iLamp
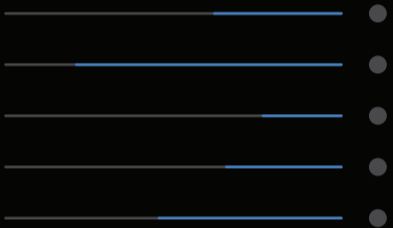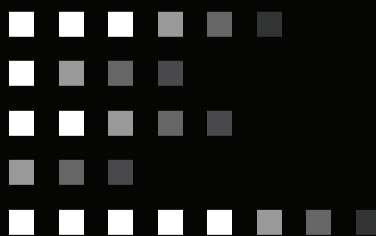
Introduction

The iLamp

What is iLamp?

iLamp is a groundbreaking, self powered, modular, and enhanced lighting solution designed to address multiple urban challenges. By integrating autonomous power generation capabilities, and monetizing them iLamp is easy to install anywhere and alleviates grid strain, contributing to energy sustainability. By using Power as a Service to bill for this energy, iLamp generates its own revenue. Its modular design supports a wide range of smart city applications, offering further monetization opportunities and revenue streams and making it a future proof solution for urban infrastructure.

Equipped with low profile, cylindrical solar panels, iLamp harnesses renewable energy, storing it in batteries for efficient distribution. This setup powers street lighting but also supports various smart sensors and modules, eliminating transmission costs and reducing emissions to zero.

Each iLamp is customizable to meet the needs of different neighborhoods-supporting add-ons like 5G WiFi, traffic management, CCTV, environmental sensors and a plethora of other modules, sensors and software. This modularity ensures a quick, plug-and-play setup, making it adaptable and future proof and providing licensee's with various upsells and benefits.

iLamp qualifies as enhanced street lighting, which has been shown to reduce crime by 20-40%. Implementing iLamp can therefore significantly reduce various crimes and improve public safety which improves quality of life and stimulates local economies.

Through it's App and Module Stores, iLamp is a dynamic framework for unlocking hardware and software ingenuity, similar to how Google Play and Apple App Store revolutionised smartphones capabilities.

iLamp is not just a streetlight; it is a comprehensive urban solution and strategy designed to enhance safety, sustainability, and spur economic growth. By leveraging advanced technology and modular design, iLamp offers a future proof infrastructure that adapts to evolving needs, making countries, cities, towns and neighbourhoods around the globe safer, more attractive, and better connected.

Whether through crime reduction, safety, economic stimulation, or health and environment benefits, iLamp stands as a beacon of innovation in urban development, illuminating the future it unlocks.
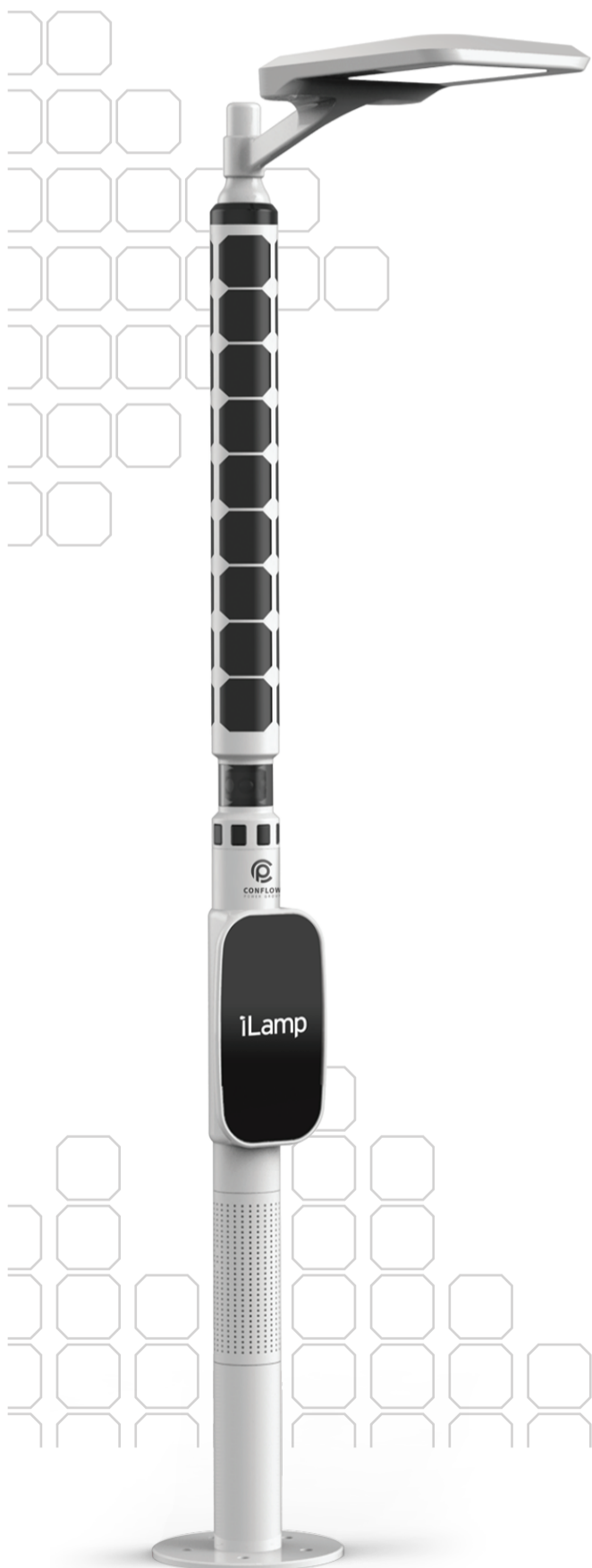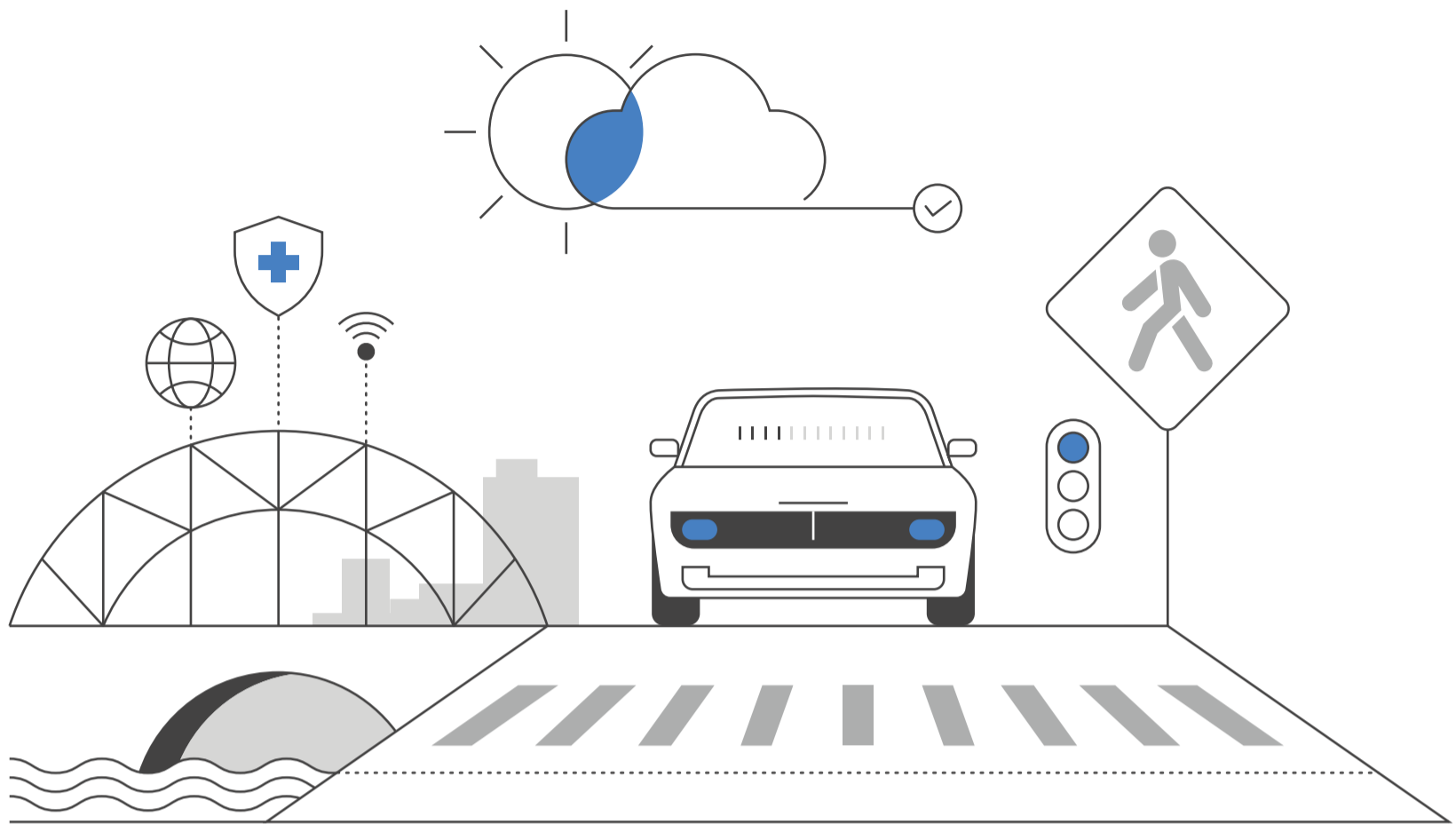
The iLamp

Why iLamp?

iLamp has a transformational effect on communities making them safer, more prosperous, social and desirable. It is the single most cost effective improvement any country, city, town or neighbourhood can make, offering multifaceted benefits that dramatically outweigh its costs.

Saves Lives: On both streets and the road. Pedestrian and driver fatalities are 58% more likely on unlit roads. By providing enhanced illumination iLamp protects both the community and road users.

Decreases Crime: iLamp improves visibility, studies have shown that this enhanced street lighting leads to sustained reductions in crime rates of over 40%. Implementing iLamp improves crime rates, deters potential crimes, creating safer, more welcoming public spaces that can be used after dark, encouraging outdoor activities, social interactions and commerce.

Increases Property Values: Street lighting correlates with increased property values - with each 1% reduction in crime leading to an approximate 0.5% to 1% increase in property values.

Creates Jobs: iLamp sublicensing creates and inspires local jobs that keep money within the communities they serve, creating a virtuous cycle. Sublicensing can be made available down to a neighbourhood or zip code level.
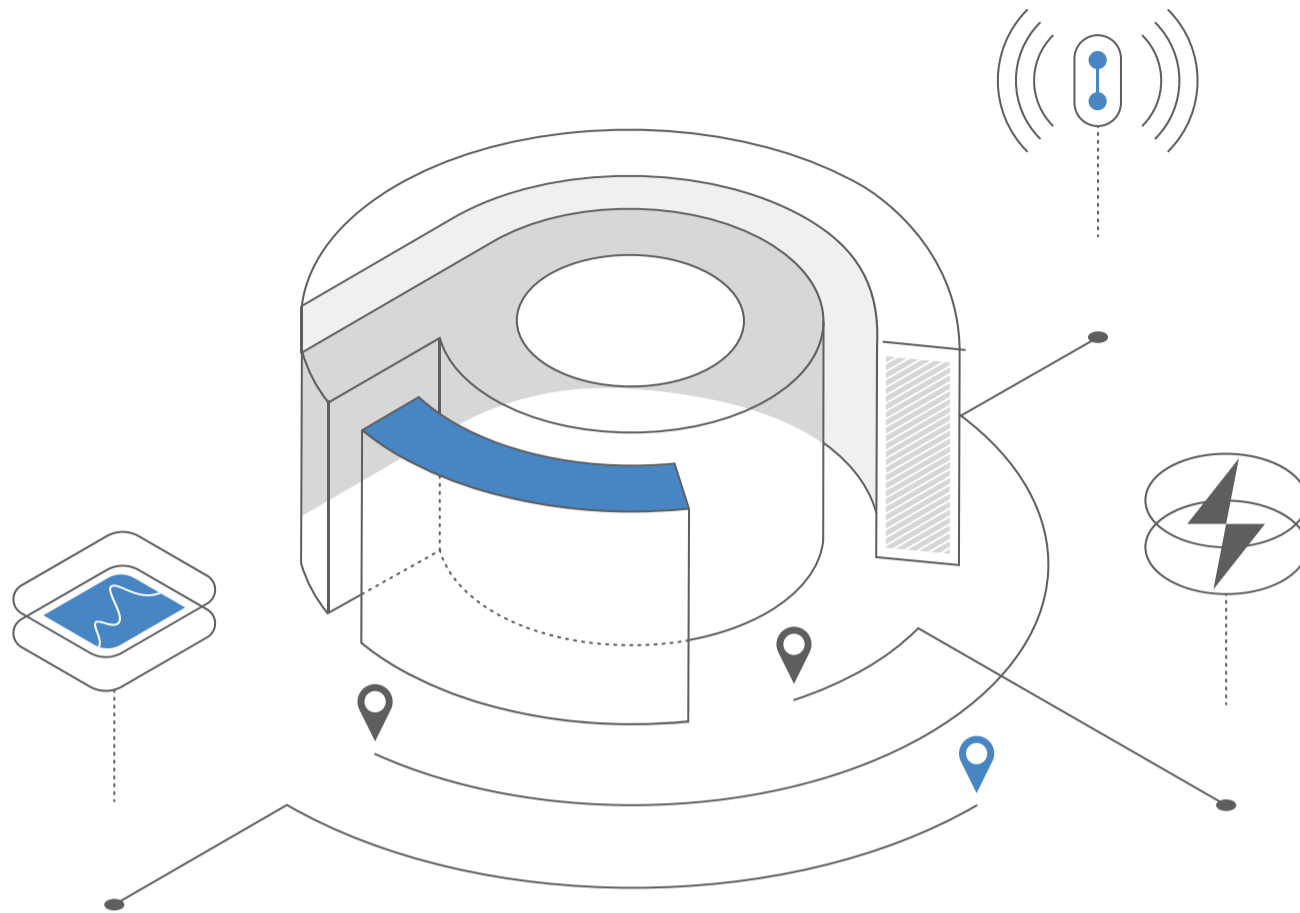
The Power of Conflow

Flagship Product of a Global Technology Aggregator

iLamp is the flagship product of the Conflow Power Group, a company with extensive global manufacturing capabilities, years of experience in product development, electronics, technology aggregation and strategy. Conflow Power Group focuses IoT and smart city solutions, owning several key technologies that make iLamp possible, ranging from advanced electronic modules and power management systems to battery monitoring, automatic lighting, LED technologies and software.

Conflow Power Group collaborates with several external developers to adapt their technologies for iLamp, providing a comprehensive development kit and specifications to support these innovations. This collaboration has led to a robust, established ecosystem surrounding every key aspect of streetlighting. Additionally, iLamp integrates a variety of smart city applications, making it the most comprehensive streetlighting solution available.

The company is committed to future innovation, with several new products in development, continually enhancing the capabilities and applications of iLamp. This ensures that iLamp remains at the forefront of smart city technology, offering unmatched performance and versatility in lighting solutions. iLamp is not only a product, but a strategy that has spawned an entire ecosystem of revenue generating activity for license holders to participate in.
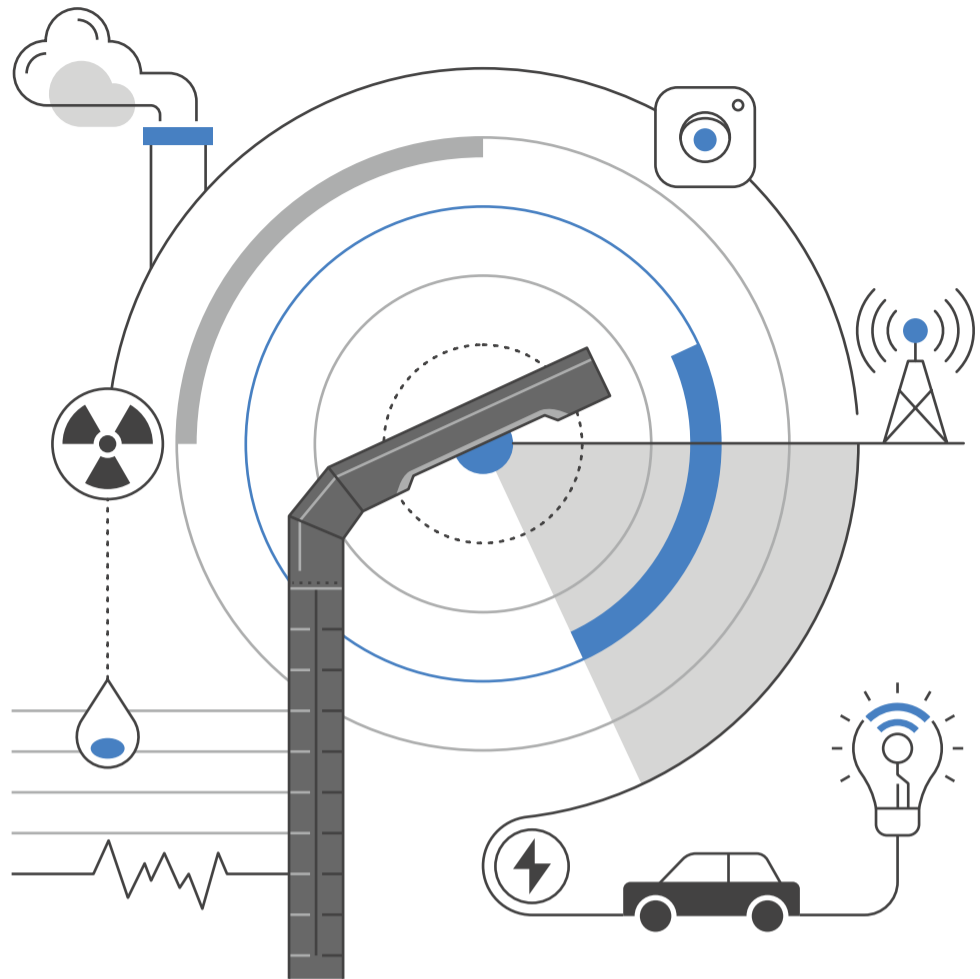
Public security and health

Road Safety & Traffic

iLamp improves road safety, decreasing road fatalities of both road users and pedestrians. iLamp's optimal lighting enhances safety during peak low light hours and adverse weather conditions. Modular camera and communications systems can help monitor traffic, detect potential hazards, and improve response times to accidents, improving road safety and reducing traffic.

Pedestrian Safety & Crime Deterrence

iLamp deters crime and increases pedestrian visibility by providing lighting in areas such as sidewalks, crosswalks, and public tra=nsportation stops. Modular cameras can be used to monitor pedestrian movement and help identify potential hazards or security threats in real time ensuring safer pedestrian environments.

Weather Monitoring Module

Weather sensors can detect changing weather conditions, such as storms, 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.

Air Quality

Air quality monitoring can help track pollution levels in real time, allowing authorities to implement appropriate measures to 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. creating a comprehensive and interconnected network enabling authorities to monitor and manage various aspects of urban living more effectively. This network of sensors can lead to improved decision making, more efficient use of resources, and a better understanding of the

Light Polution 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.

Public Protection

iLamp can host smoke, gas, gunshot detection, thermal imagine and communications modules, enabling the quick detection of public safety hazards, such as wildfires, shootings, gas leaks or explosions, these can then be relayed in real time via the communication module to the relevant authorities, enabling faster, more targetted and data driven responses.

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. iLamp transcends its primary function, unfolding as a dynamic framework for both hardware and software ingenuity.

Innovative Solutions

In the iLamp ecosystem 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.

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.

Power as a Service

Power as a Service (PaaS) is a payment processor connected to an energy management and distribution solution which was designed from the ground up to manage clean kilowatt hours (kWh) of locally produced and consumed power. PaaS enables the generation, metering, and monetization of this localised power on a decentralized basis between varied stakeholders.

Each iLamp unit is equipped with solar panels that harness renewable energy, storing it in batteries for efficient distribution. This setup not only powers the streetlighting but also supports a variety of smart sensors and modules. These modules may include cameras, environmental sensors, weather stations, and telecommunications devices which all use power, and all may have separate billing accounts with PaaS. By metering energy generated and consumed by each device PaaS enables a new paradigm where power can be locally generated for local consumption, eliminating transmission costs and emissions to near zero.

Under the PaaS model, the iLamp licensee can create PaaS contracts that delineates roles for both power suppliers and power users. Much like traditional utility models, these contracts enable accurate billing based on actual energy consumption, this is a significant step towards redefining how energy is generated, distributed, and monetized in the modern era and a crucial extra revenue stream which can be explored by iLamp licensees.
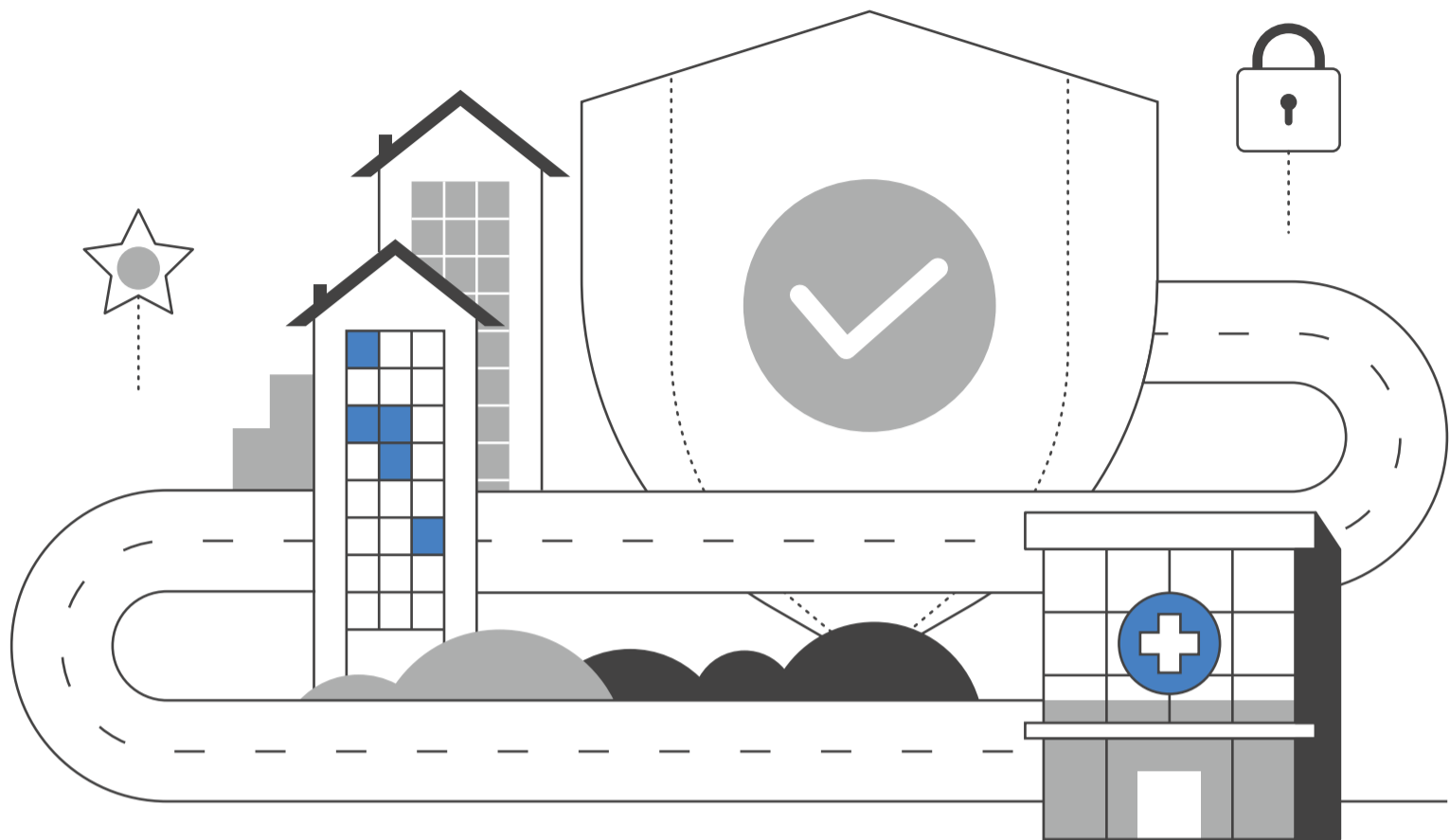
Enhanced Street Lighting

Michigan has a violent crime rate of 478.1 incidents per 100,000 people and persistent property offenses make it crucial to implement effective crime prevention strategies.

Studies have shown that improved/enhanced street lighting reduces crime by 20-40%, making enhanced lighting the single most effective way to lower crime while also increasing pedestrian and road safety.

Specific studies indicate:

UK Home Office: 20% reduction in crime, including vehicle-related crimes.

U.S. Study: Published in Criminology & Public Policy showed 45% reduction in nighttime index crime and a 39% reduction in daytime index crimes following enhanced lighting installation.

Enhanced street lighting could lead to a significant reduction in crime rates, potentially by 20-30%. This includes reductions in various types of crimes such as vehicle theft, property crimes, and violent crimes.

For every 1% reduction in overall crime, a 0.5% to 1% increase in property values is expected.

Enhanced lightingnot only increases property values significantly in previously unlit or poorly lit areas but lead to further economic stability and growth by attracting businesses and improving the quality of life for local residents. The increase in property values and improved safety drive more investments in the local infrastructure and services.

Better lit streets improve the perception of safety, leading to increased outdoor activities and community engagement and enhance the effectiveness of other crime prevention measures, such as CCTV surveillance.

To support the implementation of enhanced street lighting, a comprehensive database containing data on crime rates and property values has been compiled. This helps in identifying high crime areas that would benefit most from enhanced lighting, evaluating the cost effectiveness and impact of enhanced lighting projects and monitoring the long-term effects on crime rates and property values.

Enhanced street lighting presents a promising strategy to improve public safety, reduce crime, and boost property values. Given the continents rapid growth and active real estate market, investing in such infrastructure yields substantial benefits, making neighborhoods safer and more attractive to residents and businesses.
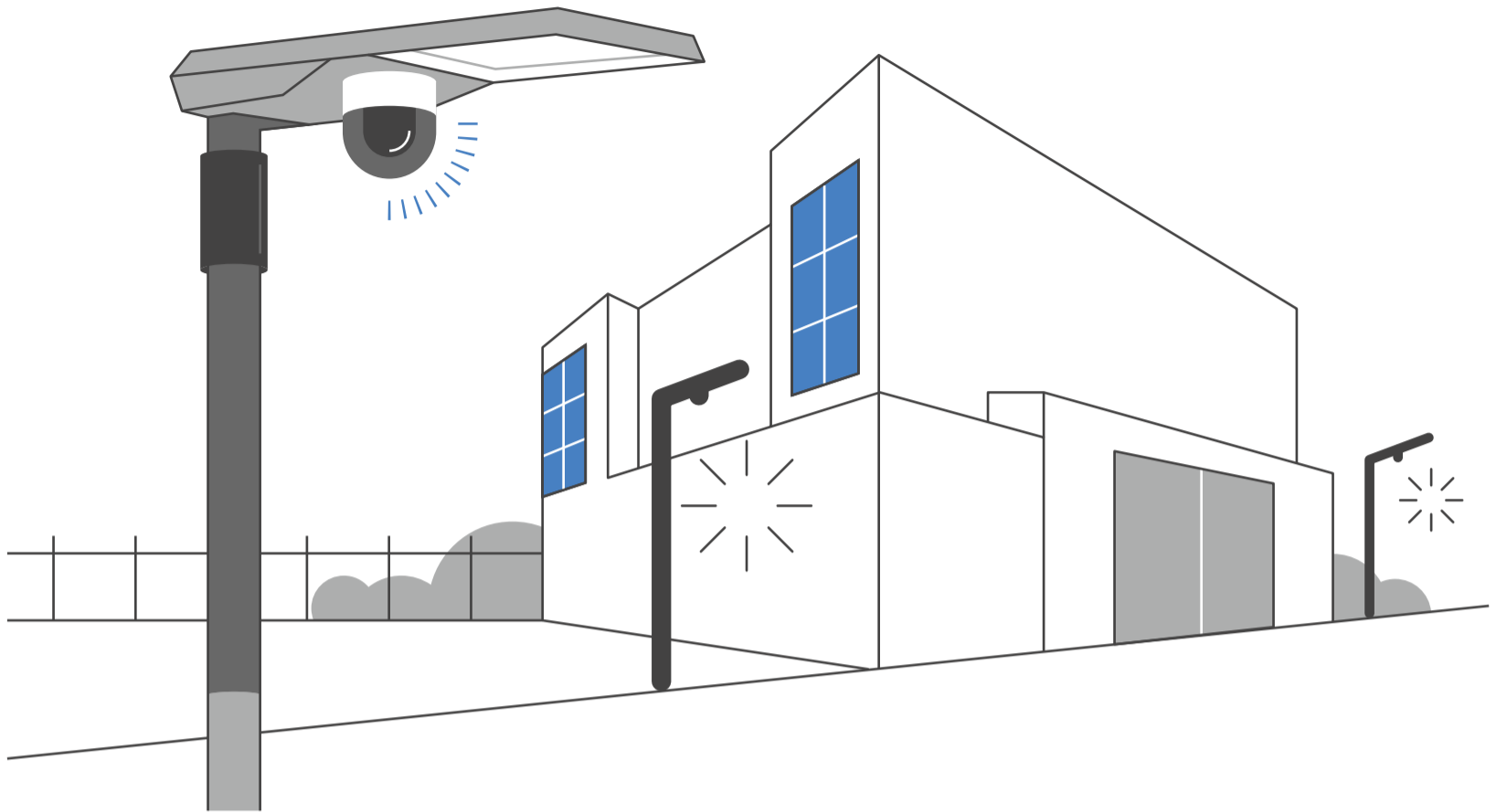
The iLamp Effect

Imagine a neighbourhood with above average crime, where after dark the streets feel unsafe and are inadequately lit.

People avoid the area, the perceived danger deters people from frequenting local businesses, which in turn close earlier or shutter permanently. The neighborhood loses its vibrancy and appeal, leading to declining property values and further disinvestment. People leave for brighter pastures.

Now imagine iLamp's are installed, their enhanced lighting and cameras begin to deter crime, first due to the lighting, monitoring, and then due to the larger presence of people who now feel safe walking the streets.

This reduction in crime leads to a domino effect: as people feel safer, they are more likely to walk around, visit local businesses, and participate in community activities. This increased presence of people further deters criminal behavior, creating a safer and more welcoming environment.

Better street lighting also contributes to road safety. Well lit streets significantly reduce the likelihood of traffic accidents and pedestrian casualties. Emergency services, including police, firefighters, and medical personnel,

benefit from improved visibility, allowing them to navigate the area more efficiently and locate incidents quickly. This enhanced response capability saves lives and mitigate the severity of emergencies.

As safety improves, the community begins to experience a revival. People start to move into the area, attracted by the now safer and more appealing environment. This influx of residents drives up property values and stimulates the local economy. Businesses extend their operating hours, taking advantage of the increased foot traffic and nighttime activity. Public transportation becomes more accessible and reliable, allowing residents to shop, socialize, and commute safely after dark. This increased mobility to a higher quality of life and a more vibrant community atmosphere.

iLamp is not only functional, but aesthetically pleasing. They can be positioned to highlight architectural features and are designed to minimize light pollution, creating a pleasant nighttime atmosphere.

iLamp modules make each lamp future proof, and can tailored to the community's needs. For instance, environmental sensors can help allergy sufferers by providing real-time air quality data. Other modules can offer early warnings for forest fires, gas leaks, and extreme weather events, enhancing overall safety and preparedness.

This story is backed by the hard evidence of communities around the world that have undergone this transformation:

The Impact of Street Lighting on Crime, Fear, and Pedestrian Street Use - by Kate Painter - Institute of Criminology, University of Cambridge, UK https://popcenter.asu.edu/sites/default/files/137-painter-the_impact_of_street_lighting_on_crime_fear_an.pdf

Colege of Policing - Improved Street Lighting https://www.college.police.uk/research/crime-reduction-toolkit/street-lighting

Can deterrence persist? Long-term evidence from a randomized experiment in street lighting - Criminology and Public Policy

iLamp Sales, Installs, and Maintenance

iLamp sales represent the largest revenue producing activity for licensees, providing them with a lucrative opportunity in the rapidly growing smart lighting market. To support sales efforts, iLamp offers comprehensive resources including sales proposals, branding kits, detailed product information, and benefit training resources. Additionally, licensees receive guides on available grants and best practices for approaching towns, counties, and municipalities, ensuring they are well-prepared to begin sales activities immediately.

iLamp products can be sold to a diverse range of public and private entities. Potential clients include public streets and highways, educational campuses, parks and recreational areas, parking lots, hotels and resorts, industrial estates and factories, hospitals and healthcare facilities, residential developments, train stations and railway networks, airports and ports, shopping complexes and malls, small businesses, stadiums and arenas, pathways and cycleways, homeowners associations and many more.

This broad market base provides licensees with extensive opportunities to secure contracts and drive significant sales revenue.

iLamp has been engineered for ease of installation, requiring minimal man-power and equipment. This user-friendly design allows sales agents to offer efficient and cost-effective installation services. Installation guides and cost calculators are readily available from iLamp, ensuring that licensees can accurately estimate installation costs and streamline the installation process.

Sales agents have the flexibility to either control the installation process themselves or sublicense these services. By sublicensing, they can generate additional revenue through the sale of installation rights or by charging royalties on services rendered. This approach enables licensees to maximize their revenue potential and capitalize on every aspect of the sales and instal-lation process.

Maintenance of iLamp systems is another key revenue stream for licensees. Similar to installation, maintenance services can be controlled directly by the licensee or sublicensed. Charging royalties on maintenance contracts pro-vides a continuous revenue source, akin to receiving a commission on each contract. This ensures that licensees benefit not only from the initial sale but also from ongoing service agreements.

The combined revenue from sales, installation, and maintenance of iLamps is substantial. With a wholesale cost of $5000 and a sale price of $9000 per unit, a small installation project of 35 units can generate over $300,000 in sales revenue alone. This significant profit margin underscores the financial viability and attractiveness of iLamp's business model for licensees.

iLamp's direct sales, installation, and maintenance services offer a robust business opportunity for licensees. By leveraging the comprehensive resources and support provided by iLamp, licensees can effectively pene-trate the market, secure diverse contracts, and achieve substantial revenue growth.
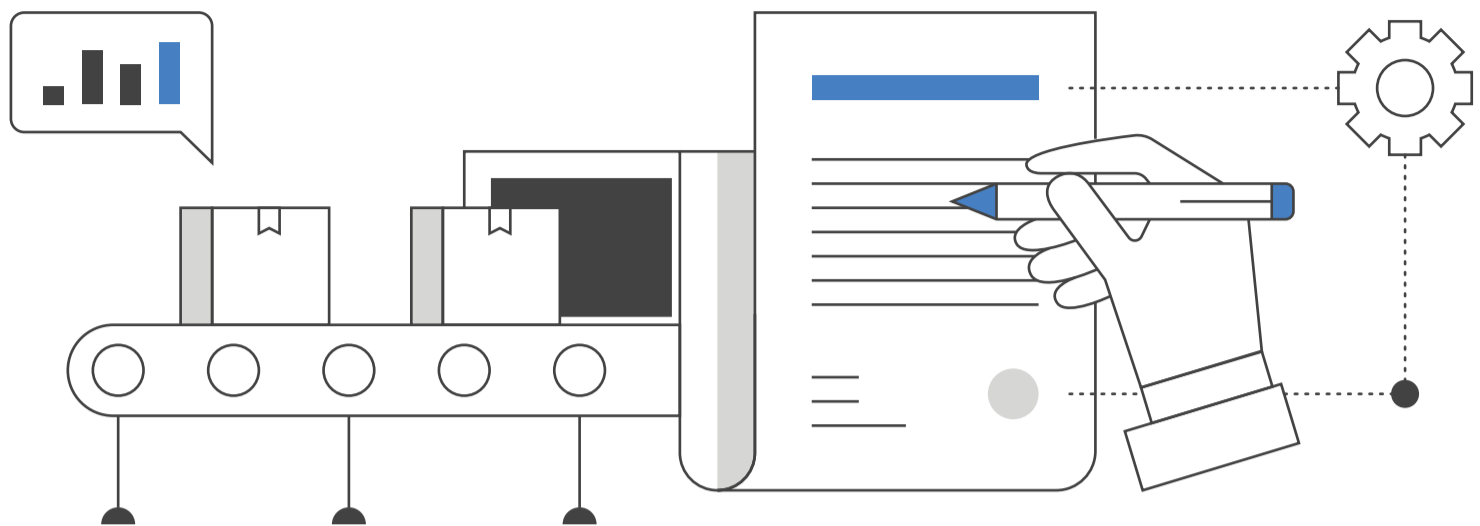
Local iLamp
Micro Factories

The Local Benefits of iLamp

The iLamp solution brings a host of local benefits that extend beyond simple street lighting, creating a transformative impact on communities.

iLamp provides the blueprint for each territory to develop microfactories, creating local jobs and fostering economic growth at a local level.

These microfactories, designed to produce high-mix, low-volume lamps, allow for the customisation of streetlights that fit the specific environmental and cultural needs of each community. This flexibility ensures that iLamps are not just functional but also align with the unique character of the city or region.

For municipalities, iLamp offers an opportunity to engage the local population through design competitions and public consultations on the sensors to be installed and services to be provided, allowing cities to involve residents in shaping the aesthetic and function of their public lighting. This fosters a deeper sense of ownership and pride, as the streetlights become an integral part of the city's identity.

As streetlights evolve into critical nodes in smart city infrastructures, iLamp ensures that these nodes remain locally owned, capturing economic value within the community, creating a virtuous cycle of investment and growth.

iLamp's locally trained teams handle sales, manufacturing, assembly, installation and maintenance. The presence of free iLamps in key areas such as schools, churches, and community centres also enhances safety and connectivity, contributing to community well being.

Beyond street lighting, iLamp's App Store and Module Store inspire local innovation, providing a platform where communities can develop and implement solutions tailored to their environment. These innovations can then spread to other regions with similar challenges, creating new revenue streams and further boosting local economies. This global-local exchange ensures that money not only stays within the community but attracts external investment as well.

With the potential to reduce crime, improve safety, and create economic opportunities, iLamp fosters a positive feedback loop of community benefits. Its partnerships with diverse local stakeholders—such as property developers, public works contractors, councils, community leaders, and various local consultants—ensure that each iLamp is a perfect fit for the community it serves, enhancing he vibrancy and sustainability of cities around the globe.

The iLamp Microfactory system empowers territories to efficiently prioritise production by leveraging locally available materials and expertise. This approach enables regions to make the best use of local resources while maintaining flexibility in production.

By integrating procurement with local assembly, the system strikes an optimal balance between sourcing materials and producing components locally, ensuring streamlined, energy efficient, and time sensitive manufacturing.

This model is particularly suited for high-mix, low-volume production, allowing iLamps and other innovations from the Conflow Power Group to be tailored to specific regional needs. The result is a sustainable, responsive manufacturing process that supports local economies and reduces logistical challenges.

iLamp and the paradigm shift

iLamp represents a paradigm shift in urban infrastructure, blending sustainability, technology, and community impact into a single, transformative solution.

By integrating advanced features like modular design, autonomous power generation, and smart city applications, iLamp addresses the pressing challenges of urbanization while opening new avenues for economic growth, public safety, and environmental stewardship.

iLamp's ability to reduce crime, enhance road safety, and improve public health directly contributes to a better quality of life. It empowers cities and neighborhoods to become safer, more vibrant, and economically stable, creating spaces where residents thrive and businesses flourish.

The introduction of iLamp microfactories and localized manufacturing creates a ripple effect of job creation, skill development, and regional innovation. By keeping resources and revenue within communities, iLamp fosters economic resilience and strengthens local ecosystems.

Future Proof Urban Innovation iLamp's dynamic framework, powered by its App and Module Stores, positions it as a continuously evolving solution, capable of adapting to the changing needs of cities.

From real-time air quality monitoring to advanced traffic management, iLamp ensures that urban centers remain connected, efficient, and sustainable.

A Global Standard for Urban Development As the flagship product of Conflow Power Group, iLamp is not just a lighting solution, it's a platform for global innovation and collaboration. By integrating locally developed modules into a global network, iLamp creates a symbiotic relationship between territories, driving technological progress and setting new standards for smart city solutions worldwide.

The journey toward smarter, more sustainable urban environments begins with a single step, and iLamp is that step. By choosing iLamp, territories unlock unparalleled opportunities for growth, innovation, and impact. Together, we can create a brighter, safer, and more connected future for communities around the globe.