

# Weaving a Smart City Together with the Right Machine-to- Machine Fabric

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Demography

Urbanization

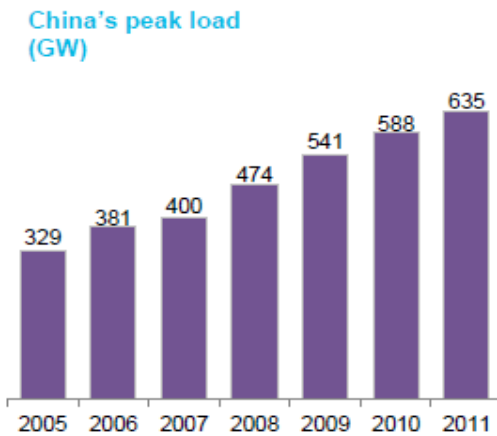
Population explosion

... Plenty of Machine-to-Machine Marketing by Big Names

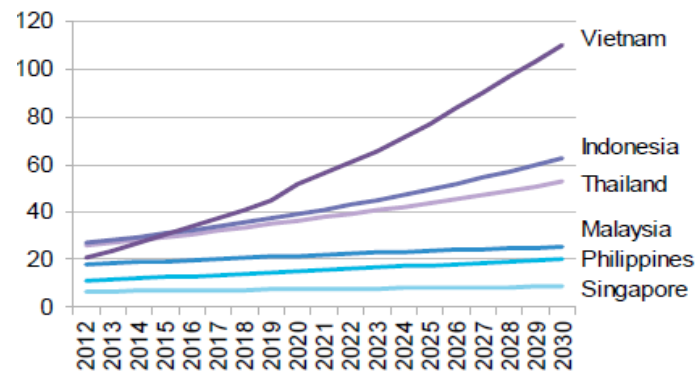
# The Example of Asia

- Home to half the world's population
- Rapidly urbanizing – myriad challenges ... take power

## LOAD GROWTH



## PEAK POWER DEMAND FORECAST IN SOUTHEAST ASIA



Source: Bloomberg presentation, "Realising the Potential of Smart Energy", Singapore July 2013

Can technology that makes lights communicate *really* help?

A fabric for the Internet of Important Things ...  
sounds like more Marketing.

**What's so different to a couple of years ago?**

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# Outdoor Lighting Market Overview

## Market Overview

- **300M** public, **300M** commercial lights
- <1% lights are networked
- Munis & Businesses often outsource lighting management to Utility or Lighting Operator

## Market Trends & Growth Drivers

- LED reliability is now proven, price is dropping rapidly - encouraging deployment
- LEDs provide compelling emergency and public safety applications
- Concept of Networked LEDs is gaining acceptance – small NZ CMS trials already done
- Networked communications cost is dropping rapidly due to scale from Smart Grid
- “Smart City” provides a political impetus for cities to leverage technology infrastructure to improve citizen services

Source: Pike / Navigant report “Smart Street Lighting” 4Q12

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Silver Spring Networks grew up in the Smart Grid market.

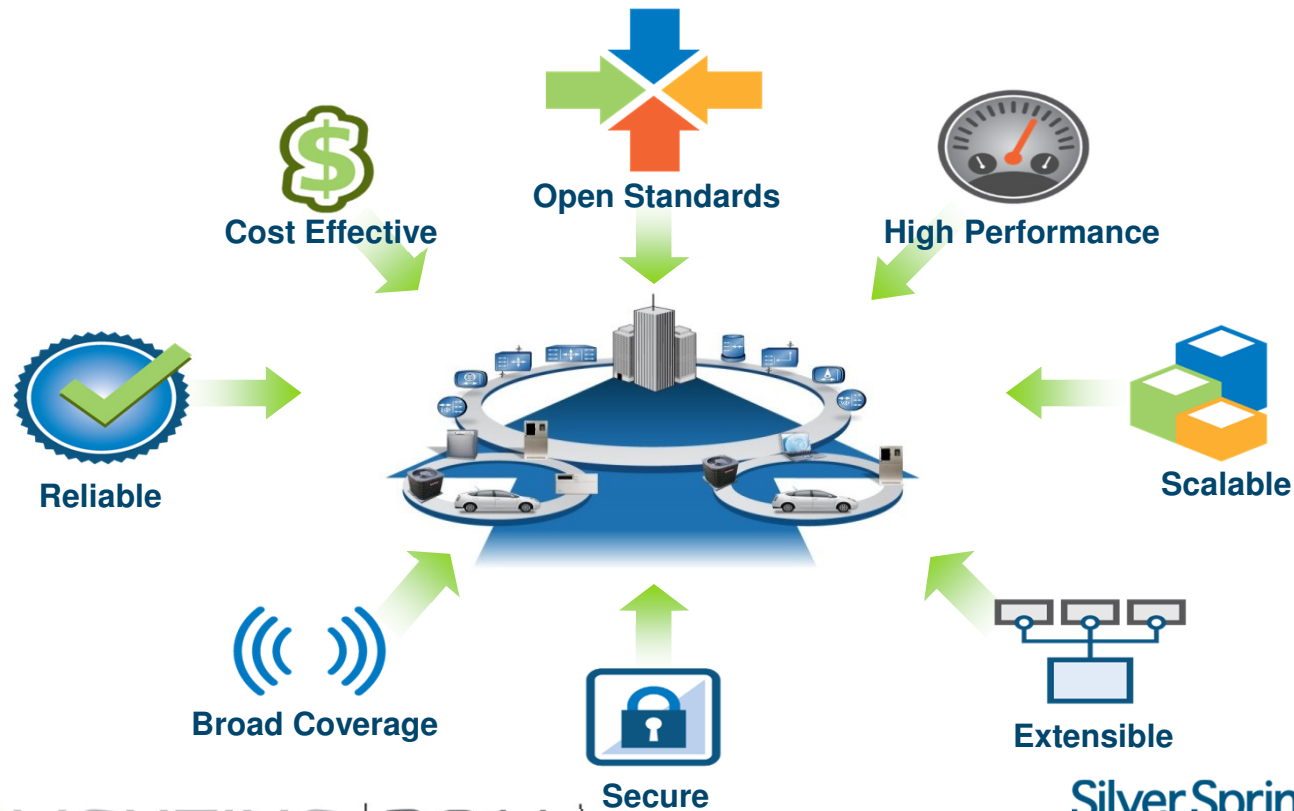
Our upbringing taught us to think about networks horizontally,  
a *platform* on which vertical, specific applications could reside.

**Only then did the business case get *really* compelling.**

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# Strict, Complex Networking Requirements



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# Can't Mobile Networks Do That?

While mobile operator technologies have provided increased coverage and data rates for users of expensive smart phones ...

... the missing piece to the puzzle has been cost-effective *and* **ubiquitous** Machine-to-Machine "dial tone" to millions of sensors and devices



# Cost Effective and Ubiquitous Wireless Network



**Additional  
sensors**



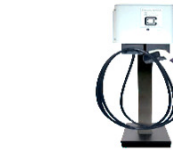
**Smart  
Traffic**



**Smart  
Parking**



**Smart  
Home / DR**



**Electric  
Vehicles**



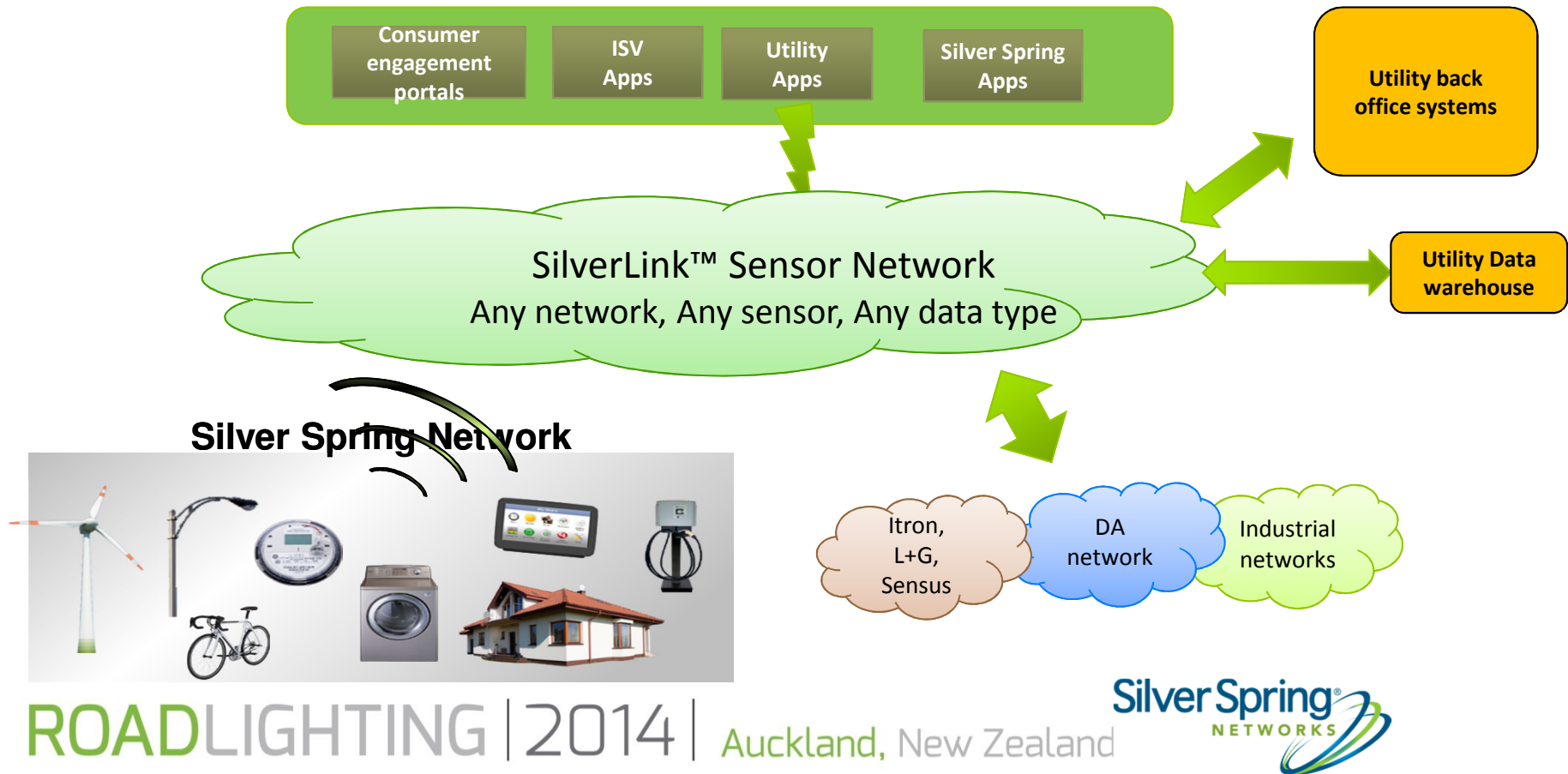
**Energy  
Billing**



# Network-as-a-Service

- Computing Fabric
  - Large
  - Capable
  - Distributed
  - Standards-driven
  - Secure
- **InterMesh**
- Basis of an Internet of *Important* Things
- Coverage that offers:
  - Storage
  - Computing horsepower
  - *Immediate* communicative sensor access
- Unique scale, scope, capabilities

# The SilverLink™ Sensor Network Vision



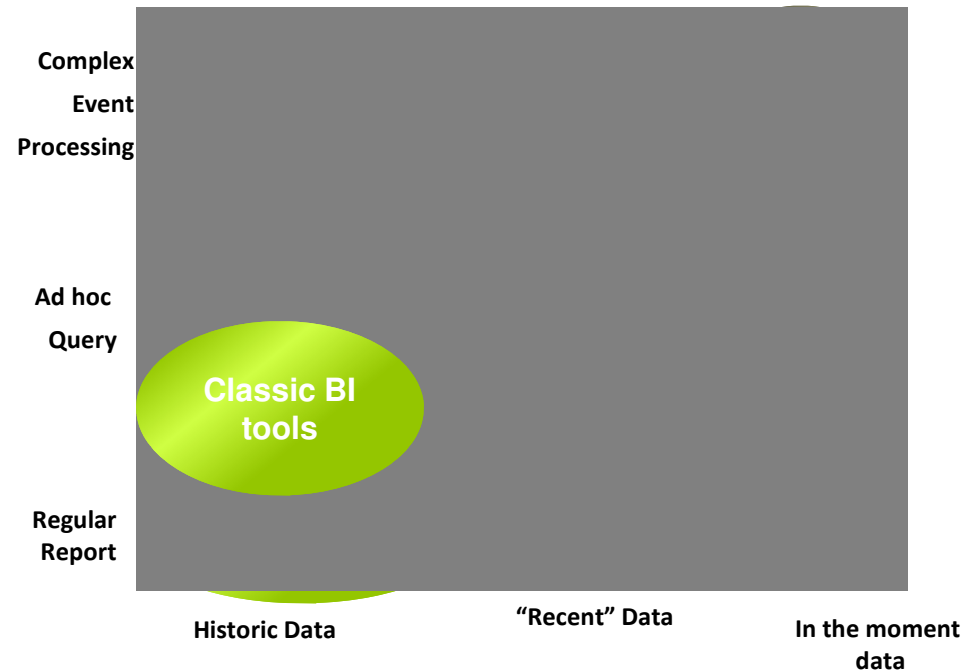
# SilverLink's Unique Approach

Think distributed intelligence platform

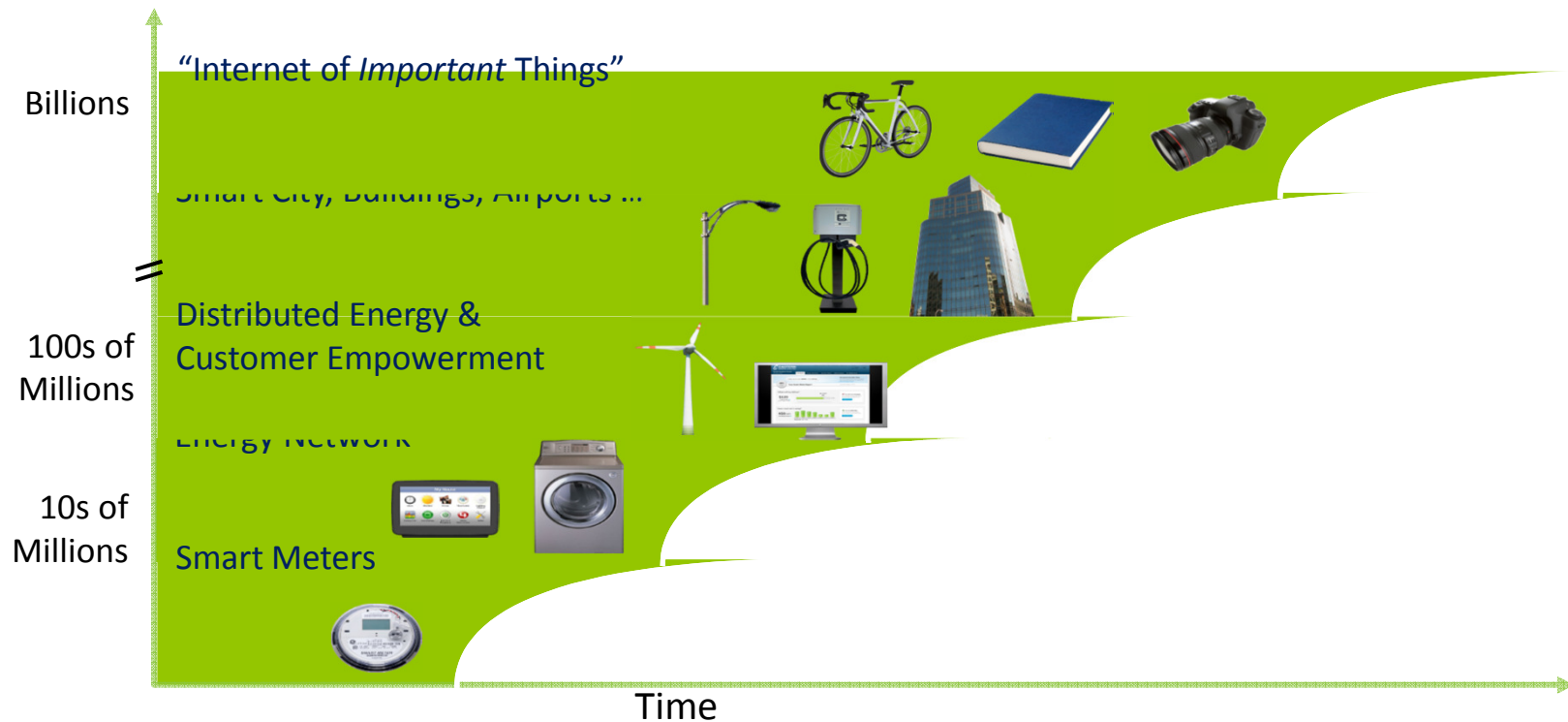
Manage "services" not "devices"

More real-time, not batch

Leverage innovators from *anywhere*



# Expanding into The Everything Network™



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# Silver Spring's Vision for a Smart City Solution

Smart city applications

Continuously connected big data

Proven IPv6 network

Open standard devices



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By connecting  
and automating  
key services  
*with the right network*

**cities are**  
becoming smarter,  
finding new funding,  
getting more efficient,  
and  
strengthening  
communities

# Copenhagen

Citelum is the contract holder

Silver Spring Networks is working in Strategic Partnership with Citelum

Lighting Master Plan delivered to the City and rollout planned through end 2015



**EU's most sustainable city**

Aggressive carbon reduction targets

Collaborative city departments all leveraging the network to achieve automation aims



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To put it simply,

*Copenhagen is not the only one thinking like this.*

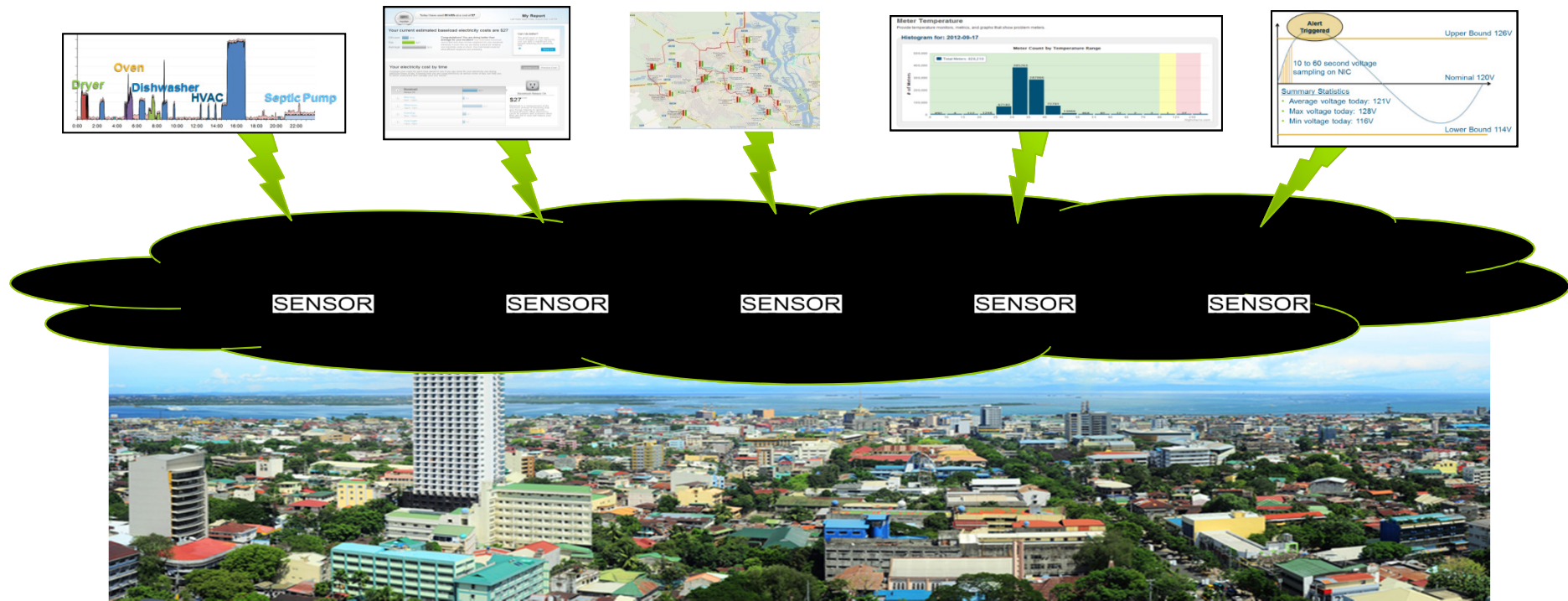
**The right network architecture underpins the  
roadmap.**

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# Software-defined Sensors

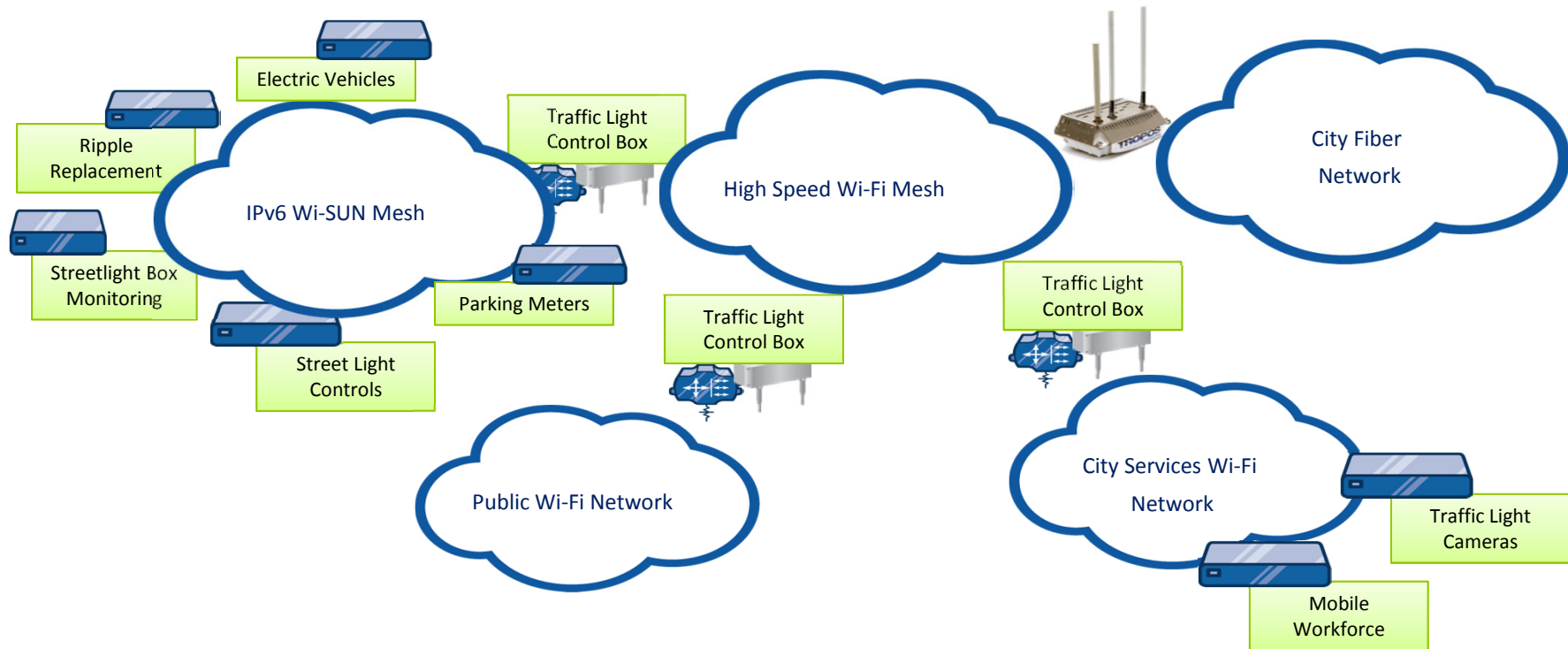
IPv6 to RESTful: apps simply subscribe to services



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# Smart Cities: Drag-and-Drop



# THANK YOU!

Questions?

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