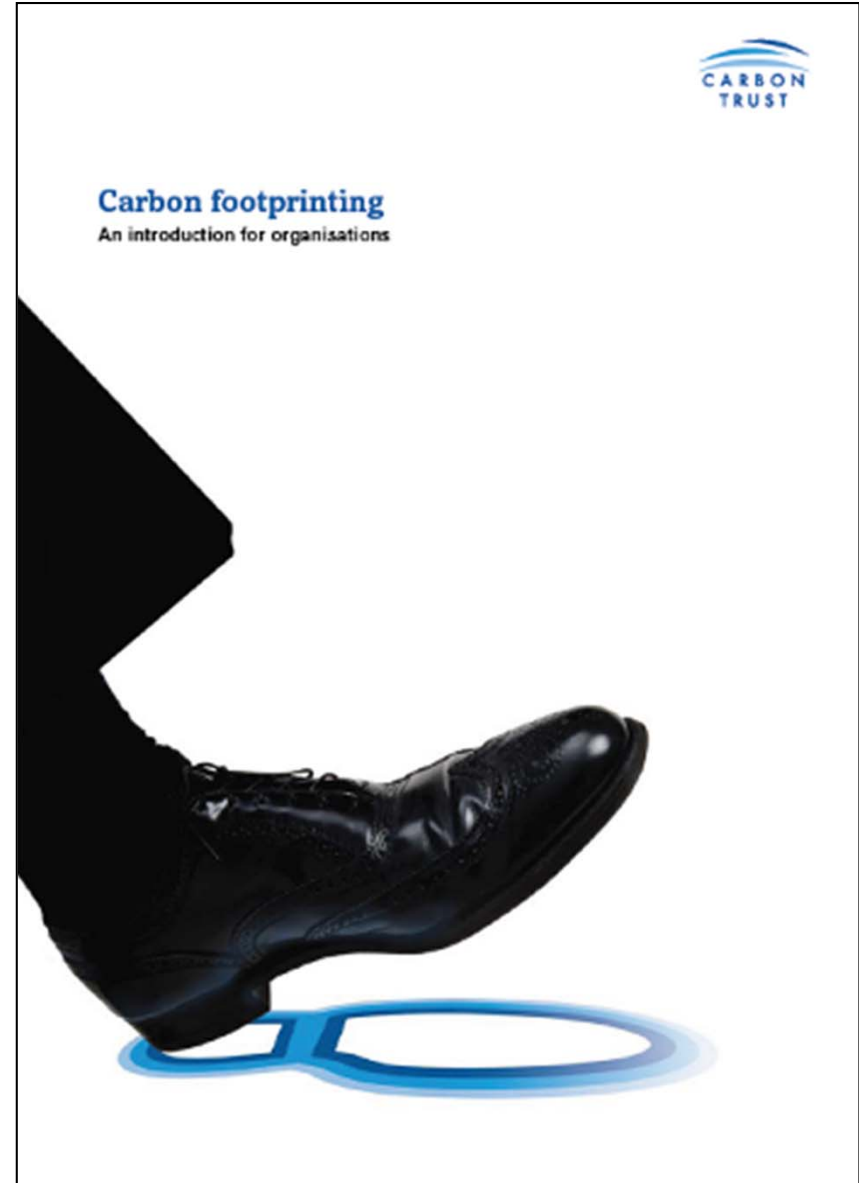


# Lighting the way for Bolton's "Green" future

Mark Atherton

Victor.Janecki

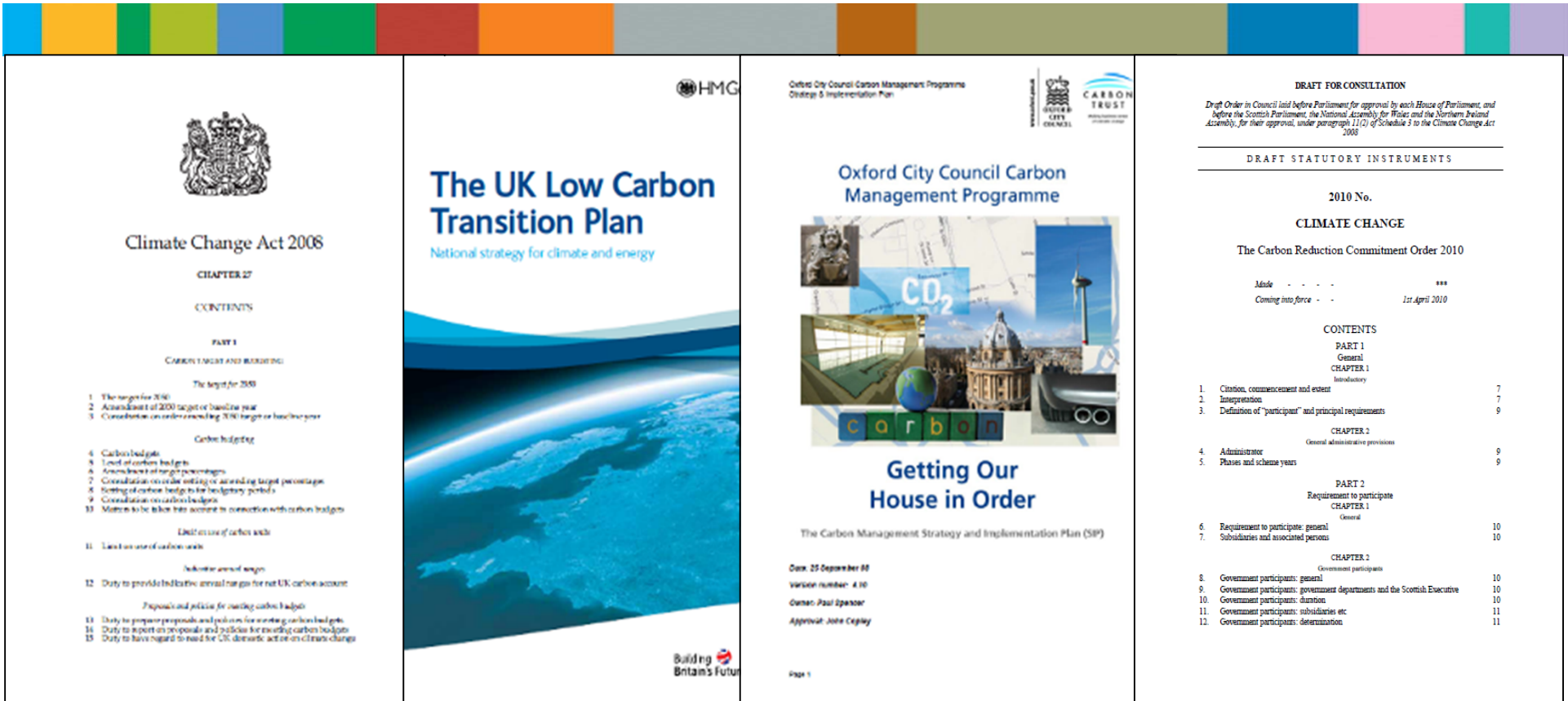
Paul Worthington





# AGENDA

- Our approach and what Bolton are doing.
- Progress to date with CMS Installations.
- Design, Process, Planning and Asset Management.
- Successful Partnership Working.
- Future opportunities - Emerging technology
- Questions



- Climate change act 2008
- Legally Binding Reduction of CO2
- Carbon trading commences April 2011
- Need to reduce carbon emissions:
  - By 34% before 2020
  - By 80% before 2050
- Cameron “Greenest government ever”

**Bolton’s Targets (St Lighting 21% of Overall Energy)**

- Reduce by 33% by 2013
- Financial savings £5m

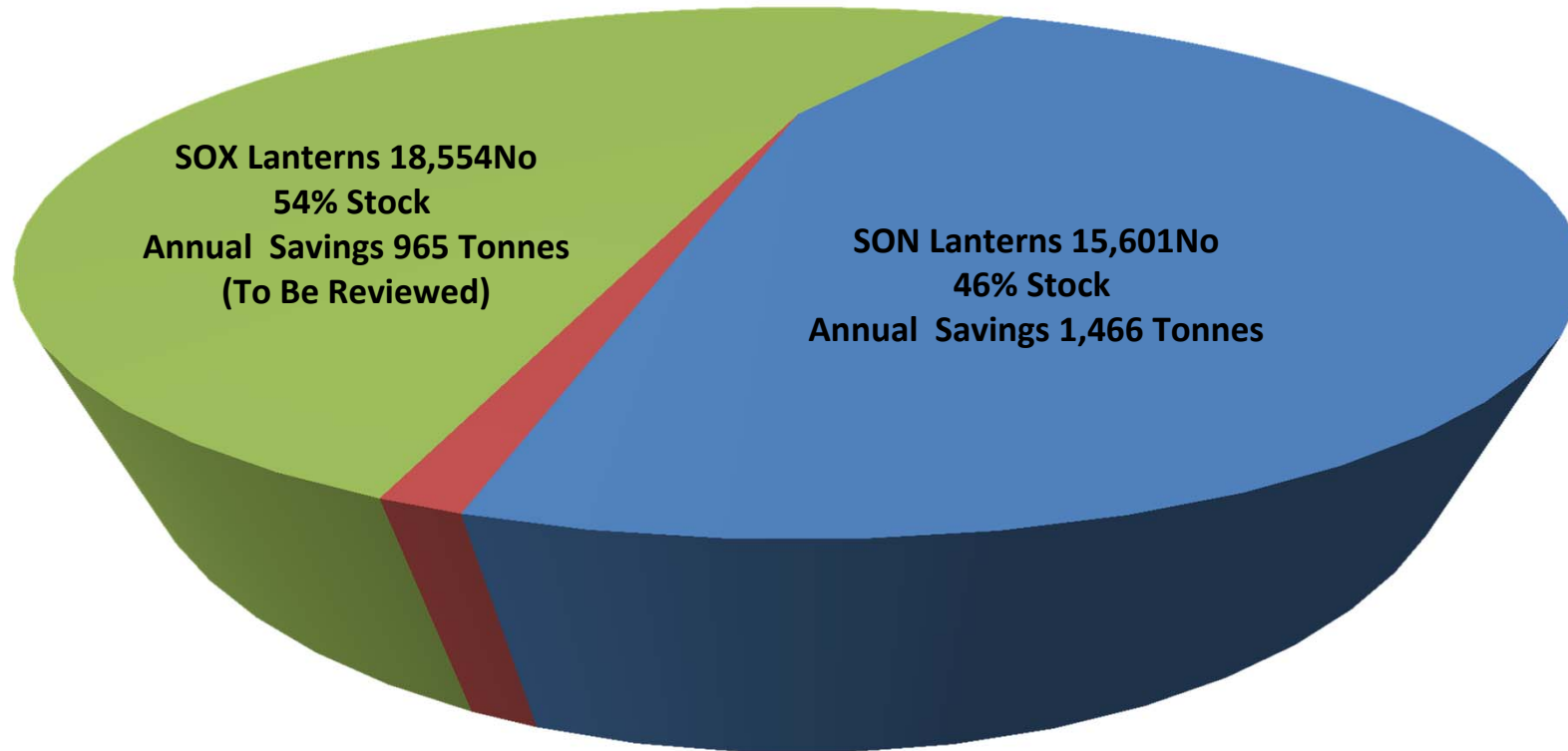




## Our Implementation strategy:


- Approved by Members 2011
- Deliver energy efficiency efforts focused over a prolonged period
- 4 phases to project over 7 years
- Allow flexibility of new and emerging technology
- Proposed implementation programme

**Bolton Councils Current Street Lighting Stock (35,279No) May 2012**  
**47% Can Be Introduced To CMS Retro-Fit**  
**With A Potential Saving of 2,743 Tonnes of Carbon.**



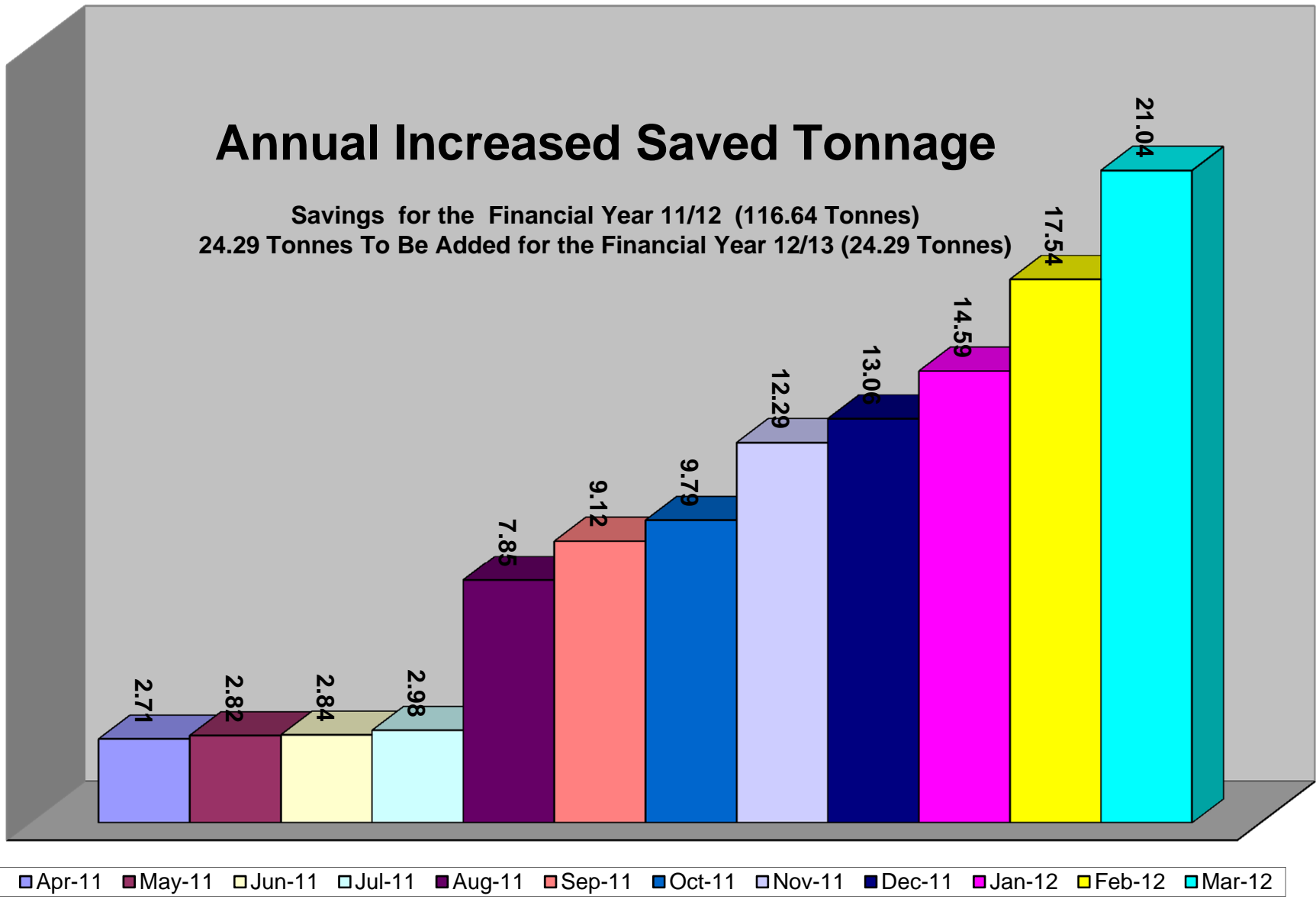
**CPO Lanterns**  
**1,124No 1% Stock**  
**Annual Savings 42 Tonnes**

## PROPOSED IMPLEMENTATION PROGRAMME

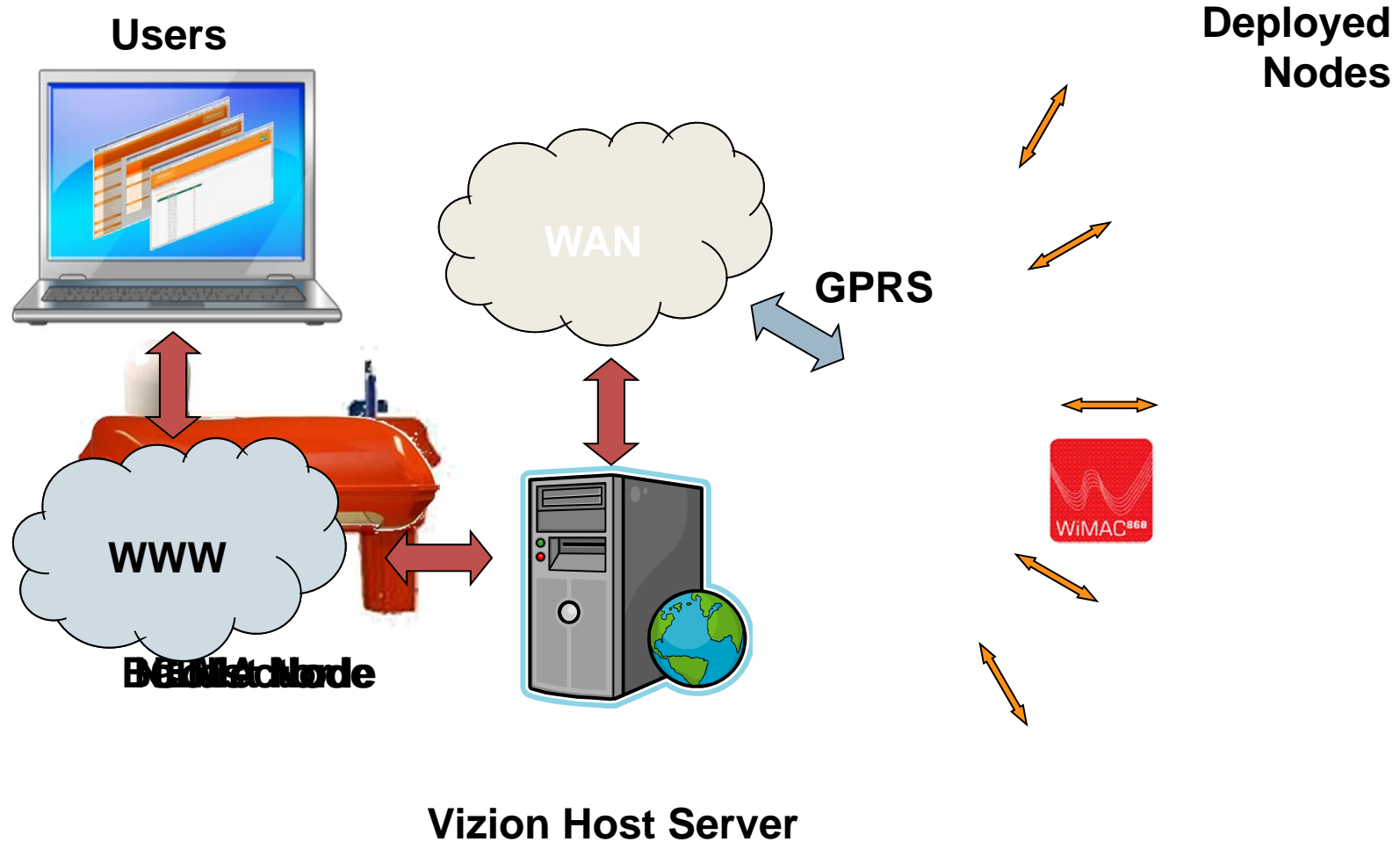
PHASE	LANTERN TYPE/ NUMBER	ANNUAL ENERGY SAVING	ANNUAL CO2 SAVING	YEAR
1	1,124 CPO Lantern 3,318 150w SON Lantern	£ 161,415	448 tonnes	1
2	3,380 250w SON Lantern 1,158 70w SON Lantern	£ 237,068	718 tonnes	2
3	7,745 50w SON Lantern	£ 158,262	342 tonnes	3-4
4	18,544 SOX (Yellow ) Lanterns	£ 309,337	965 tonnes	5-7
<b>Totals</b>		<b>£ 866,082</b>	<b>2473 tonnes</b>	

# Annual Increased Saved Tonnage

Savings for the Financial Year 11/12 (116.64 Tonnes)  
24.29 Tonnes To Be Added for the Financial Year 12/13 (24.29 Tonnes)



# CMS System



BMBC's Has A Collector Talking To 212Nodes And A Distance Pickup From 5.90miles Away (Horwich-Coppell)



# CMS Features

Remotely Manage Assets

Facilitates Energy Reduction

Event/Fault /Scouting Reporting

Energy Reporting

Elexon Approved CMS

Highly Scalable And Individually Controlled



# Bolton Council: Design, Process & Planning

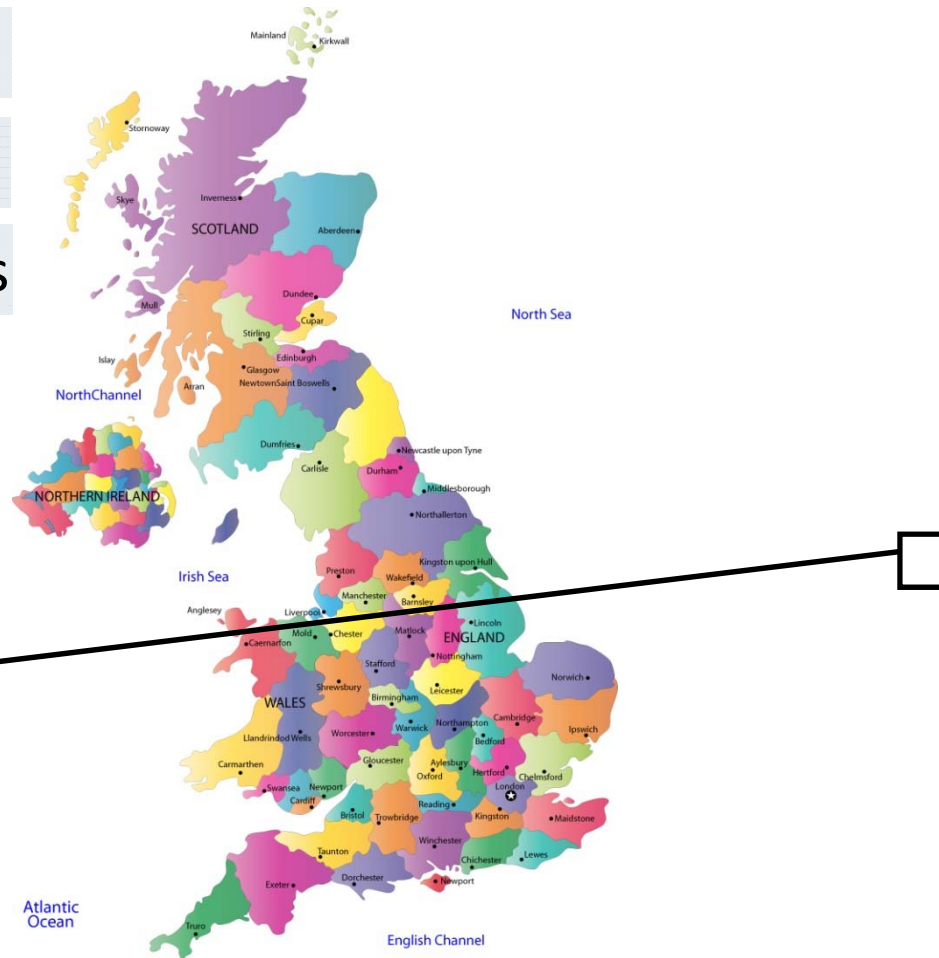


# Bolton Council Case Study

54 miles<sup>2</sup>

Urban & Rural

35,279 Lighting Columns



# Ellesmere Street Shared CMS Test Bed



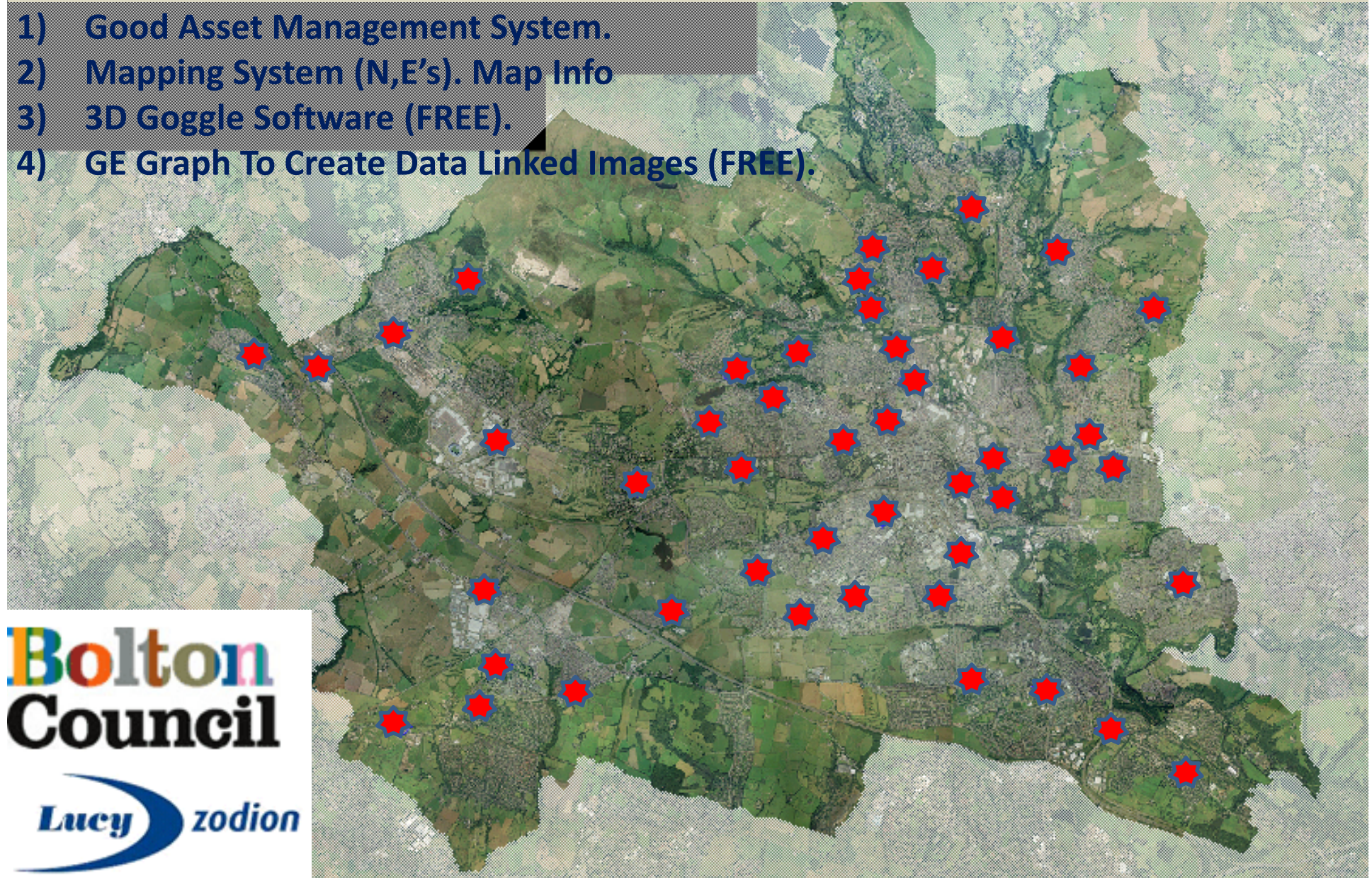
Test Bed For Next Phased Lanterns (12 months before Implementation).

New Lanterns to be Tested From Lantern Manufactures.



# Collector Positions (Cluster Points)

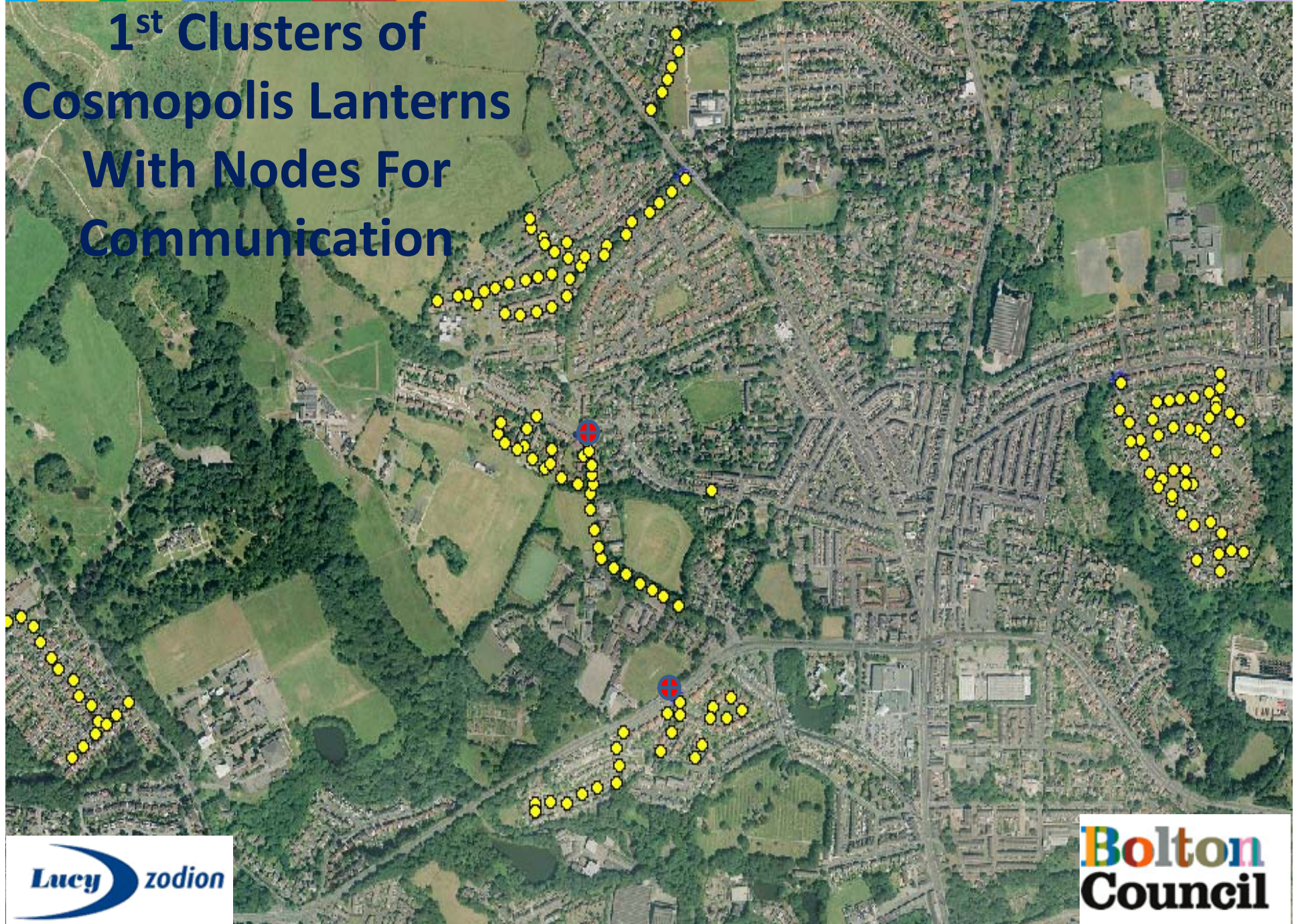
- 1) Good Asset Management System.
- 2) Mapping System (N,E's). Map Info
- 3) 3D Goggle Software (FREE).
- 4) GE Graph To Create Data Linked Images (FREE).



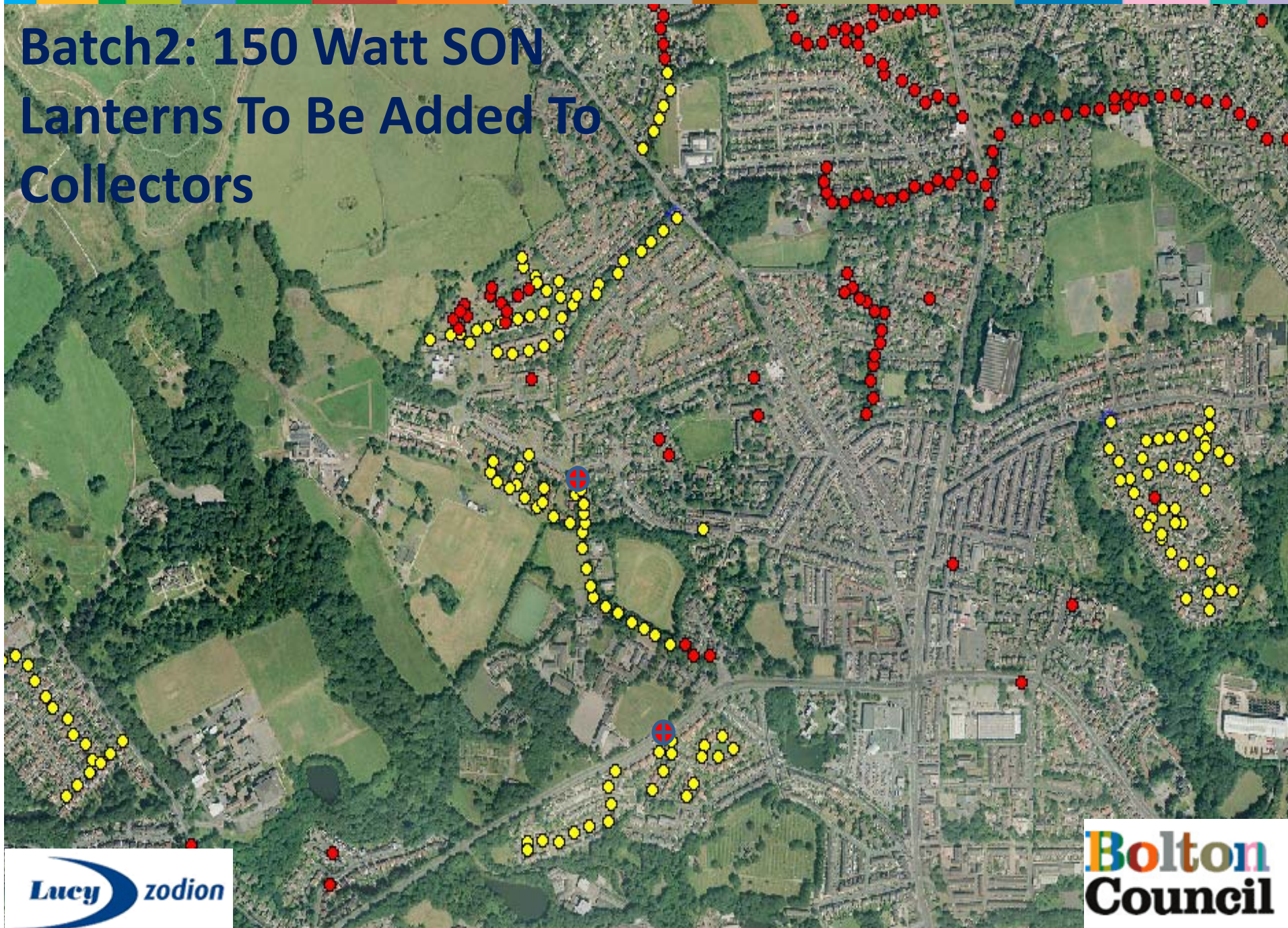
**Bolton**  
**Council**



# 1<sup>st</sup> Clusters of Cosmopolis Lanterns With Nodes For Communication



# Batch2: 150 Watt SON Lanterns To Be Added To Collectors





3D Goggle Earth Image  
Using GE Graph Software





# GE Graph Data Automatically Drops Into Street view on 3D Google Earth.

**Future Use:**  
HTC Phones And Desk Top To Assist With Maintenance Issues, (Esp. Knockdowns, One Stop Shop, Streetcare Lighting Complaints).

SCHOLEY ST 006 8 150 SONT Z 061445 L - 0



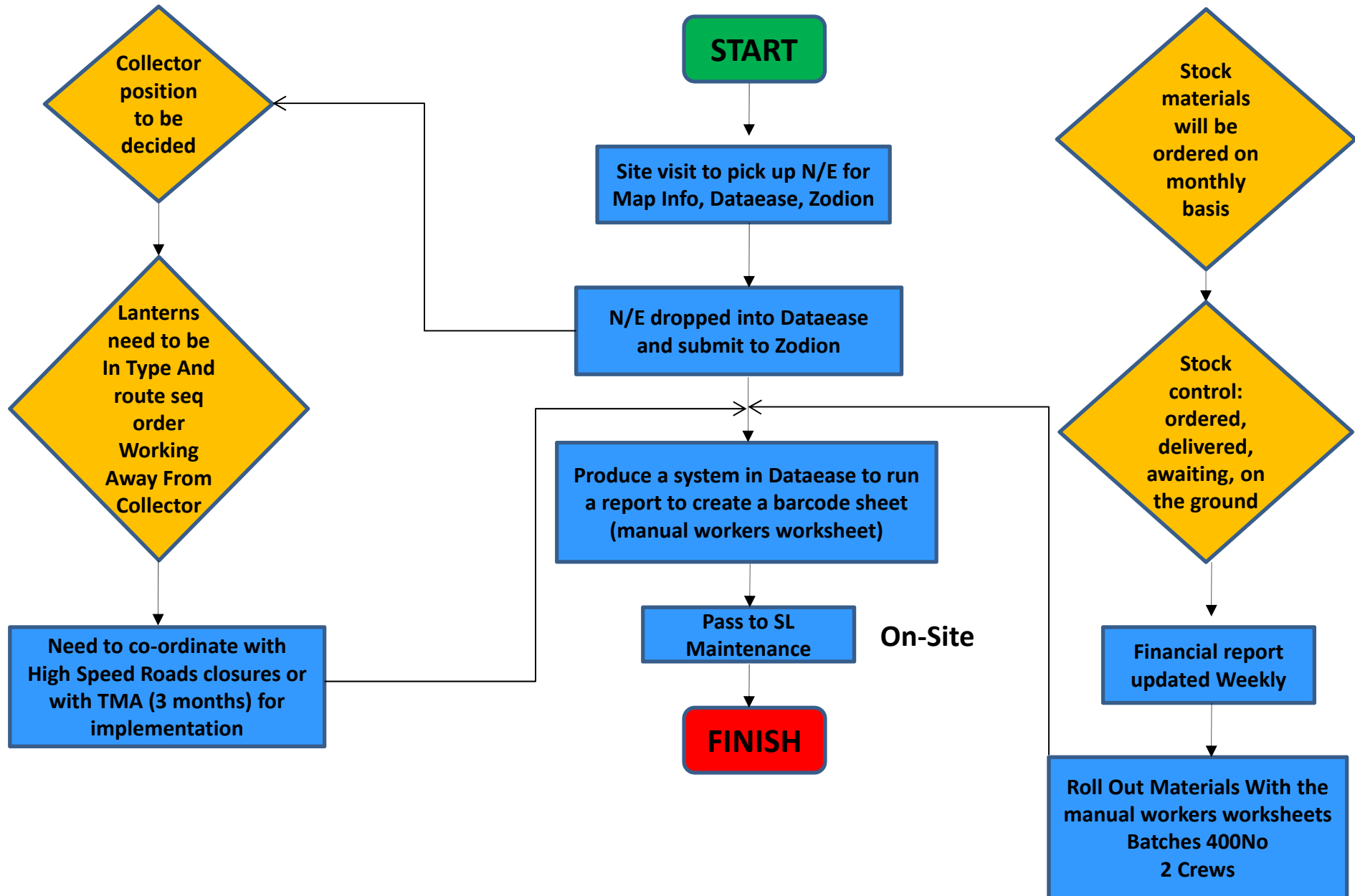
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© 2012 Google

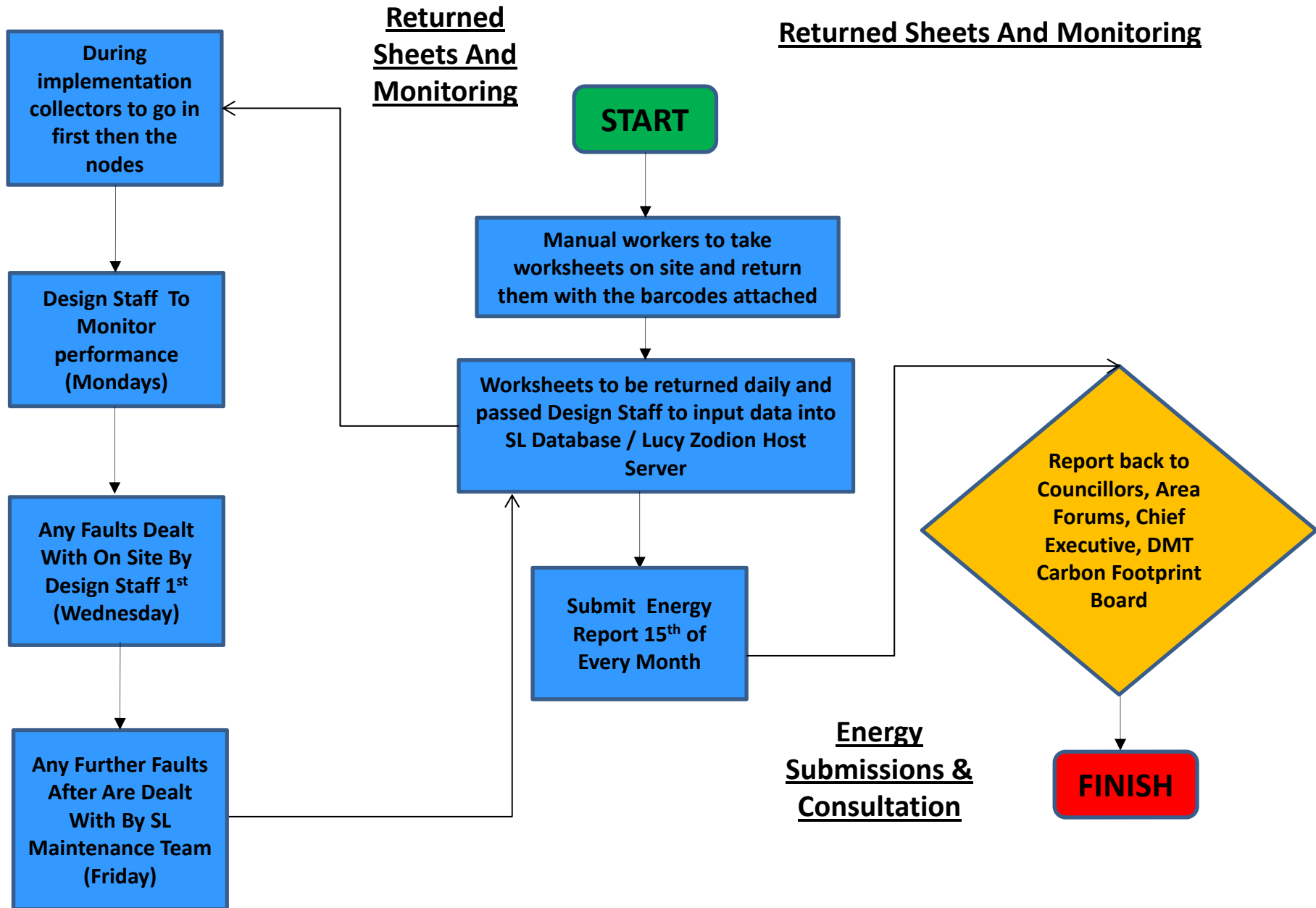


## Design/Issue

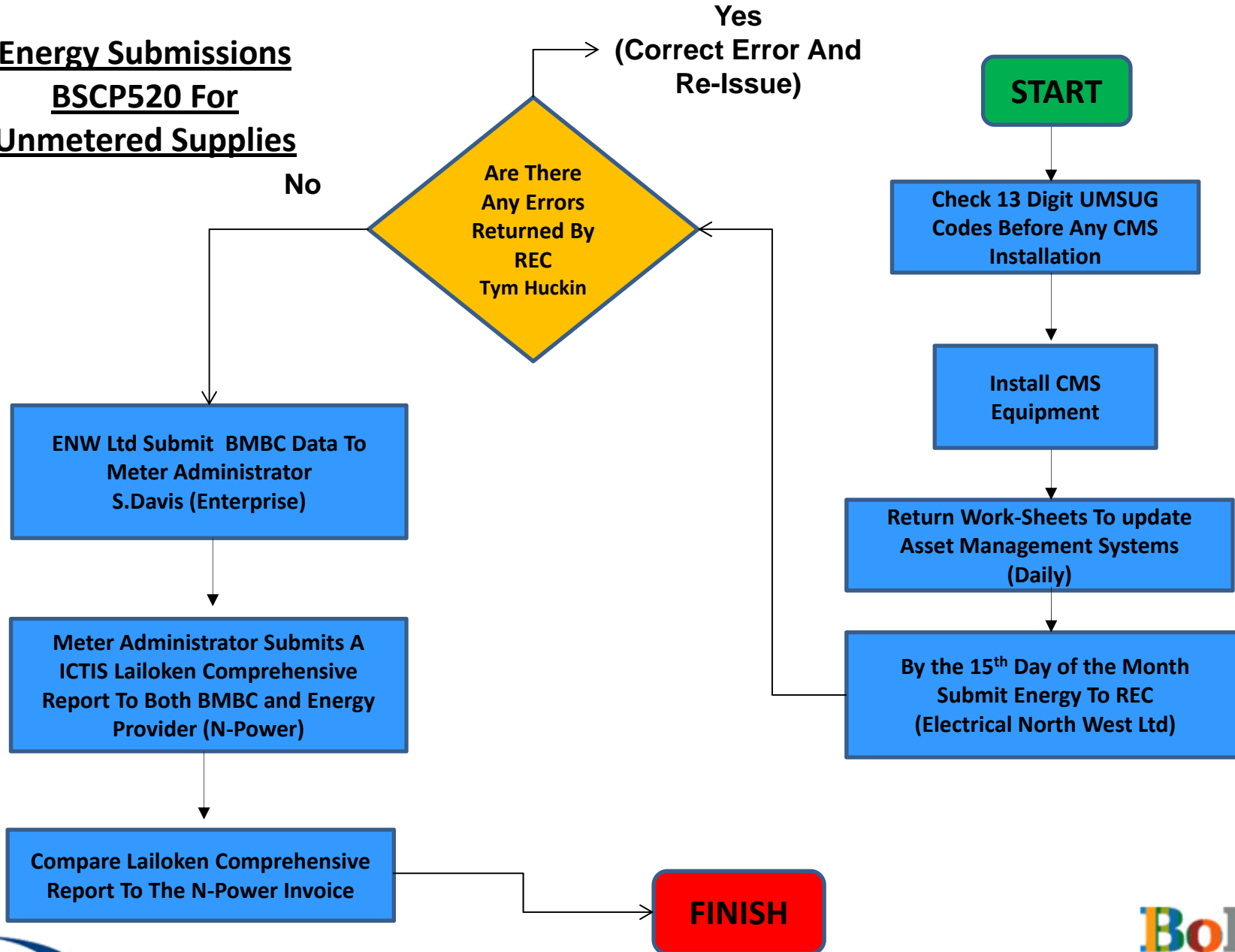
## Implementation:

## FINANCIAL





**Energy Submissions**  
**BSCP520 For**  
**Unmetered Supplies**





# Successful Partnership Working:

- Developed an Energy efficiency Policy.
- Work Base Support And Training.
- 6 Weekly Partnership Meetings.
- Visits From Other Councils and Agencies.
- Allow flexibility of new and emerging technology.
- Energy Supplier and Meter Administrator.



# Future Opportunities-Energy Technology:

- Other Clients:- Housing Stock, Car Parks (NCP), NHS and Schools.
- LED Lanterns Trial.  
135No LED lanterns on 15 Streets Across The Borough.  
20Yrs Maintenance Free.  
Additional Energy Savings Through CMS technology.
- School Crossing Sites (Lancashire).
- Festive Decorations (North East Lincolnshire).

Bolton Leading The Way !!!!!!!



**Happy To assist  
Any Questions**