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## **SGBCCommunity Spotlight**

Green building and sustainability span many facets and perspectives, all of them working together to move the needle towards our climate goals.

In this column, find out what sustainability means to SGBC Members and discover how they are helping to build a greener and healthier built environment.

### **Casambi Technologies Pte Ltd**

# CASAMBI

Casambi is a leader in modern wireless lighting control solutions based on Bluetooth Low Energy. Key aspects of the Casambi solution are great user experience, high performance, and scalability from basic individual fixture controls to industrial-scale solutions with cloud-based remote control, monitoring and data logging.



Representing Casambi Technologies:

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## 1. How is Casambi helping to build greener buildings?

Casambi Technologies contribute to two green building objectives of Wellbeing and Sustainability:

### i. **Wellbeing**

Lighting goes far beyond just providing sufficient illumination to see. Human productivity and moods change in response to the quality of lighting around us. Therefore, lighting is an essential part of the efforts to maintain the wellness of occupants as humans are highly responsive to visible light.

Lighting also has biological effects on human health and wellbeing. Human Centric Lighting refers to the lighting system that mimics natural daylight and enhances the comfort level, health, and wellbeing of the occupants. The benefits of Human Centric Lighting are numerous. As the pioneer of wireless lighting controls, Casambi provides the technology that creates truly human-centric solutions.

While the human body clock is complex, mastering it with Casambi control is simple and fun. Adjustable lighting strategies can be programmed and implemented in the software – whereby controls can perpetually adjust lighting to support a target level, reducing energy costs. Since light can affect human circadian physiology, settings can be programmed and tweaked to follow diurnal rhythms to positively affect health, alertness, and productivity.

## ii. Sustainability

**Energy efficiency:** When a building needs an upgrade to its existing lighting systems, Casambi offers best-in-class solutions and performs the upgrade without interruption. By adding Casambi enabled sensors into the building network, energy consumption can be largely reduced. The use of occupancy and daylight harvesting sensors reduce electricity consumption between 40% - 60%.

**Future-proof system:** With the accelerated efforts to reduce carbon emissions and energy consumption, countries throughout the world continuously roll out innovative programs or industry standards. With Casambi, energy saving control strategies can be adopted anytime. Building owners will have full flexibility as all new lighting settings are managed via software, not through complex hardware or wiring. The system settings can be simply updated via the Casambi App, which makes it easier comply to new energy efficiency programs or standards.

**Ecological responsibility:** When designing the lighting system in a building, it is also crucial to make sure that light pollution is minded. Light pollution can be reduced by using the correct optics and adjusting the light direction. However, the impact is still there. There are two other measures that could greatly help with the issue - keeping light levels to minimum and making sure light level is matched according to usage zone, time and traffic. With Casambi wireless control system, the two measures can be easily set up and implemented at the occupant's fingertips.

## 2. What drove the establishment of Casambi?

Our founders believed that smartphones and wireless technologies could fundamentally change the way we interface with everyday objects around us. The Casambi solution is based on Bluetooth Low Energy. They realised the potential of wireless technology and successfully developed Casambi wireless solutions before there were even any Bluetooth Low Energy devices on the market.

## 3. What is the biggest challenge Casambi has faced? Are there any learning points for the rest of the sector?

The biggest challenge Casambi has faced is in switching the risk narrative. People still feel that wireless is magic; that wired technology is visible and is therefore more reliable. Yet, befriend any specifier and they will share war stories from the wired trenches, where projects have not gone

as planned due to miscommunication or miscalculations. 'Better the devil you know' is not always the safest way.

With Casambi, one only needs to select Casambi Ready products (of which there are thousands to choose from) and the configuration and programming will happen in the app. Possibilities of costly mistakes are reduced since settings can be reset and rectified in the software.

#### **4. What do you think can be done to move the needle towards built environment sustainability?**

Building a sustainable future is a collaborative effort from all parties – Government, the industry, and its stakeholders. Education is important as well. We have observed a greater awareness of sustainability and open conversations in the built environment sector thanks to more educational messages and activities. However, such tactics are only effective to a certain extent. More must be done to translate the awareness into action. Industry leaders should come together to build a platform and share their best practices with smaller organisations.

#### **5. How does the future of our built environment look like to you?**

The Internet of Things (IoT) has created new ways of communication and capabilities in production. While the adoption velocity of modern technologies is crucial, it also poses challenges to conventional business structures.

The major shift on environmental and social aspects will continue and be further emphasised on. Alongside the pressure on manufacturers to supply goods and services to a growing population is the immediate challenge of reducing carbon emissions. It is vital for organisations to use healthier and more sustainable materials. Smart designs and the use of IoT solutions that contribute to health and wellbeing will be increasingly popularised in BE sector.

#### **6. What's next for Casambi?**

Casambi is poised to accelerate business growth globally by focusing our efforts on activities that support our ecosystem partners with their product development and commercial roll outs. We are also increasing support for all stakeholders through the provision of global specification, support services and training programmes.

We have also introduced Casambi Pro, which is a planning and pre-commissioning tool designed to further simplify the process of configuring lighting controls. It has been designed for specifiers and commissioning partners who are familiar with the multitude of technical configuration properties that can apply to large lighting projects. With this tool, it is possible to specify the full logic for lighting control even before any of the devices have been installed onsite.