



**PHILIPS**

Outdoor lighting

IntelligentCity

IntelligentCity solution

Bring  
your city  
to life with  
**connected  
lighting**



# The challenges facing **your city**



## Sustainability

One of the biggest challenges facing cities is the increasing emphasis on environmental regulation. Acting responsibly towards the planet means finding the right balance between meeting your city's energy saving and CO<sub>2</sub> targets and your public lighting infrastructure, reducing light pollution, and providing the high-quality lighting that can enhance modern city life to become a green city.



## Livability

Lighting environments to make people feel welcome and feel safe is key to creating a livable city. The challenge is to be able to provide lighting to suit each zone, from residential areas and public spaces in the city center to busy ring roads and industrial sites. Light when and where you need it, in precisely the right levels and color to make the city safer, reduce crime rates and increase attractiveness for citizens and visitors and stimulate growth of the local economy.



## Urbanization

Lighting your livable city is not a short-term venture. As more people and businesses move into your city due to urbanization, you will need to add extra capacity to light new neighborhoods, urban areas and business districts. The challenge is to choose a future-proof solution that can adapt and change to your city's needs, with the scalability to cope with rapid urbanization. A future-proof way to bring your city lighting to life.



## Economic uncertainty

In the current economic climate, many municipalities are feeling the burden of escalating debt. This is not the time for contemplating huge investments. In fact you are probably looking for accountable ways to reduce the budget that you need to manage your city infrastructure investments, maintenance, manpower and energy costs.



## Technological revolution

The cost of processing, managing, storing and transmitting data has collapsed. At the same time open standards and interfaces have increased. The result is a growth in cloud-based computing that relies less on hardware and more on software and intelligent IT solutions. This is something your city will need to embrace as you need to incorporate data maintenance and monitoring to become accountable.

Brings your city to life

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Ease of use

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Efficiency and flexibility

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Future scalability of city lighting

# Realize the future of city lighting

Imagine your city as a place in which people can move around freely and safely whenever and wherever they want to. A city where all the dark or shadowy areas can be illuminated when needed. Where the city center, parks, walkways and main urban traffic routes can be lit flexibly; adjusted to the needs of people and traffic flow; and be ready to change over time, to improve livability.

Imagine a technology that could help you switch and dim streetlights in selected areas of your city. For example, in a residential area when the night-time traffic density is low. Or increase the lighting level in the inner city when the bars and nightclubs close. Or to support an emergency team during an accident. Imagine being able to deliver light exactly when and where it is needed – all by a simple mouse click.

Imagine a lighting solution that will significantly reduce your energy consumption and operational complexity, cutting your costs and optimizing maintenance processes at the same time, with benefits to both the environment and your municipality budget. Such a solution will be greatly appreciated by your mayor and local politicians, who will be seen as economically prudent.

Imagine a management system where planning, controlling and managing your entire lighting data would be easier than ever before, enabling automatic data transfer of your public lighting assets, managing and reporting and confident decision-making on facts for future investments on replacements or maintenance works.

It's time to stop imagining, and start putting your dreams into practice. Philips IntelligentCity maximizes ease of use, efficiency, flexibility and the future scalability of city lighting. Bring your city to life, with IntelligentCity connected public lighting.

# IntelligentCity Getting city lighting **under control**





A simple solution

CityTouch

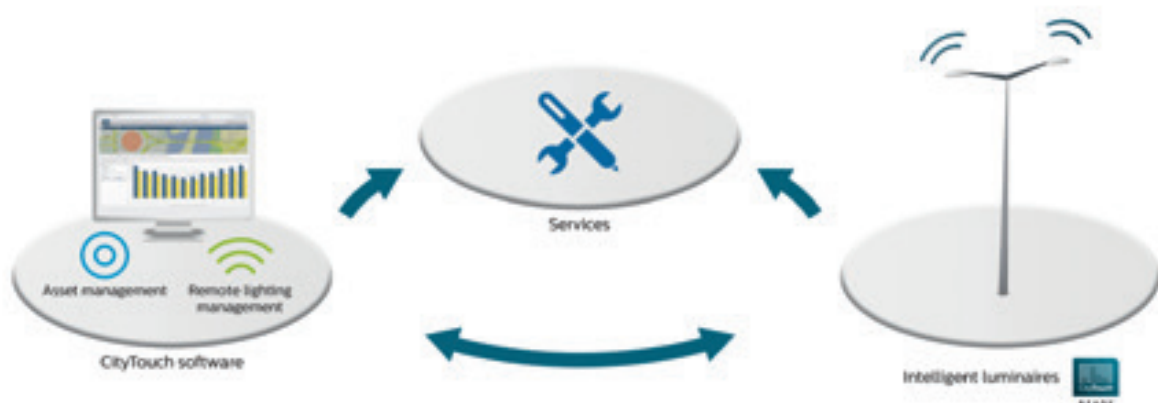
Intelligent luminaires

Dedicated services

IntelligentCity is a connected public lighting solution for cities. It is transforming the way public lighting is controlled, managed and maintained. IntelligentCity is a dynamic, intelligent and flexible way to bring your city to life.

The concept is incredibly simple. This unique solution combines three differentiating elements:

- **CityTouch** – Lighting management platform that can link all the public lighting assets in your city so you can easily manage and control them from your desk.
- **Intelligent luminaires** – CityTouch Ready plug-and-play LED luminaires that are designed for automated connectivity and no-hassle commissioning – all controlled remotely by CityTouch via the public mobile network.
- **Services** – Available separately or combined in a tailor-made, turnkey package. Our dedicated services mean you can outsource several tasks, reduce your investment risk, and be guaranteed a completely coordinated end-to-end solution.



IntelligentCity gives you real-time insight into the status of your public lighting to enable you to respond quickly to the changing needs of your city. The end result will be a solution that helps cities and city operators improve operations, better manage energy consumption, improve livability, safety and sustainability, and reduce costs.



“As a citizen, I am looking for a pleasant and vibrant city where I can work and live, and enjoy after dark. I want a bright, lively and varied cityscape – one that increases my feeling of safety and well-being, but which respects my need for a green, sustainable urban environment.”



# IntelligentCity is for people

Lighting can transform the city into a vibrant, exciting space that people want to spend time in after dark. But it must also respect the needs of its residents. Artificial lighting is responsible for 19% of all the energy consumed worldwide. It can also result in a night sky that is 500 times brighter than is natural.

IntelligentCity achieves the perfect balance between a beautiful city ambience and preserving the darkness that makes our cities more livable. IntelligentCity improves the livability of your city. It increases traffic and social safety, improves well-being, leads to the beautification of cities, and is an important factor in crime reduction.

## My needs



### Sustainability

- Green city
- Saving energy
- Reducing carbon footprint
- Minimizing light pollution
- Ensuring sustainable public lighting



### Livability

- Flexible light at the right levels
- Providing comfortable high-quality lighting
- Making cities more attractive to people



### Urbanization

- More light needed
- Light that adapts and changes to city needs
- Light that is scalable and future-proof to cope with rapid growth

Increased safety and enhanced well-being

More beautiful cities

# Key benefits for people



## Increased safety and enhanced well-being

Light affects the quality of life. It is an important element in how comfortable we feel. Connected public lighting maximizes safety in your city by providing the right lighting levels at the right times – for vehicles and pedestrians.

With managed lighting levels on demand, IntelligentCity also means you can optimize illumination and safety at junctions and pedestrian crossings, during emergency situations, maintenance programs or special events, or even dim street lights to reduce light pollution. It enables the dark skies to be reclaimed, and promotes a healthy and restful environment.

Use low light levels in the morning as your city wakes up, and then turn up the brightness as the day turns to night. IntelligentCity is as dynamic as life in your city.

*IntelligentCity in practice:  
Adjust the light level temporarily in areas where more accidents happen or criminal activities appear.*





### More beautiful cities

Lighting solutions that delight and inspire can enhance a city's appeal and attract more visitors. Use it to highlight tourist destinations, public squares, monuments and parks. Create attractive and inviting atmospheres that will encourage people to stay in the city for longer and stimulate local business to settle. With IntelligentCity you can flexibly transform a city's nightscape, creating an inviting ambience for citizens as well as for visitors.

*IntelligentCity in practice:  
Enhance public squares with ambience lighting and adjust the lighting levels during public holidays or special city festivals to create extra atmosphere.*





“As a lighting operator responsible for the public lighting infrastructure I am looking for an attractive way of making the city more livable through smart solutions that are enabled by information and data communication technology. I need flexible control, with connected public lighting that responds to the city’s changing needs. And I need it to meet the needs of the service companies that I liaise with, who are constantly looking for added-value services they can provide to me.”

# IntelligentCity is for lighting operators and service providers

Over the last three years, public lighting has gone through a massive revolution in the transition from conventional lighting to LED technology to digital lighting. The combination of LED with new digital technologies opens up new opportunities. Now it is so much easier to optimize the business of installing, controlling and maintaining your city public lighting installations. Meanwhile the digital revolution is opening up huge opportunities for new business models too.

## My needs



### Sustainability

- Green city
- Saving energy
- Reducing carbon footprint
- Minimizing light pollution
- Ensuring sustainable public lighting



### Technological revolution

- Complex data process
- Open standards
- Interfaces
- Cloud-based computing
- Dealing with increasing costs and management burdens



### Economic uncertainty

- Minimize investments
- Being accountable
- Manage city infrastructure
- Reduce costs



### Livability

- Flexible light at the right levels
- Making cities more attractive to people
- Providing comfortable high-quality lighting



### Urbanization

- More light needed
- Light that adapts and changes to city needs
- Light that is scalable and future-proof to cope with rapid growth

Take decisions confidently

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Improve maintenance effectiveness

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Save energy more easily

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Create new business models

# Key benefits for lighting operators and service providers

## Take decisions confidently

IntelligentCity lets you build up the knowledge you need to take critical business decisions confidently. With greater transparency in your public lighting data you can easily identify and carry out further money-saving initiatives. It will support your decision-making process with up-to-date facts and figures. A city map overview and intuitive interface make your lighting planning operations easier than before.

*IntelligentCity in practice:  
Well-considered investment decision to invest in new lighting to replace the 25 year old lighting installation in your North-East city district.*



### Improve maintenance effectiveness

Effective and easy maintenance and planning of public lighting is key to your daily business. IntelligentCity's tracking tools and reports – tailored to maintenance and replacement work – provide you with the valuable information you need to better plan and improve inspection, maintenance and replacement processes. At the same time, IntelligentCity will help you improve your operational performance and reduce costs.

*IntelligentCity in practice:*  
*Scouting for lamp failures is no longer needed. Simply plan according to the failures reported in your CityTouch program.*

### Save energy more easily

IntelligentCity enables you to make full use of profitable business models that save energy as a result of LED technology and accurate flexible adjustable lighting level opportunities. It helps you as lighting operator or service provider to monitor the availability and the energy consumption of the lighting infrastructure you are in charge of, in the most efficient and cost-effective way.

*IntelligentCity in practice:*  
*Accurate energy metering enables automated reporting, negating the need for inspections of cabinets in streets or calculated assumptions when you do not have this data available for your older street lights.*

### Create new business models

We believe in new partnership models that involve private parties in renovating and improving public lighting. Through this sort of cooperation and using the latest knowledge and technologies, we make sure you have a higher and safer return on your investments, lower operational costs, and higher service levels. IntelligentCity provides the data required by financing investment models such as ESCO or PFI constructions.

*IntelligentCity in practice:*  
*Your lighting renovation investment is paid by savings made on energy consumption and operational costs.*





“As someone responsible for a municipality I have to create a livable and smarter city and take care of my citizens. In my regular council meetings I am constantly debating the advantages of branding our city as a unique, beautiful and secure place. Lighting plays a special part in establishing that identity. With restrictive legislation and the Kyoto Protocol, switching to energy-efficient light sources is high on my agenda. IntelligentCity creates a unique identity and transforms the night scene with lighting solutions that also enhance my city’s green credentials.”

# IntelligentCity is for **municipalities**

Over the last few years outdoor lighting has gone through a massive revolution from conventional lighting to LED. The combination of LED with new digital connectivity technologies opens up endless opportunities for making cities more smarter, safer and livable.

## My needs



### Sustainability

- Green city
- Saving energy
- Reducing carbon footprint
- Minimizing light pollution
- Ensuring sustainable public lighting



### Economic uncertainty

- Minimize investments
- Being accountable
- Manage city infrastructure
- Reduce costs



### Livability

- Flexible light at the right levels
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### Urbanization

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A green and sustainable city

A safe and attractive city

A popular and welcoming city

An innovative and future-proof city

# Key benefits for municipalities



## A green and sustainable city

Cities consume significant resources and have to provide a clean, green and safe environment. Lighting accounts for about half of the electricity consumed in cities. With IntelligentCity we will help you save up to 80% of the energy used for public lighting, helping drive your city's journey to becoming green and sustainable.

*IntelligentCity in practice:  
Implement IntelligentCity and save on your energy bill, whilst increasing citizens' trust in your election program on decreasing public tax spending.*

## A safe and attractive city

More and more people are going to live in your city, and the majority is getting older. Improved safety and livability in your city are key for your citizens and visitors to enjoy and be proud of their city. With IntelligentCity we help you improve the quality of community life and become an inviting, attractive, livable city.

*IntelligentCity in practice:  
Improving the livability in your city by creating an attractive but safe nightlife will help your political image – and your citizens will be highly satisfied with you.*





### A popular and welcoming city

Your city is competing with the neighbor cities to attract more visitors, and increasing your city branding will positively affect tourist trade. IntelligentCity can transform uncomfortable or older forgotten areas into livable, attractive, urban places through the strategic use of innovative lighting solutions. It can make your city more open, connected and welcoming. Your city will become a magnet for tourists and new businesses, and a livable place for existing citizens and newcomers.

*IntelligentCity in practice:  
New urban regeneration places will stimulate the local economy in your city, making your city financials and future healthier.*



### An innovative and future-proof city

Your city requires new, innovative solutions to help you cope with the challenges of urbanization and create a positive city image. With IntelligentCity we can help you make your city safer, greener, environmentally sustainable and a pleasant place in which to live and work. Starting today. And ready for the future.

*IntelligentCity in practice:  
With IntelligentCity, your city will be seen as innovative and technology-driven. This will enhance the image of the city and will give numerous outstanding free publicity opportunities. The result? Plenty of interest from the press, exposure in the media, and new visitors to your city.*



An aerial night view of a city skyline, likely New York City, featuring a harbor with many boats and a dense urban area with numerous lit-up buildings. The sky is a deep blue with some clouds. The text 'IntelligentCity' is in white, 'How' is in white, and 'it works' is in a teal color.

# IntelligentCity How it works

Philips IntelligentCity is a connected public lighting solution that combines CityTouch software with intelligent luminaires and dedicated services.



### CityTouch software

### Services

### Intelligent luminaires



IntelligentCity  
solutions

# CityTouch



CityTouch is a web-based lighting management platform that links all the lighting assets in your city with CityTouch software that you can use to manage and control lighting from your desk at one touch. It is a platform that puts you in charge today with plug-and-play commissioning and open standards.

Most advanced lighting management platform from a trusted partner

### Advanced architecture management

CityTouch puts into practice the most advanced lighting management available. It consists of two key application programs:



#### CityTouch LightPoint

Asset lighting management system. A sophisticated tool for data and maintenance management. It brings transparency over your assets and workflows.



#### CityTouch LightWave

Remote lighting management system. Acts as the control center for adjusting and monitoring your public lighting in the city. It communicates with various assets of the lighting system via the public mobile communications network – simply, interactively and reliably.



### Open integration

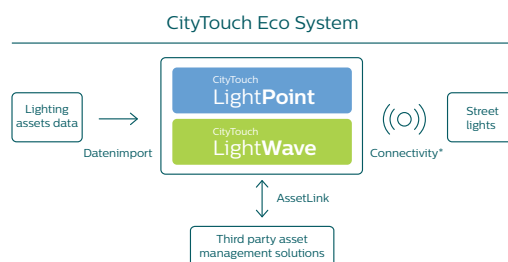
The CityTouch platform is also open to third-party software. For customers who want to combine CityTouch LightWave with their own asset management systems, CityTouch offers AssetLink, a standardized open integration interface.

### Long-term solution

CityTouch brings urban lighting management to a new level and grows with you as your business requirements change. Ready for future applications that you can add over the years, the extensible CityTouch platform features the highest level of security, including completely encrypted user sessions and regular data backups.

### Trusted partner

Benefit from the security and reliability of a trusted partner. Having deep understanding of the specific needs of smaller cities, and being chosen as preferred partner of megacities around the globe, we combine international project expertise with local know-how. With our 120+ years of experience in the lighting industry and a keen, developed focus on street lighting, you can rely on our partnership.



\*Only in conjunction with CityTouch LightWave



LightPoint asset lighting management

Simple

Easy to use

Allows fact reporting and analyses

# CityTouch LightPoint

## Bring light into your lighting operations

### Putting your data to work

CityTouch LightPoint, the asset management software solution, makes planning, analyzing and managing your lighting infrastructure very simple.

With its intuitive user interface, map-based visualizations, and simple charts and diagrams, CityTouch LightPoint gives you visibility for every single asset in your lighting infrastructure. This level of transparency leads to important insights that can improve your decision making. It also facilitates workflow-based maintenance, allowing you to conveniently and efficiently manage light failures.

With insights from CityTouch LightPoint you can quickly identify energy saving potential, reduce operational and maintenance costs, and make fact-based investment decisions.

- Simple, transparent and efficient
- Entire city lighting infrastructure at your fingertips
- Easy to use asset management, designed for lighting
- Optimum transparency through clear map-based data visualization
- Reports and analyses that support decision-making with robust data





- LightWave remote lighting
- Flexible and dynamic adjustable
- Automated faults notification
- Accurate energy metering

## CityTouch LightWave

### Stay in touch with your streetlights

#### Putting you in control

CityTouch LightWave gives you the power to make the lighting in your city dynamic, intelligent and totally flexible. It is a web-based remote lighting management software that connects your streetlights with the CityTouch platform.

With just a few simple mouse clicks, you can adjust the lighting in your city, monitor it, and control it. You are automatically informed when a failure occurs, enabling you to immediately initiate the repair work process.

The intuitive user interface allows you to easily adjust lighting levels to respond to changing requirements. You can boost lighting levels to improve safety and visibility, or dim them to save energy and prevent light pollution.

You can monitor, control and program lighting levels for individual light points, streets, or an entire district, allowing you to deliver precisely the right amount of light at any place or time.

- Dynamic, automatic and flexible
- Remote control of each individual light point
- Calendar-based planning of light levels and dimming technologies
- Automated notification of faults and outages
- Configurable fault types with different levels of severity
- Accurate energy metering down to the level of each individual light point





# IntelligentCity Solutions

# Intelligent luminaires







Seamless connectivity

Easy plug-and-play installation

Automated asset management

No commissioning

CityTouch Ready

Intelligent luminaires are designed for seamless connectivity and automated asset management. No hassle in commissioning – just plug-and-play installation of the luminaire and you are ready to go.

Philips intelligent luminaires can be controlled from the operator's desk through CityTouch LightWave remote lighting management software, which communicates via the public mobile communications network. It's simple, interactive, reliable and CityTouch Ready.

#### Connectivity benefits

- Intelligent luminaires designed for seamless connectivity
- Full control and efficient monitoring of your entire street lighting infrastructure
- Ready for connectivity at installation
- Energy saving due to dimming schedule optimization for every luminaire
- Energy metering to accurately measure and track the energy consumption of the luminaire
- Flexibility to adapt the light to the different requirements in the city
- Improved safety by increasing the light levels where needed

#### Installation, operation and maintenance benefits

- All intelligence is integrated into the luminaire
- High efficiency ensuring fast payback and low Total Cost of Ownership
- No own maintenance effort on network
- Plug-and-play installation
- Automated commissioning for quick, flexible and cost efficient roll-out
- Automated locating, so no GPRS location needed
- Automated connection, so no complex local networks required
- Automated upload of all lighting related asset data in your lighting management system
- Reduced spare part control

#### Reliability and security benefits

- High reliability and security due to integrated connectivity hardware in the luminaire
- Fast incidental failure tracking due to limited number of hardware components



# IntelligentCity Solutions **Services**

Relieves your own resources

Reduce your investment risk

Tailor-made

Completely coordinated



## Supporting you from start to finish

Philips offers dedicated IntelligentCity services that are specifically designed to support you. This will relieve your own resources by taking care of several tasks, and at the same time reduce your investment risk.

Available as separate services, or combined into a tailor-made, turnkey package, they guarantee a completely coordinated solution. Our dedicated services for IntelligentCity include Advisory services, Project services and Lifecycle services.



### Advisory services

Get a clear insight into your current lighting system, how it can be improved, and the benefits you would gain. Advisory services for IntelligentCity include:

- Basic City Audit: A simple way to obtain insights in the current lighting installed base.
- Total Cost of Ownership calculations: Easily compare the complete costs of alternative lighting solutions to your current lighting installation. This enables you to make well-considered decisions for the long term on sustainability and costs.



### Project services

These include the complete range of design, control and coordination activities necessary to take a lighting solution from the drawing board and turn it into reality. Project services for IntelligentCity include:

- Asset data import: We can help you with comprehensive and effective data import before you start with asset management.
- Asset data collection: We can help you in collecting the database of your lighting infrastructure to enable the asset data import and analysis in a later stage.
- System integration: We can help you integrate our intelligent lighting solutions to your other systems and applications, ensuring a fully integrated functionality.



### Lifecycle services

Philips offers customers and channel partners a variety of project after-care contracts that cover all aspects necessary to guarantee long-lasting, hassle-free, cost-effective performance. Lifecycle services for IntelligentCity include:

- Extended warranty: With the extended warranty you can choose a flexible warranty period according to your project requirements on the complete lighting system.
- Maintenance packages: Your guarantee of dependable, hassle-free operation of your lighting system for an extended period of time after installation.



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