

## Add-ons and Modules

### A Modular Approach to Technological Integration

iLamp's modular design is its cornerstone, allowing developers to create custom hardware and software modules that seamlessly integrate with iLamp's power and data management systems, ensuring a quick, plug-and-play setup.

Modules are backwards compatible, and so can be built in at manufacture or added at any time in the future, future proofing each iLamp and allowing upsells at the time of sale and any future point.

As new hardware modules are in continuous development by iLamp and its partners each iLamp becomes a perpetual revenue generator, creating a never ending cycle of recurring revenue and sales fees.

Each of these add-on modules consumes power, data and rack space, for which the module is billed via Power as a Service. A module development kit is openly available to all third party developers.

From environmental sensors to advanced communication tools, the iLamp platform is not just about illumination; it's about revolutionising urban infrastructure and providing a robust, future proofed product that becomes the backbone of the smart cities of the future.

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## Add-ons and Modules



### Road Safety

iLamp positively impacts road safety by providing optimal lighting conditions on roads and highways. Its adaptive lighting capabilities can adjust brightness according to traffic conditions, enhancing safety during peak hours and adverse weather conditions. Additionally, camera and communications modules support apps to monitor traffic, detect potential hazards, and improve response times to accidents, further improving road safety.



### Pedestrian Safety

iLamp improves pedestrian safety by providing enhanced streetlighting in areas such as sidewalks, crosswalks, and public transportation stops. Modular cameras can be used to monitor pedestrian movement and help identify crimes and hazards, ensuring a safer environment for walking and other outdoor activities.



### Weather Monitoring Module

Weather sensors can detect changing- weather conditions, such as fog, rain, or snow, and adjust the intensity and distribution of light accordingly. This adaptability enhances visibility for drivers and pedestrians in adverse weather conditions, further improving public safety.



### Environmental Sensors

Air quality monitoring can help track air quality, pollen and pollution levels in real time for proactive data driven responses that limit exposure and maintain a healthy environment. By monitoring and addressing air quality concerns, iLamp contributes to improved broader public health and well being.



### Communications

Communication modules can both expand telecoms coverage and facilitate the transmission of critical information to the relevant authorities and emergency services in case of accidents or security incidents. This real time communication improves response times and overall public safety.

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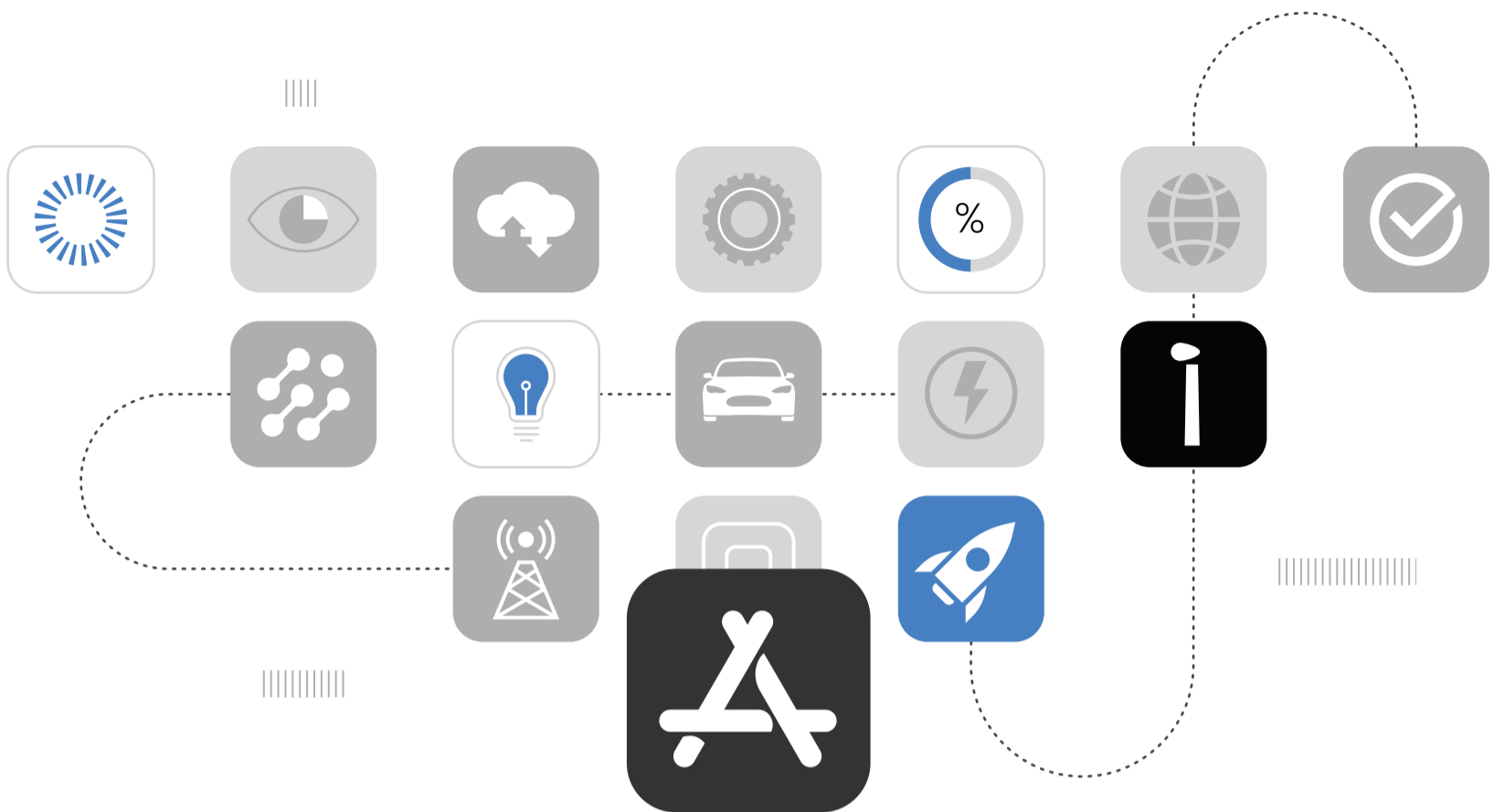
### **Light Pollution Reduction**

The adaptive lighting capabilities of iLamp can minimize light pollution by adjusting brightness levels according to the time of day and surrounding conditions. This can contribute to a better night-time environment, reducing the impact of artificial light on wildlife and human health.

### **Integration with Existing Infrastructure**

iLamp technology can integrate with existing sensors and infrastructure, allowing for enhanced data collection and analysis. By connecting iLamp with sensors a modules facilitating parking, traffic management, telecommunications structural, UV and noise monitoring, fire, leak and flood detection, grid management and many more.

Hardware modules can open their sensors to software apps, facilitating real-time data transmission between sensors and software, creating a comprehensive and interconnected network that monitors and manages various aspects of urban living more effectively.



## iLamp App Store for Urban Innovation

iLamp stands at the forefront of urban technological evolution, akin to how the Google Play and Apple App Store redefined the landscape of software applications. This innovative street lighting solution transcends its primary function, unfolding as a dynamic framework for both hardware and software ingenuity.

### Innovative Solutions

In the iLamp ecosystem, innovative combinations of hardware and software create transformative solutions for urban challenges. For instance, integrated microphones in iLamps enable a software application for gunshot detection and triangulation, providing precise location data for rapid law enforcement response, enhancing public safety. Similarly, iLamps equipped with smoke and heat sensors can detect early signs of forest fires, allowing for prompt alerts to residents and emergency crews, significantly mitigating fire damage and safeguarding communities. Motion sensors and cameras on iLamps optimise traffic flow through AI-driven analysis of traffic patterns, reducing congestion and accident risks, and contributing to a more environmentally friendly urban environment. These examples exemplify iLamp's potential in revolutionising urban living through smart, integrated technology solutions.

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## Empowering Local Innovation, Impacting Globally

While iLamp's immediate influence is local, enhancing public spaces with smart lighting, its potential for global technology dissemination is significant. This model encourages local developers to contribute to a growing repository of modular solutions, potentially setting new standards in urban technology and smart city development.

## Creating a Sustainable Ecosystem

The beauty of the iLamp model lies in its economic and collaborative structure. Territorial holders stand to gain considerably, capturing over 20% of the revenue from apps developed in their region, incentivising territorial holders to promote innovation within their locale but also allowing them to include these novel solutions in their sales pitches, thereby broadening their offer to clients. This creates a symbiotic ecosystem where territorial holders, developers, and end-users benefit mutually.



### Intelligent Lighting

iLamp's intelligent lighting app ensures the correct lighting level for the area it's positioned in, adapting to visibility and weather.



### Power As A Service

PaaS redefines how energy is generated, distributed, and monetized on each iLamp.



### Communications Billing

Communications billing enables each module to pay only for the data it uses, as well as for open WiFi network billing.



### Batteryware Monitoring And Optimisation

BatteryWare conducts comprehensive monitoring, and real-time analysis to ensure optimal battery conditions.



### Video Surveillance

Video surveillance enables remote real time monitoring, motion detection, high definition video, smart alerts and integrations.



### Weather Monitoring

Weather monitoring uses environmental sensors to act as a local weather station, relaying real time data to stakeholders.