The APSE Highways, Street Lighting and Winter Maintenance Services Seminar 2017

Workshop one: Street Lighting

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Bolton's Being Smart Approach

Bolton Council

Bolton Council

Presentation To APSE Workshop March 2017

Paul Worthington

Bolton Council Lighting Assets

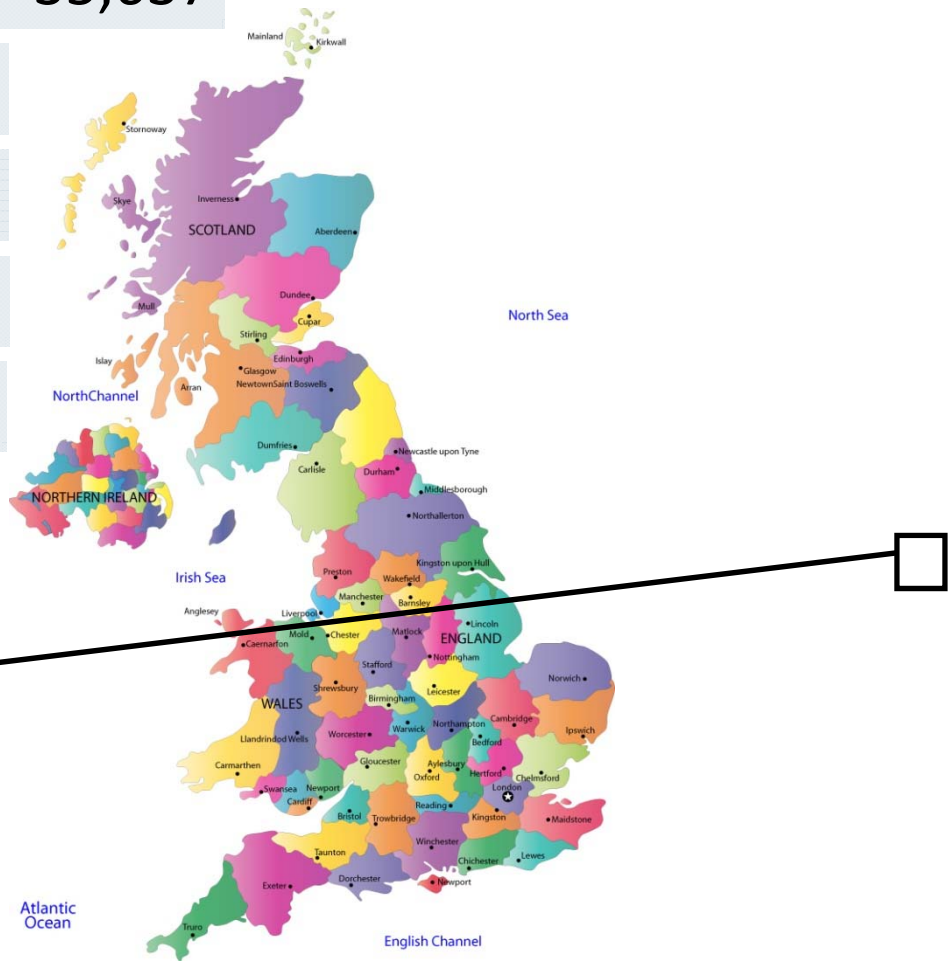
Street Lighting Columns: 35,637

Illuminated Signs: 3,030

Pay And Displays : 71

CCTV: 66

Weather Stations: 2



Bolton Council

Bolton Council: Being Smart On The Streets

Work with targeted **use of data** in solving problems

Work with **new technology** or known technology in new ways

Work with **efficient** use of the Boroughs **resources**

Work with new ways of **involving citizens** or **businesses**

Bolton Council: Being Smart On The Streets

In short, a wide ranging of measures and controls can be incorporated into one integrated system, Borough wide, using the existing Street lighting infrastructure to facilitate rapid deployment at minimum cost to the authority.

There may be opportunities for revenue generation by gathering data which can be “sold” to various parties making decisions about future development sites within the Borough or those with existing businesses that want to better understand how to increase the appeal of their enterprise to their customer base.

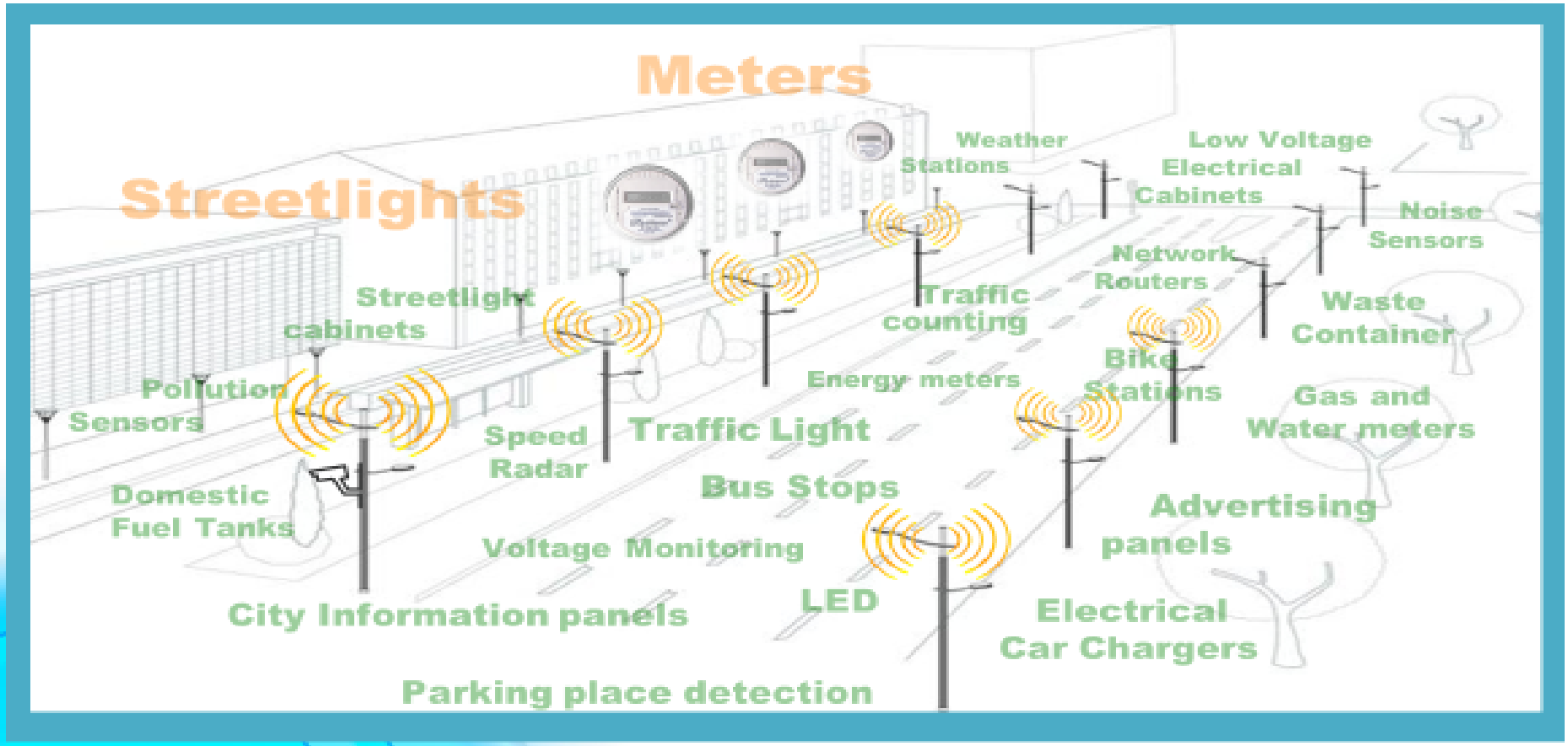
This is a new age based upon information and communication and Smart Cities will be at the cutting edge of the IoT (Internet of Things) and will create opportunities for faster growth, reduced budgets and higher efficiencies.

Bolton Council: Being Smart On The Streets

Smart City – What Devices?

GET CONNECTED

Street Lighting can play a key role



Bolton Council: CMS User Group Meetings

Our CMS provider has held a number of user group meetings with Councils to which “Smart City” is now on the agenda. A workshop exercise took place last week involving Bolton, Lancashire, Stockport, St Helens Calderdale, Bradford, Cheshire East and Isle of Man (Douglas and Manx Utilities).

The unified challenge is:

- How do we prioritise and select “smart” applications?
- How do we establish the core benefits that will be delivered per application?

Smart Communities:	public safety, connectivity .
Smart Environment:	gritting, energy, flood, air/noise pollution
Smart Streets:	lighting, EV charging, parking,
Smart Buildings:	flexible buildings, efficient homes
Smart Mobility:	traffic, EV charging, traffic management
Smart Data:	IoT, e-Governance, connectivity

Bolton Council: CMS User Group Meetings

- Traffic Counting:

The volume of traffic can be measured on any road and linked to traffic signage to re-route traffic to available car parking or to avoid traffic hold up

- Air Quality Measurement:

Pollution levels can be measured and recorded and used to formulate strategic traffic/development planning.

- Surveillance Cameras:

Can be incorporated into the luminaire body to discreetly keep watch for Traffic problems/criminal activity and potential problem hotspots.

- Still Frame Images:

To Assist Drainage Teams To Monitor Culvert's

Bolton Council: CMS User Group Meetings

- Road Temperature Sensors:

To Assist Decision Makers on Gritting outcomes

- Grit Bin Sensors:

To Check if the containers are Full, Half Full or Empty.

- On Street Parking Sensors:

To Assist The Public, Car Parking Enforcement and Traffic Management Team.

Bolton Council: CMS User Group Meetings

- Becoming a smart city isn't an overnight process
  - Budget under increasing pressure
  - Lack of cohesive direction from Government
  - Bolton's Aim Is To Fully Explore And Trial The Applications, Even If It Takes Time With The View of Getting It Right 1st Time.

Our CMS workshop exercise consisting of 36 people split into 6 groups resulted to the top 3 wish list Below

- Air Quality Measurement:

Pollution levels can be measured and recorded and used to formulate strategic traffic/development planning.

- Road Temperature Sensors:

To Assist Decision Makers on Gritting outcomes

- On Street Parking Sensors:

To Assist The Car Parking Enforcement and Traffic Management.

Bolton Council: Being Smart On The Streets

<u>The Current Lighting Stock with built in Central Management System:</u>

SONS Built In CMS 7,100 (Installed 2011-2014)
LED's with Built In CMS: 21,500 (Installed 2014-Now)

Based on these figures Bolton has a 80% CMS in place with access to a Wimac and/or Zig Bee wireless networks to act as a Future Platform for Smart City applications and products.

Bolton Council: Being Smart On The Streets

- Now that the top three applications are being looked into by our CMS provider they will collaborate with their sources and hold further user group meetings during the “Smart” journey.
- As a user group member, Bolton are quiet happy to share their findings with others especially during the trail testing , pros and cons, good practises.

Thank you

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