listing of 10 companies that are at the forefront of providing
Travel and Hospitality solutions and impacting the APAC industry*

SensorFlow

Making Smart Hotels a Reality



Max Pagel,
Co-founder and CTO

Saikrishnan Ranganathan,
Co-founder and CEO

Travel is still heavily restricted in the wake of the COVID-19 pandemic. As a result, hoteliers are grappling with significant drops in room occupancy due to depressed travel sentiment, as well as heightened expectations of sanitation and contactless service standards. To survive, hotels are exploring avenues to cut costs without overly affecting staff headcount. Given that energy is the second highest expenditure after payroll, hotels are keenly looking to save on energy costs.

Similar was the case with ST Hospitality, a hospitality management firm in Singapore, that was in dire need of energy-saving strategies that could improve their sustainability and increase their bottom line to

alleviate the impact of the pandemic on their business. Due to the local tropical climate, ST Hospitality was also concerned about effectively managing high-humidity issues, mold formation, in-room material damage, bad odors, and excessive condensation on their A/Cs. To this end, the firm sought a smarter and greener solution that could not only address their energy efficiency and room maintenance challenges but also help them to enhance guest satisfaction while improving their overall sustainability. This is where SensorFlow, a Singapore-based award-winning proptech company, made a significant difference. To help hotels minimize costs and meet the present pandemic-induced requirements, SensorFlow provides a wireless IoT and AI-driven remote room monitoring solution.

After installing SensorFlow's solution, ST Hospitality not only benefited from energy savings, but they also maximized their operational team's productivity, which was especially impactful during the post-COVID period when on-site staff resources had been greatly reduced and limited. "With SensorFlow's solution, ST Hospitality enhanced its operational standards in line with post-COVID contactless norms by ensuring consistently optimal levels of air quality and guest comfort across all their rooms with minimal physical contact or manual intervention by the staff," says Saikrishnan Ranganathan, the co-founder and CEO of SensorFlow.

While majoring in Electrical and Computer Engineering & Design Thinking in university, Ranganathan took a keen interest in building apps that combined cutting edge technology and real-world application. He was one of the first to work on a smart home platform and discovered that IoT could be a way to apply machine learning to solve real-world problems. It was not until he met Max Pagel, the co-founder and CTO of SensorFlow, at the Entrepreneur First

Program in Singapore that he realized they shared a common goal of combating global warming and reducing carbon emissions. They found that buildings contributed to nearly a third of worldwide energy consumption and carbon emissions. Believing that equating efficiency with eco-friendliness for hotels and other large buildings would make a significant difference to preserving the health of the world, Ranganathan and Pagel joined hands to establish SensorFlow and create a solution to make smart buildings a reality, starting with hotels.

“SensorFlow’s smart room automation solution combines the use of smart wireless IoT sensors and AI to help buildings monitor, analyze, and automate energy consumption for better productivity, sustainability, and energy efficiency,” says Ranganathan. The sensors detect when the guest has left the room and will either increase the temperature of the air-conditioning or turn it off to automatically save energy according to the automation setting that can be easily customized to the hotel’s preferences. The IoT tech at work can also monitor hotel room environments, including temperature, humidity, occupancy status, and energy consumption in real-time.

SensorFlow’s innovative, retrofittable solution can be installed within as little as five minutes per room, allowing hotels to save energy instantly and boost operational efficiency. The solution does not require large-scale renovation, thereby minimizing guest and daily operational disruptions, thus generating immediate savings. SensorFlow’s proprietary network of wireless devices is compatible with any HVAC system, which makes the installation process even more seamless. “Our proprietary wireless network requires a single gateway for up to 300 rooms with no need for complex wiring,” shares Pagel. Besides intelligent automation of HVAC systems, SensorFlow’s smart hotel solution also enables remote management and control of these systems through the online dashboard to maximize hotel’s operational productivity and guest services performance.

Apart from monitoring and reporting energy usage, SensorFlow’s online dashboard also provides real-time data on individual room’s occupancy status and humidity risks, which allows service teams to optimize housekeeping routes to increase productivity and reduce unnecessary contact with guests. Engineering teams can utilize these HVAC performance insights through the dashboard and conduct timely and strategic system maintenance before the problem grows, avoiding costly repair and large-scale maintenance services. Furthermore, as part of SensorFlow’s client services, the Customer Success Manager also conducts further analysis by extrapolating these room occupancy data into high-level occupancy trends to support hotel clients in planning suitable and timely guest promotions and activities based on room usage to increase their revenue stream.



The company’s IoT solution helps hotels save up to 30 percent of their energy costs and 40 percent of maintenance costs by automating HVAC energy consumption and real-time monitoring of hotel rooms’ environmental data. “Our solution has zero upfront costs. Our pay-as-you-save pricing model has proved extremely beneficial for hotels amidst the COVID outbreak. We charge hotels only a fixed percentage of their actual energy savings cost and they do not have to invest in large upfront payments,” adds Ranganathan. Besides, as a full-stack company, SensorFlow builds the solution from the ground-up fully in-house with low manufacturing costs, which allows the company to offer its solution at zero upfront cost to hotels on a profit-sharing model.

SensorFlow primarily targets the hospitality industry, which most MNCs don’t exclusively and specifically cater to. SensorFlow is not just a product company but a customized service provider as well. Each of its clients is assigned to a dedicated customer success manager to tailor automation settings and energy management strategies according to their specific needs and objectives.

SensorFlow is targeting the retrofit market in key cities of Asia and the EU with dense hotel coverage, including serviced apartments, hotels, and resorts. The company has signed on over 10,000 rooms with over 2,400,000 rooms in its pipeline. SensorFlow aims to sign on 26,000 rooms, and partner with all top five major international hotel chains (e.g. Marriott, Accor, Hilton, Hyatt, Ascott, Best Western, IHG) by September 2021, by leveraging global brand names in its existing clientele. Further, SensorFlow is developing a new productivity suite that leverages the extensive data collected from hotel room environments and systems to provide in-depth analysis, actionable insights as well as data-driven recommendations to greatly assist hotels in improving their operational productivity. “We are in the concept development and testing stage with early customers to build this new product, and we expect to launch it publicly in Q3 of 2021,” concludes Pagel. [ACO](#)