Webinar: The smart city is open by Machina Research and Philips Lighting

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Webinar: The smart city is open
by Machina Research and Philips Lighting

Guest speaker – Machina Research

Jeremy Green
Jeremy is Principal Analyst at Machina Research, where his research focuses on smart cities.

Host – Philips Lighting

Peter Zink
Peter globally manages the Road & Street Segment at Philips Lighting. He has a passion for opening up tech standards, as a driving force innovation and new business models.

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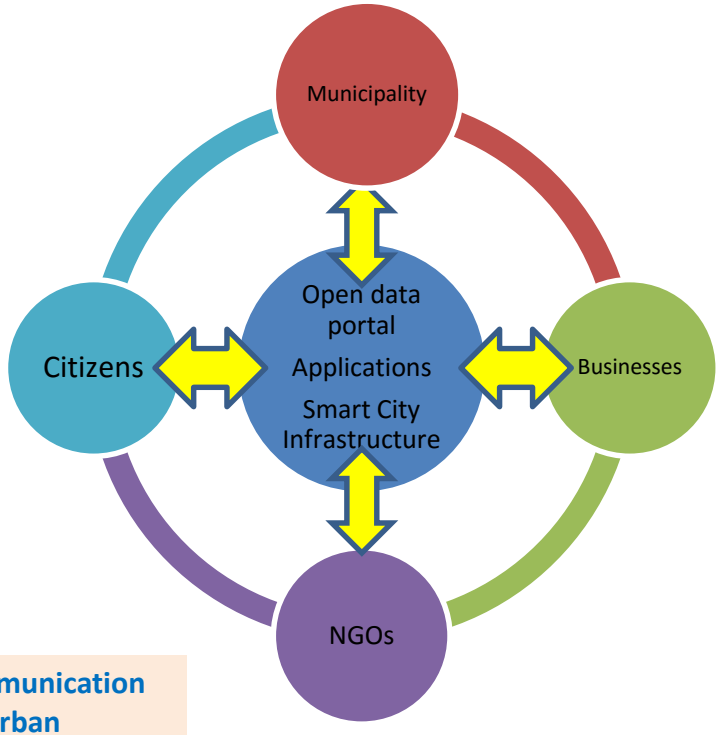
About this research

- Sponsored by Philips to examine the value of open systems as key enablers of smart cities.
- Carried out by Machina Research, a specialist analyst and consulting company focused on IoT
- Based on interviews with cities, telecoms operators and other suppliers, governments and NGOs
- Focused on the implications of and challenges of ‘open-ness’, in terms of connectivity, interfaces between applications and city verticals, standards and procurement
- Argues for an open eco-system that develops independently but integrates seamlessly at a higher level to unlock increasing value over time from different verticals and applications

What is a smart city?

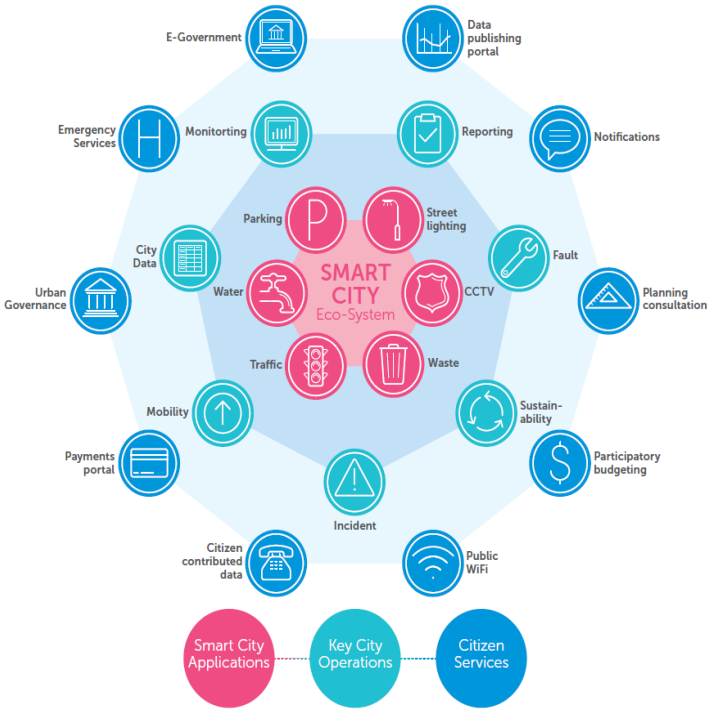
- There is no one way to be a smart city
- Different definitions, architectures, applications, technologies, visions…
- A continuum from ‘instrumented city’ to ‘happy city’



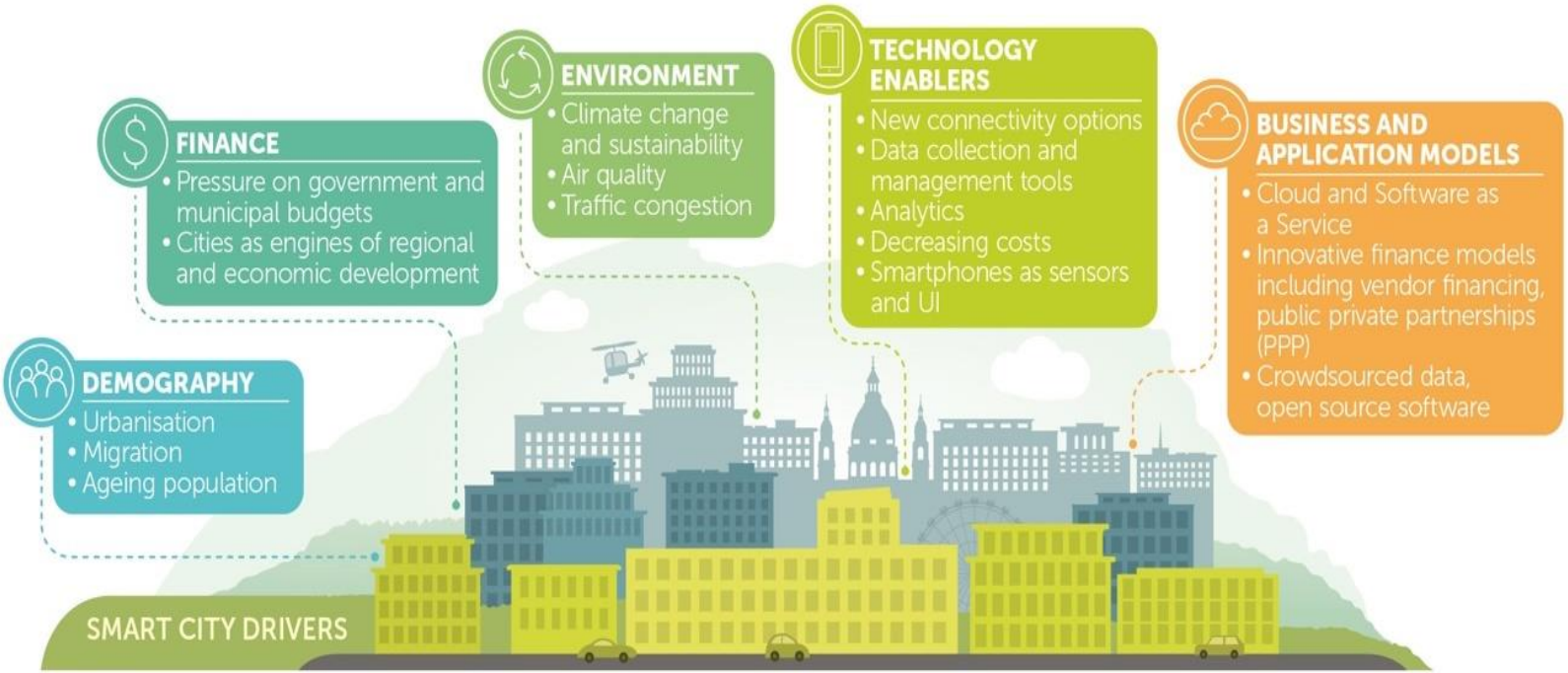
"A smart sustainable city is an innovative city that uses information and communication technologies (ICTs) and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social and environmental aspects.“ *ITU-T Focus Group on Smart Sustainable Cities*

Smart city applications: ‘EIMA’ and beyond

- No definitive set – just as there’s no global consensus on the responsibilities of municipalities
- ‘EIMA’ – ‘Enterprise IoT for the Municipal Authority’ often includes lighting, waste, parking, traffic – but sometimes also water, air quality, social care…
- A layer of citizen-facing CRM, publishing and Web 2.0 apps (e.g. fixmystreet)…
- Open Data publishing, participatory budgeting, open sensing, citizen engagement…
- Smart malls/campus solutions…and ‘bottom-up’ initiatives…and Uber…and Airbnb…

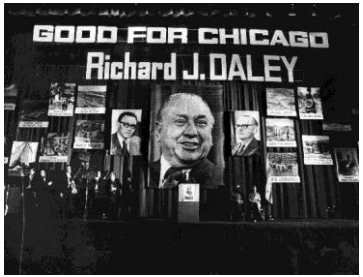


Smart city: key drivers



Unique challenges for cities

- Cities are like and not like enterprises
- A large organisation with departments, multiple systems and silos, legacy estate, limited skills…
- A big budget but little discretion to spend
- Multiple objectives and metrics – not all financial
- Run by politicians who answer to voters, not shareholders
- ‘The city’ doesn’t stop at the city limits



The smart city is a moving target

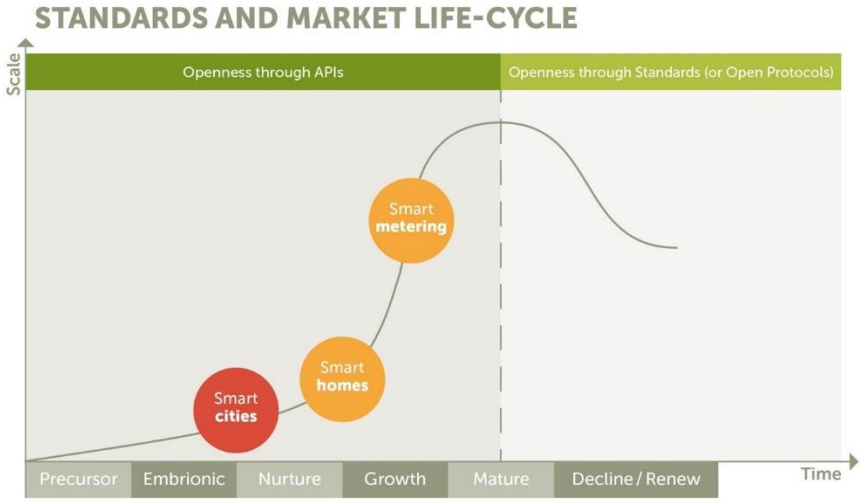
- **An evolving narrative:**
  - From point solutions…
  - …to a shared centralised platform…
  - …to a decentralised architecture based on interoperable standards, open APIs…
- **A shift of emphasis shift from:**
  - From EIMA and optimized municipal operations…
  - …to engagement of citizens

The importance of being open

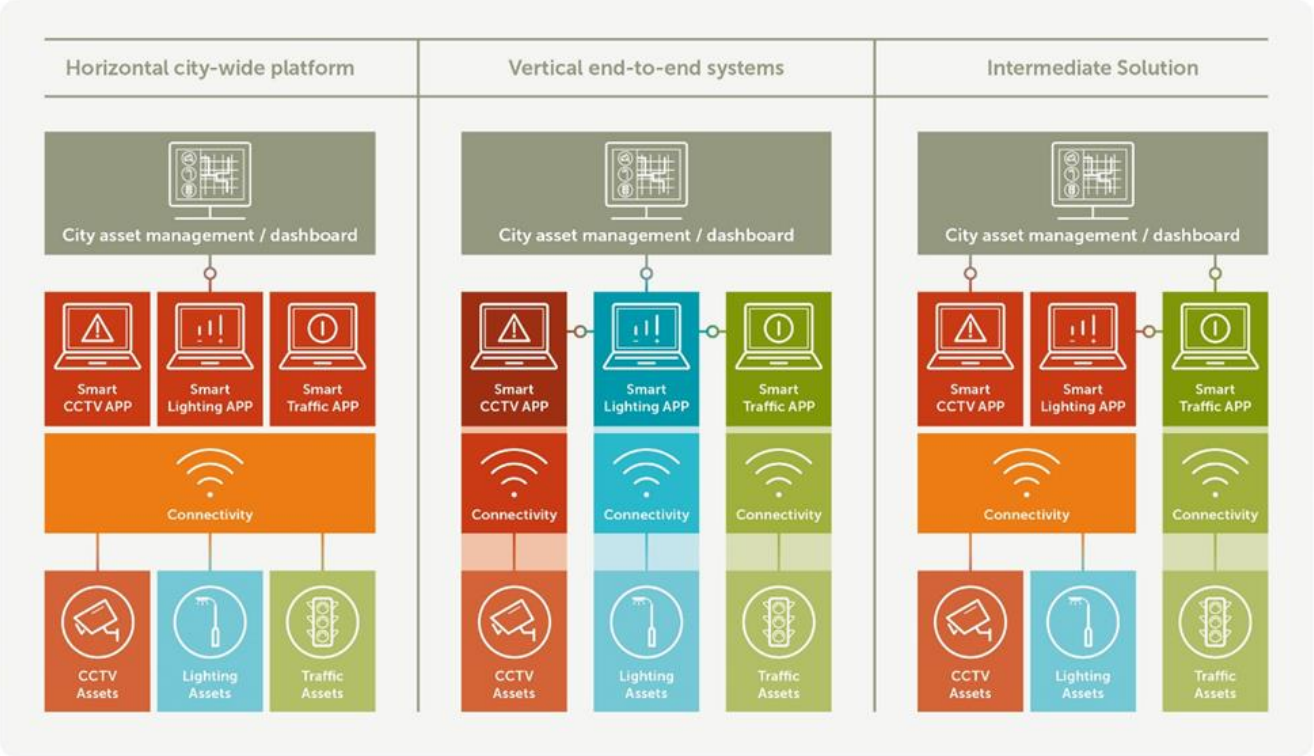
- **Lots of complexity in city applications – apps developed in isolation to align with legacy systems**
- **The temptation to go with "one platform to rule them all", from one vendor, is strong…especially for under-resourced public sector organisations**
- **Much to be lost from being locked in to a proprietary implementation:**
  - Interoperability and data sharing between applications
  - Economies of scale in development
  - Competitive market
  - Replicability and re-use between cities and applications
  - Opportunities for third party developers
- **Everyone likes 'open' but they don't all mean the same thing…**
  - Open standards
  - Open Source
  - Open data
  - Open APIs

The role of standards

- In a mature environment formal standards ensure interoperability between different vendors' offerings
- In an evolving environment open-ness is best delivered via application programming interfaces (APIs)
- Smart cities are very much in the evolving stage - business models, interconnection methodologies, sensor and connectivity technologies are all in a process of rapid change
- An open system means one that can inter-operate with others via defined interfaces



Options for interconnecting applications



Key take-aways

- Inter-operability should be a guiding principle in every project and every stage
- Forward compatibility with future decisions about inter-operability is more important than a once-and-for all platform choice
- Cities need to stay flexible and prepare for a future based on open standards and APIs
- During the current stage of smart city development the key to remaining flexible is implementing open systems that enable interoperability via interfaces
- Choosing open and recognized standards is a crucial element that is required to ensure open, durable systems and infrastructure
- Where no recognized standard exists yet the ability to work via APIs is key to guaranteeing openness

Digitalization
of professional lighting management

Simple	Open	Secure

- **Interoperability** — Lighting management software integrates with existing city systems through APIs
- **Non-proprietary** — Use of open standardized network technologies by using existing cellular network
- **No vendor lock-in** — Install luminaires from other providers

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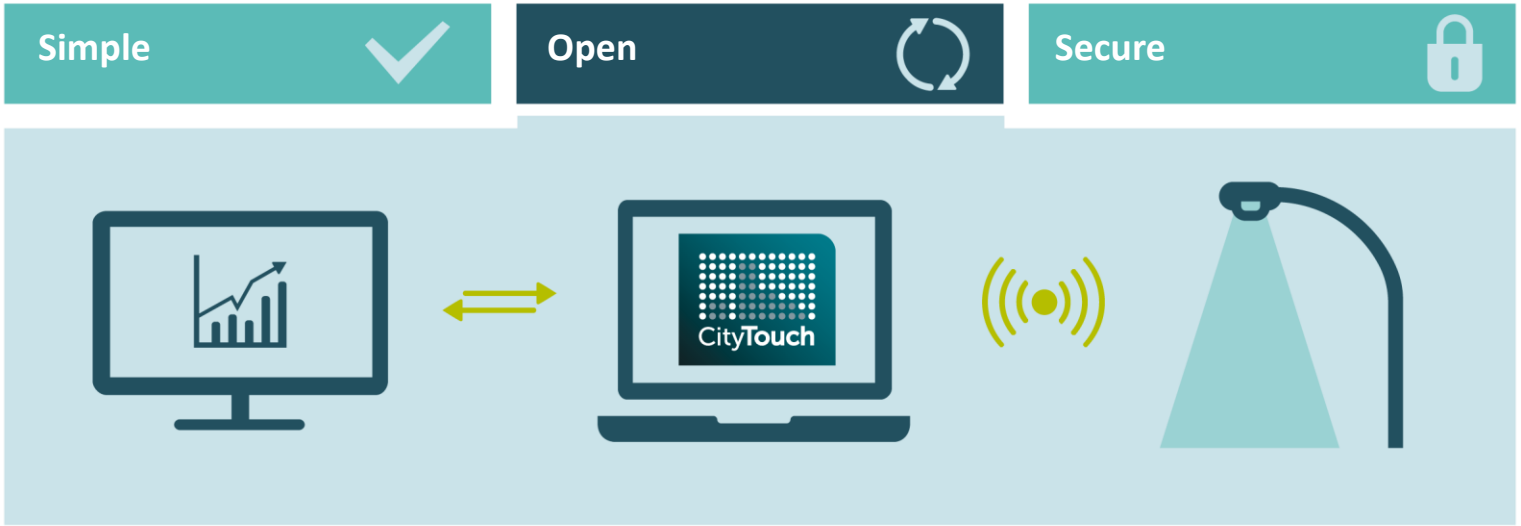
Digitalization
of professional lighting management



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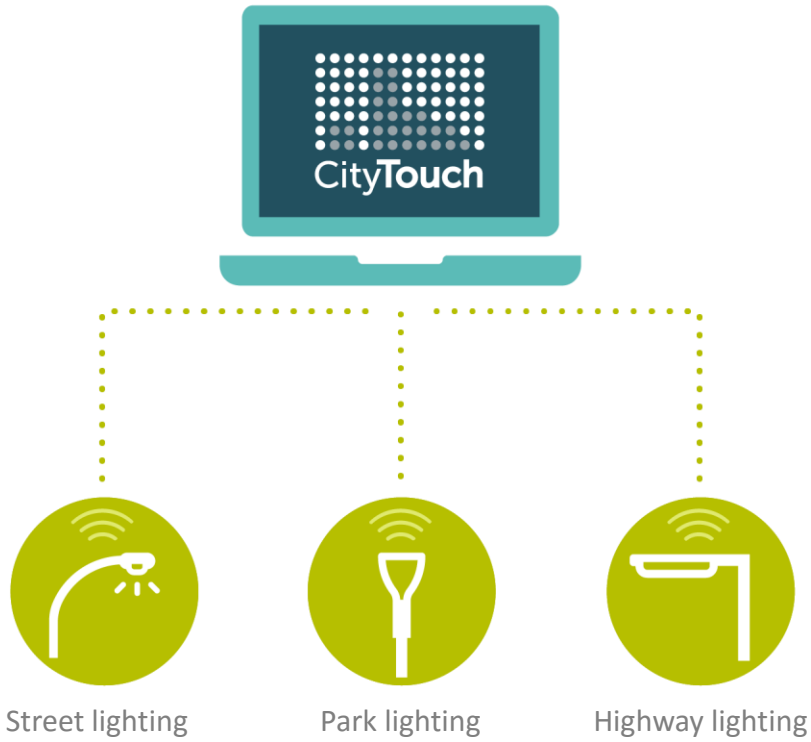
Smart city ecosystem

Philips CityTouch connects all your city lighting, independent of vendor or luminaire type.



More about CityTouch

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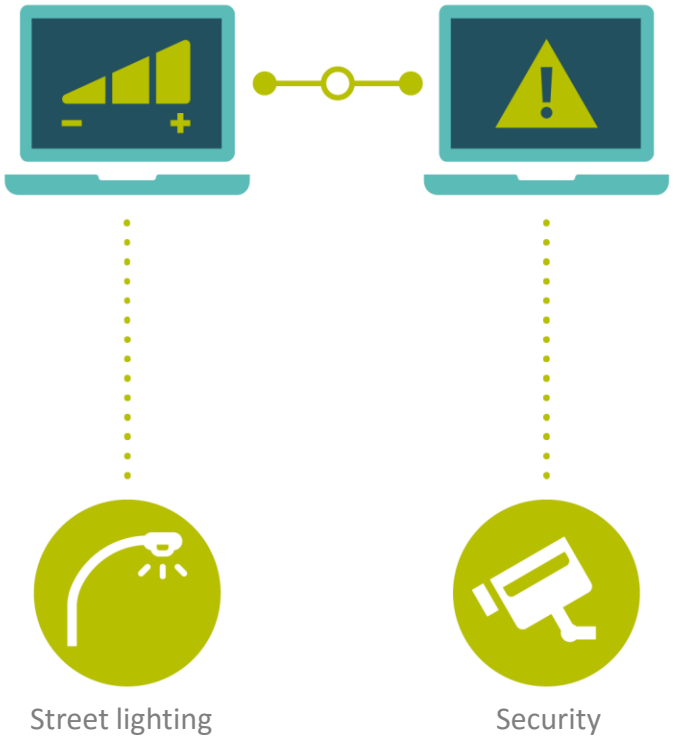
Smart city ecosystem

Philips CityTouch connects your lighting with other systems via open interfaces.



More about CityTouch

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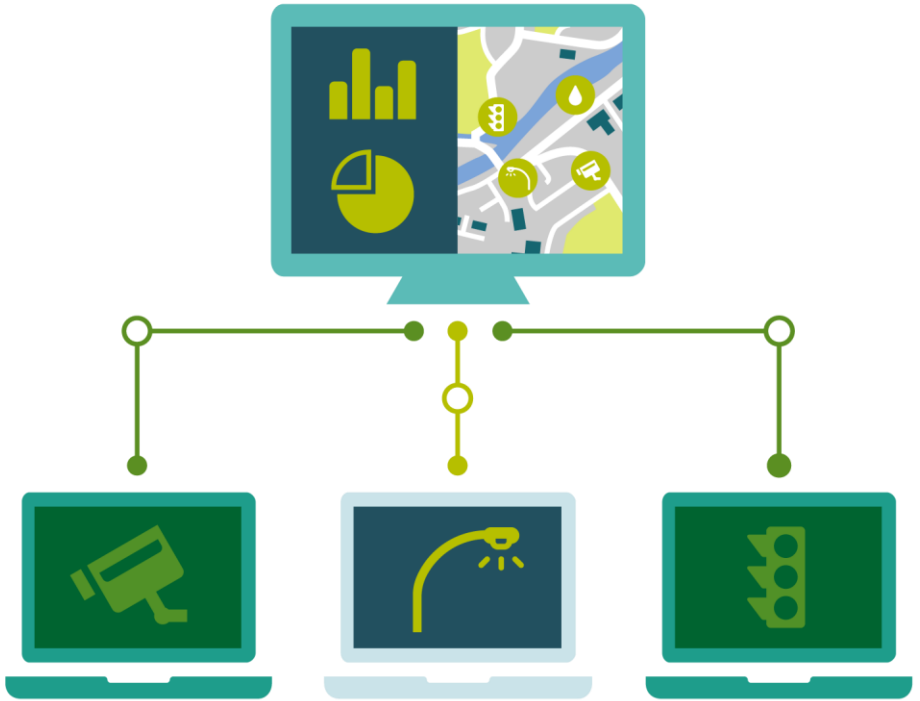
Smart city ecosystem

Philips CityTouch connects to any asset management system or any city dashboard you have in place.



More about CityTouch

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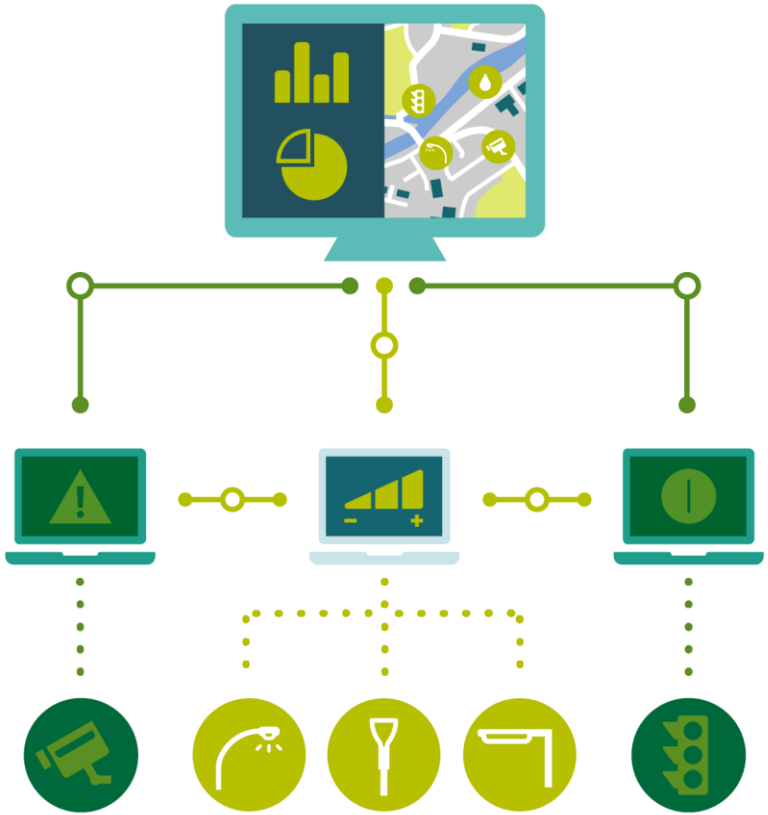
Smart city ecosystem

Philips CityTouch
The open lighting management system for evolving smart cities.



More about CityTouch

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Multiple assets one dashboard

CityTouch integrates seamlessly with SAP HANA, providing a single, convenient dashboard that links multiple city assets and services.

Philips CityTouch and SAP HANA

Combine real-time data from connected street lights with data from other assets and sensors in a single integrated city dashboard.

- Stay up to date via real-time data
- Get a performance overview of lighting and other assets
- Streamline city management processes


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