



AGIL<sup>®</sup>  Light

# SMART ESTATE LIGHTING SOLUTION

 ST Engineering

# EMPOWERING CITIES

## WITH SUSTAINABLE IOT LIGHTING

### Driving the Future with AGIL®

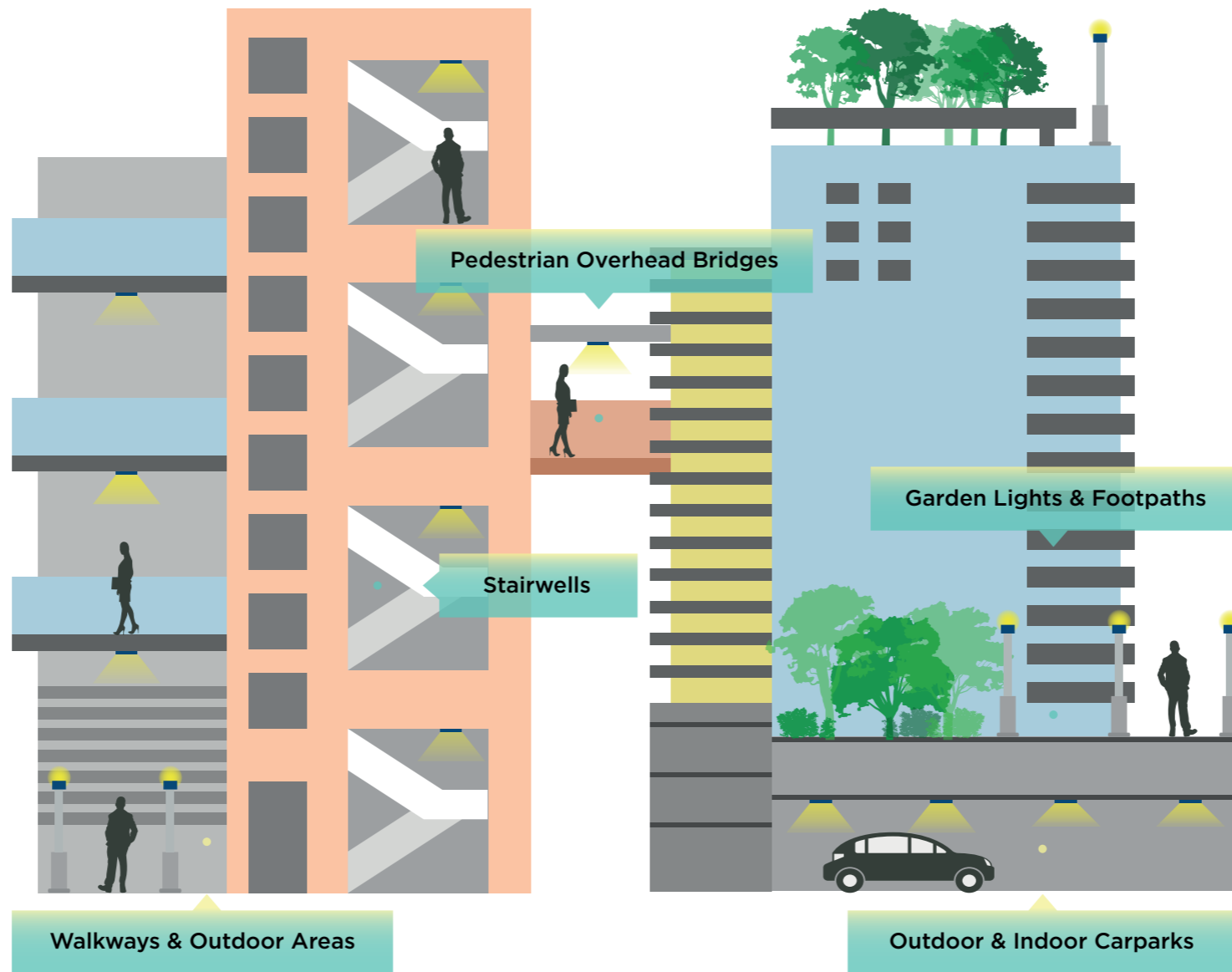
Demand to transform urban spaces into sustainable smart cities enabled seamlessly by cost-effective and smart technologies are shaping the future. We are obsessed with a deep sense of purpose to address a range of evolving challenges, whether it is reducing emission of greenhouse gases, improving asset performance or optimising data analytics and trends for future demand planning to create smarter and safer living environments.

The importance of efficient, connected and data-driven systems, utilising IoT-enabled on-demand lighting technologies that promote energy efficiency, optimised demand planning and increased cost savings drive our solutioning approach. AGIL, our unique solutioning approach, acts as the heart of our conscious innovation to constantly seek and challenge incisive, inventive and intuitive solutions to help solve real-world problems. With emerging technology and experiential thinking, we have effected over 100 large-scale security projects across over 22 cities.

Internet of Things (IoT) is growing at a rapid pace—and on the forefront comes smart lighting. Lighting is one of the highest energy consumers. It accounts for 40% of energy usage and takes up a large portion of maintenance expenditure. City planners now choose to invest in smart lighting for energy-efficiency and sustainability, optimised operational efficiency and secure data analytics for future demand planning without compromising safety, security, and visual comfort.

AGIL Smart Estate Lighting Solution combines a secured wireless mesh network of sensors with a smart control system to achieve maximised lighting efficiency at low operating costs.

Our award-winning solution allows remote configuration and continuous data collection for performance optimisation. The solution also creates a build core network for other smart IoT-driven applications such as automated emergency light tester, temperature sensor, and air quality sensor to generate future actionable insights.



## Features



### Configurable Lighting Profiles

User-friendly interface enables remote configuration and tailored dimming profiles



### Anticipatory Illumination

Occupancy and targeted progressive dimming



### Self-diagnostic & Fail-safe

On-condition monitoring of luminaires allow preventive maintenance and failure prediction



### Scalable & Flexible

Operational convenience to scale network infrastructure according to demand and requirement



### Secure

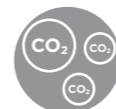
User authenticated, reliable and robust 128-bit Stream Cipher Encryption resistant to unauthorised access

## Benefits



### Cost & Energy Savings

Drive down operating cost of up to 55% on top of LED savings



### Green & Sustainable

Reduce carbon emission for environmental sustainability



### Smart Data Analytics

Intelligent analytics to assess lighting patterns for demand planning



### Future Ready

Interoperable technology for larger IoT-driven smart city applications



### Affordable

Financing options to address mixed space usage demands



Most Innovative Energy Savings Award (2018)  
IES Prestigious Engineering Achievement Awards

City planners and business owners use smart lighting for cost saving, operational efficiency, sustainability and remote monitoring for a wide range of applications.

#### Use case application Residential Estate

Challenge: Upgrade of lighting network in large scale brown field matured estate due to multiple environmental communication interference causing disruption of lighting to residents

Solution: 10,000 LED lights with motion-sensing technology managed within a single platform equipped with data analytics for environment monitoring and maintenance optimisation

Result: Energy consumption slashed by more than 64 percent. Improved lighting environment and experience for residents without service disruption. The IoT-enabled sensors build core network for future integration with applications such as water metering, temperature sensing and air quality monitoring.

#### Use case application: Commercial Building

Challenge: Indoor carpark with high energy usage due to 24-hour operations

Solution: 260 units x 18W anti-mask and anti-break IP65 LED batten with wireless smart sensors to promote energy savings, improve light quality, remote monitoring for ease of maintenance

Result: Energy consumption slashed by more than 55 percent aligning with the building's sustainability goals. Provided increased maintenance efficiency with the added advantage of tamper-resistant lights to protect against vandalism.

#### Use case application: Hospital

Challenge: Deployment in a brown field link way with aging fluorescent lighting

Solution: LED lighting upgrade roll-out with Smart Energy Dashboard allowing wireless mesh communication between luminaires for improved lighting experience and increased energy savings

Result: Energy consumption slashed by more than 70 percent attributed to data analytics feature to monitor and understand human traffic behaviour within the hospital for future planning.

**ST Engineering** is a global technology, defence and engineering group with a diverse portfolio of businesses across the aerospace, smart city, defence and public security segments. The Group harnesses technology and innovation to solve real-world problems, enabling a more secure and sustainable world. Headquartered in Singapore, it has operations spanning across Asia, Europe, the Middle East and the U.S., serving customers in more than 100 countries. ST Engineering reported revenue of \$7.7b in FY2021 and ranks among the largest companies listed on the Singapore Exchange.

**Urban Solutions** is a leading provider of smart city solutions, we offer a comprehensive and integrated suite of mobility, utilities, infrastructure, and environment solutions powered by deep capabilities in digital connectivity, big data and video analytics, artificial intelligence and robotics.

Our smart solutions span rail and road, autonomous and electric vehicles, mobility payment systems, building security and management systems, as well as IoT solutions for lighting, water and energy management.

**ST Engineering Urban Solutions Ltd.**

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