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Welcome to the Smart Metering Launch

21st October 2010



Olivia Garfield
Group Strategy Director, BT

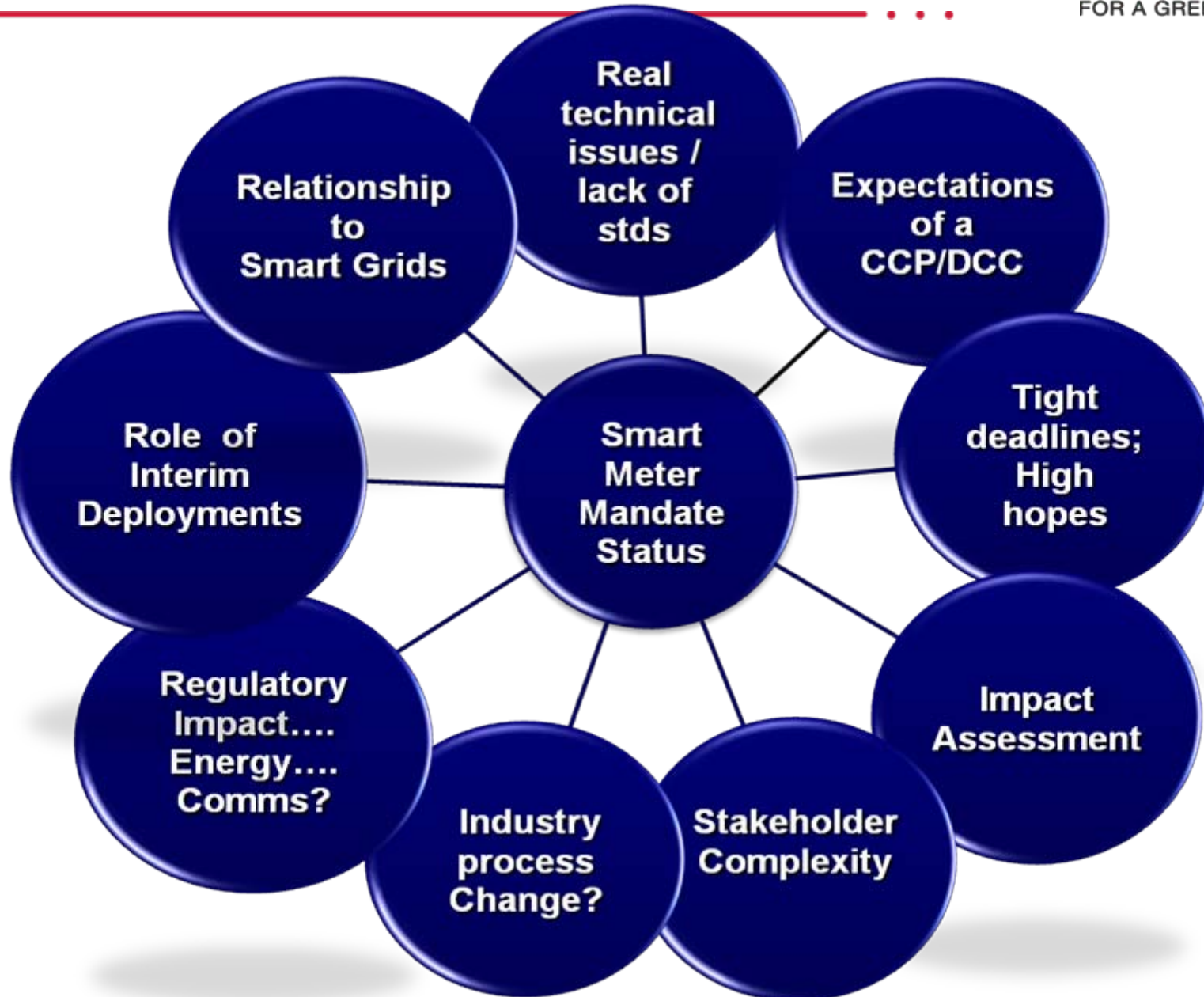


Jo Wright

Vice President, Smart Meters and Grids
BT Global Services



BT Perspective which drove the creation of a collaboration



- BT analysis of the Communications needs of Smart Metering
 - The 100% challenge
- The importance of Security and Data Privacy
 - Depth of expertise within the consortium
- People we know we can work with for the long term
 - Decades of collaboration
- Willing to work together for a common good
 - Co-operate not compete
- Shared commitment to a great outcome for Britain
 - Personally and professionally vested in its success

- Understand the Great Britain specific nuances of the need
- Experience running regulated national services
- Experience running and securing Critical National Infrastructure
- Experience delivering major IT and comms programmes into brownfield sites
- Technology designed for Smart Meters and Grids
- One of largest consumer customer bases with in home technology and field engineering forces
- We can advise as well as deliver
- We have skin in the success of this project in Great Britain

- Experts need to collaborate to improve the clarity of advice to decision makers:
 - we want to kick start that collaboration (IT, comms, energy sectors)
- We want to reduce risk to our customers
 - Starting with secure end to end communications
- We will provide practical answers for today and advice for tomorrow
- We want to work with other experts to make Great Britain a showcase for benefits to the nation, environment and consumers



Alastair Davidson

Director of Strategy, Marketing and Business Development
Arqiva



arqiva

2,300 employees based in locations across the UK and Ireland

Turnover of c. £800m pa

Focus on long term infrastructure investment

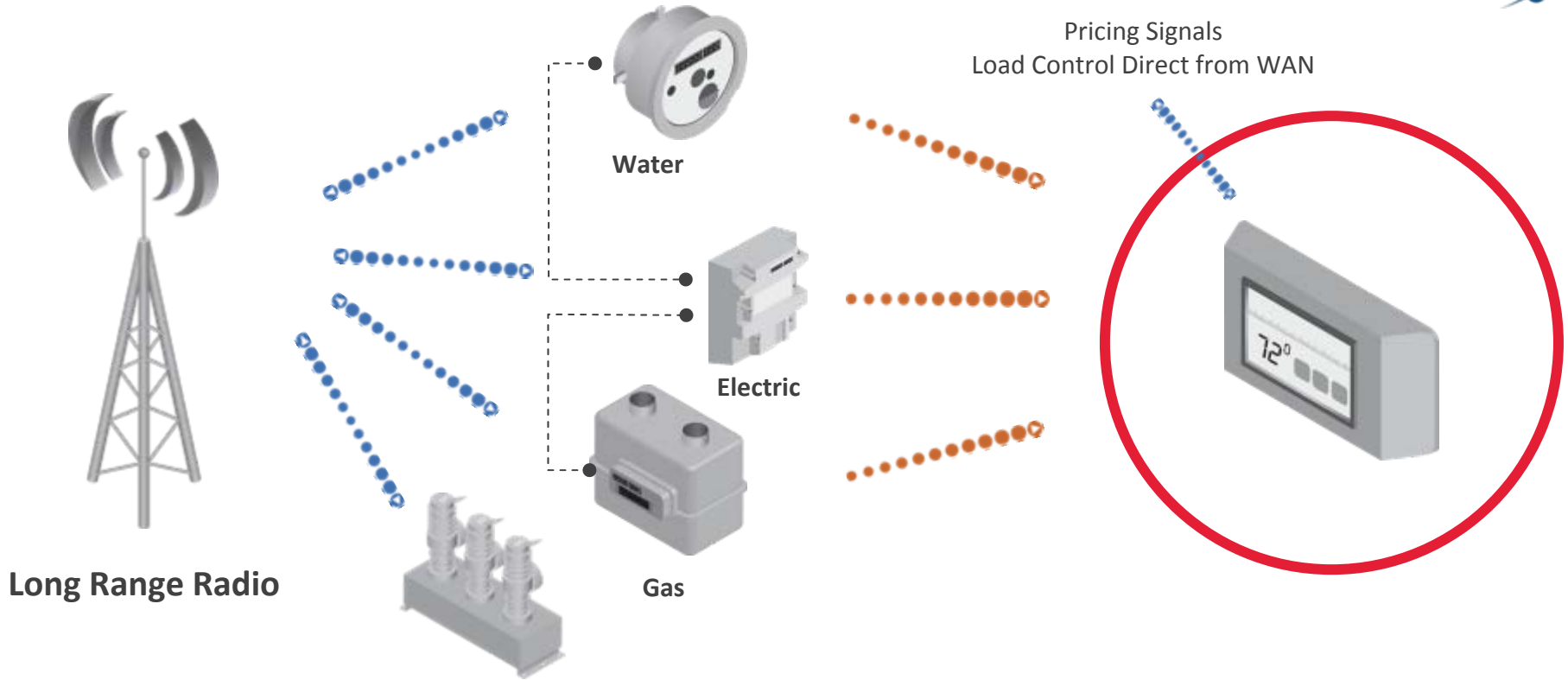
Government, Mobile & Enterprise

- UK's largest independent radio site provider to cellular operators
- Provider of design, build and installation services, and backhaul
- Solutions for 'blue light', RNLI and MCA – private mobile radio and mobile data

Broadcast & Media

- Transmission for UK terrestrial TV channels (BBC, ITV, C4, C5) and radio
- Successful delivery of Digital Switchover programme
- Scale and worldwide satellite footprint

A dedicated, secure, resilient and universal communications solution



Delivered rapidly

Household coverage	70%	80%	90%	95%	99%
Time to deploy	12 months	15 months	18 months	24 months	30 months

All timescales are subject to final requirements and tender process

Dedicated	Secure	Resilient	Universal
<ul style="list-style-type: none">• Designed and optimised for Smart Metering and Smart Grid• Smart Metering and Smart Grid is the only priority• Single point of contact and accountability• Licensed spectrum – in perpetuity	<ul style="list-style-type: none">• End-to-end security by design• Safeguards Critical National Infrastructure• Consistent with national security strategy	<ul style="list-style-type: none">• Low frequency provides excellent in-building penetration• From basement to tower block in winter and summer• Designed to work for over 15 years	<ul style="list-style-type: none">• Single technology solution for all homes• Ensures everyone can benefit from smart meters• First time connection and a reduced need for revisits are key differentiators• Common platform for Smart Energy and Smart Grid

Provides the lowest total cost of ownership and the best consumer experience



Richard Watson

Director, Commercial Client Group
Detica



Why does security matter?

- Enhancing consumer and business confidence
- Protecting our Critical National Infrastructure
- Ensuring the privacy of individuals
- Assuring the success of the smart programme



“NHS Trust and building society guilty of data breaches”

BBC News

“The Stuxnet worm infected industrial control system companies around the world”

CNET News

“The UK is under daily cyber attack...there have been 300 significant attacks on the government’s core computer networks in the last year”

Lord West, speaking in The Observer, March 2010

“Did China’s Hackers Shut Off the Lights?”

National Journal Magazine

“Estonian government websites were shut down after botnet-directed attacks”

Guardian.co.uk

“Secret mobile phone codes cracked”

BBC News

“Engineer's actions triggered Florida blackout”

CNN.com

“Criminals were responsible for creating 240 million distinct new malicious programs in 2009 - a 100% increase on 2008”

Internet Security Threat Report (ISTR) 2010

Detica are market leaders in cyber security and information assurance:

- Specific focus on information security, built on an unparalleled track record with HM Government, including:
 - Civil Government
 - Military
 - National Security Agencies
- Extensive hands-on experience and specialist skills
- Information security expertise is backed-up by advanced technical delivery capabilities
- Enduring client relationships amongst CNI Industries

UK infrastructure faces cyber threat, says GCHQ chief

The UK's critical infrastructure - such as power grids and emergency services - faces a "real and credible" threat of cyber attack, the head of GCHQ says.

The intelligence agency's director Iain Lobban said the country's future economic prosperity rested on ensuring a defence against such assaults.

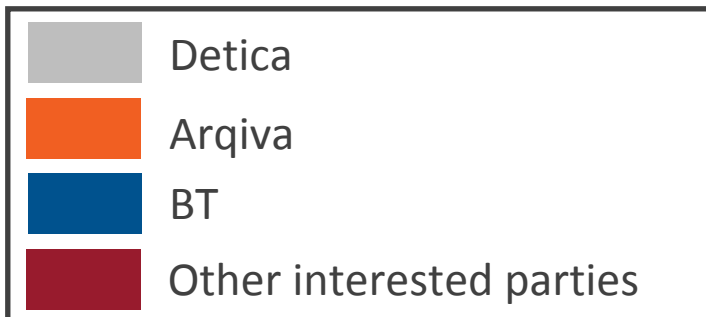
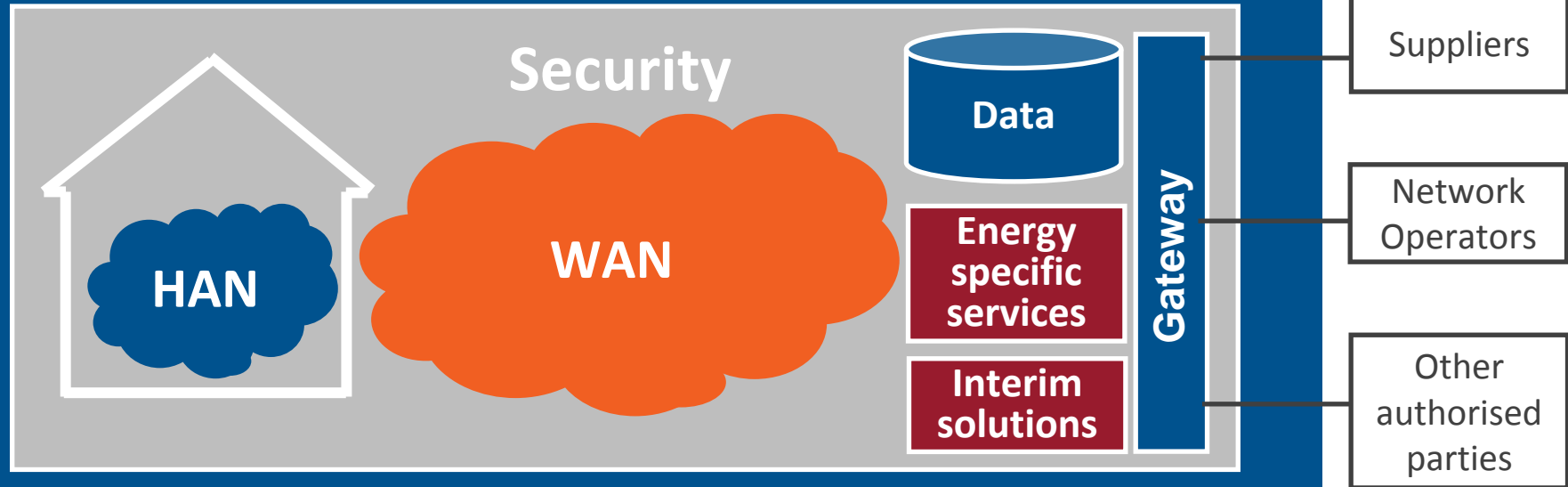


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Service Management



Some meaty challenges lie ahead

- Minimising stranded assets
 - Early design and deployment of ultimate solution
- Getting and keeping consumer interest
 - Customer experience
 - Delivering real benefit
- Reducing complexity wherever possible
 - Nationwide solutions
 - Regulation an option
- Value for Money across supply chain
 - Solution design
 - Cost of technology + Deployment + Running Costs
- Enabling innovation in the Energy Sector
 - Lower barriers to entry; embrace new entrants
 - A platform for new services
 - Customer choice



SmartReach has the skills to deliver today...
and the capability to meet tomorrow's needs

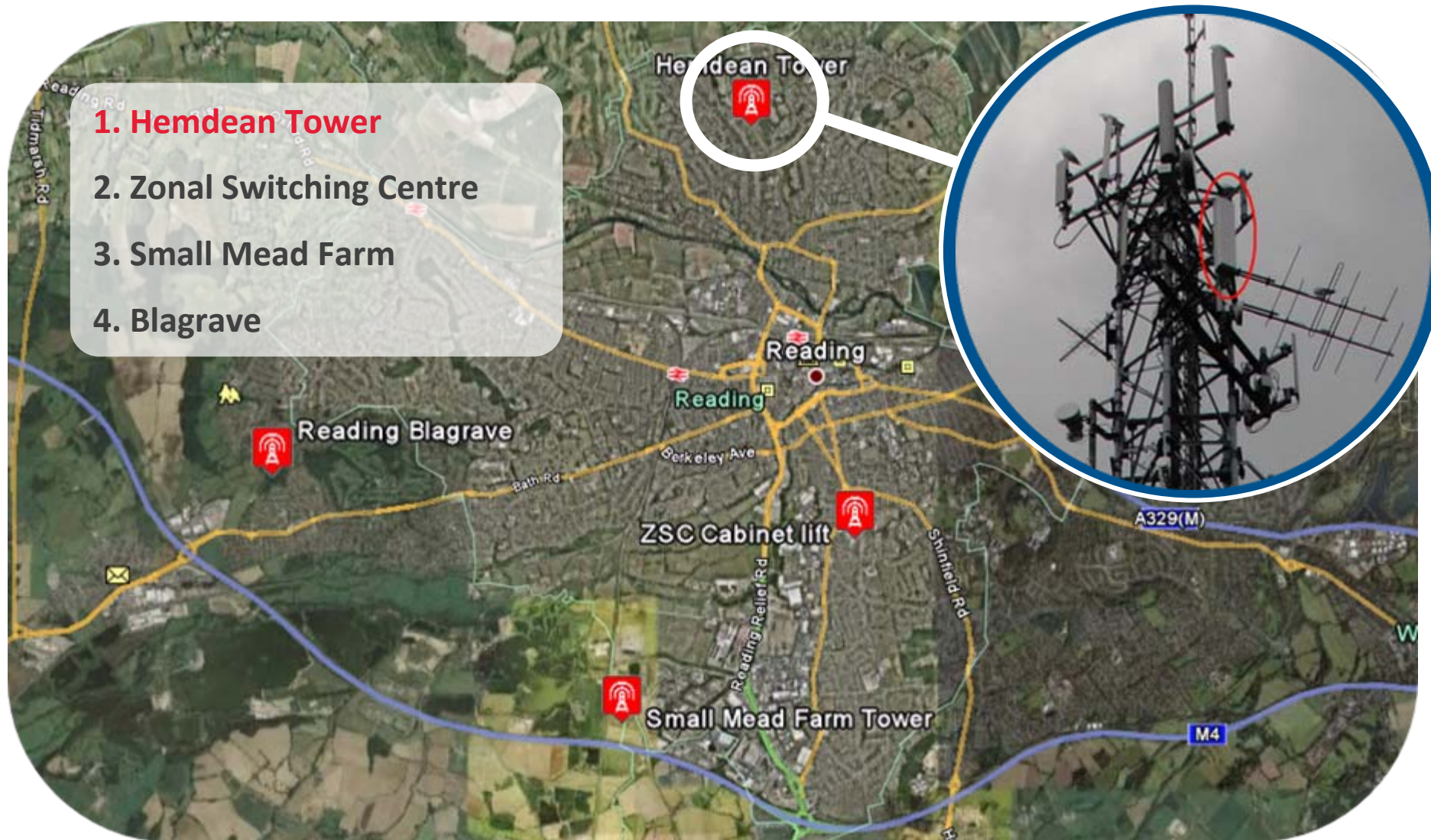


David Green

Programme Director, Smart Metering
Arqiva

- Smart Grid Capital Grant from DECC awarded in March 2010
 - Used to part fund smart grid proof of concept network in Reading
- Network covers approximately 80 square kilometres
 - c. 200,000 homes in the network area
- Network being used for trials by partners for smart meters, water and grid
- Network went live in July 2010
 - Four base stations
 - Each site configured differently to test optimal system and antenna configuration
- Early results proving very positive
 - Connectivity in hard-to-reach places is proven
 - Wide coverage proven
- Network is being utilised by smart metering, water and grid stakeholders

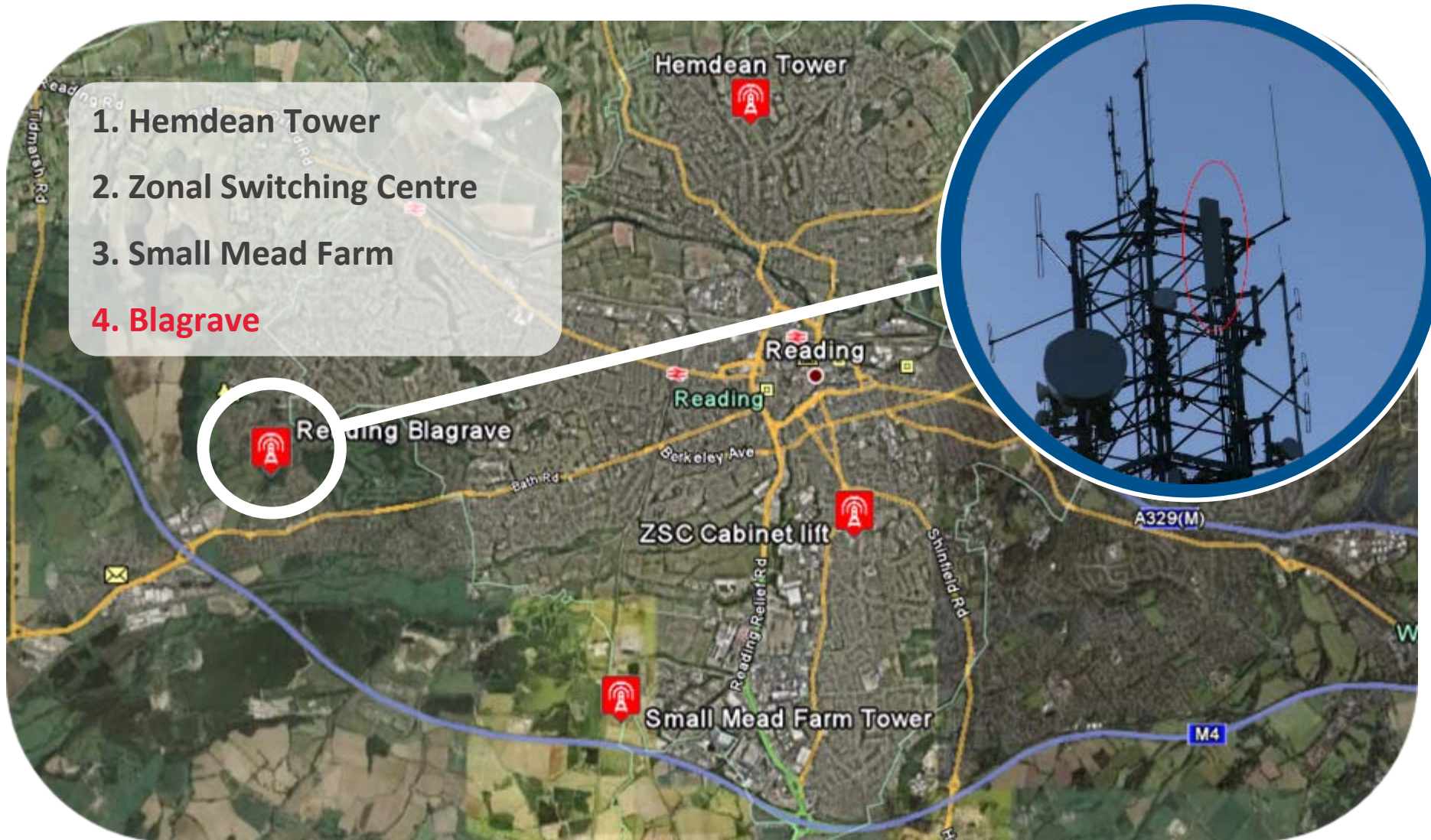
The Reading Smart Grid Proof of Concept network



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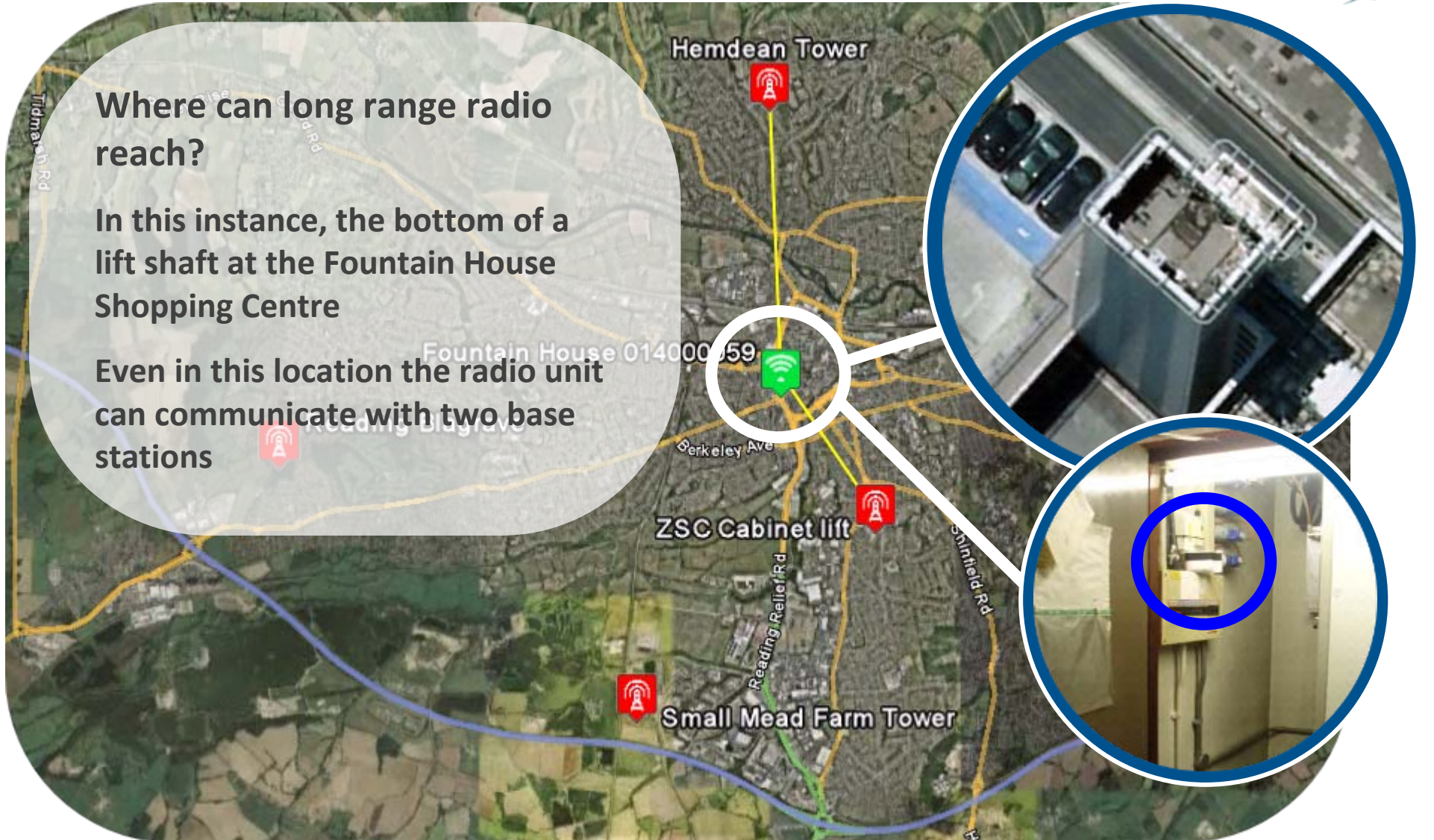


Universal connectivity: Difficult to reach locations

Where can long range radio reach?

In this instance, the bottom of a lift shaft at the Fountain House Shopping Centre

Even in this location the radio unit can communicate with two base stations



14000080

Triallists Home

semi, brick, 1897

Directions: [To here](#) - [From here](#)

How far can long range radio reach?

- The unit at this location could communicate with three sites (Blaggrave, Small Mead and ZSC)
- ZSC was the furthest distance from the location at 11.5 miles

14000080 to ZSC

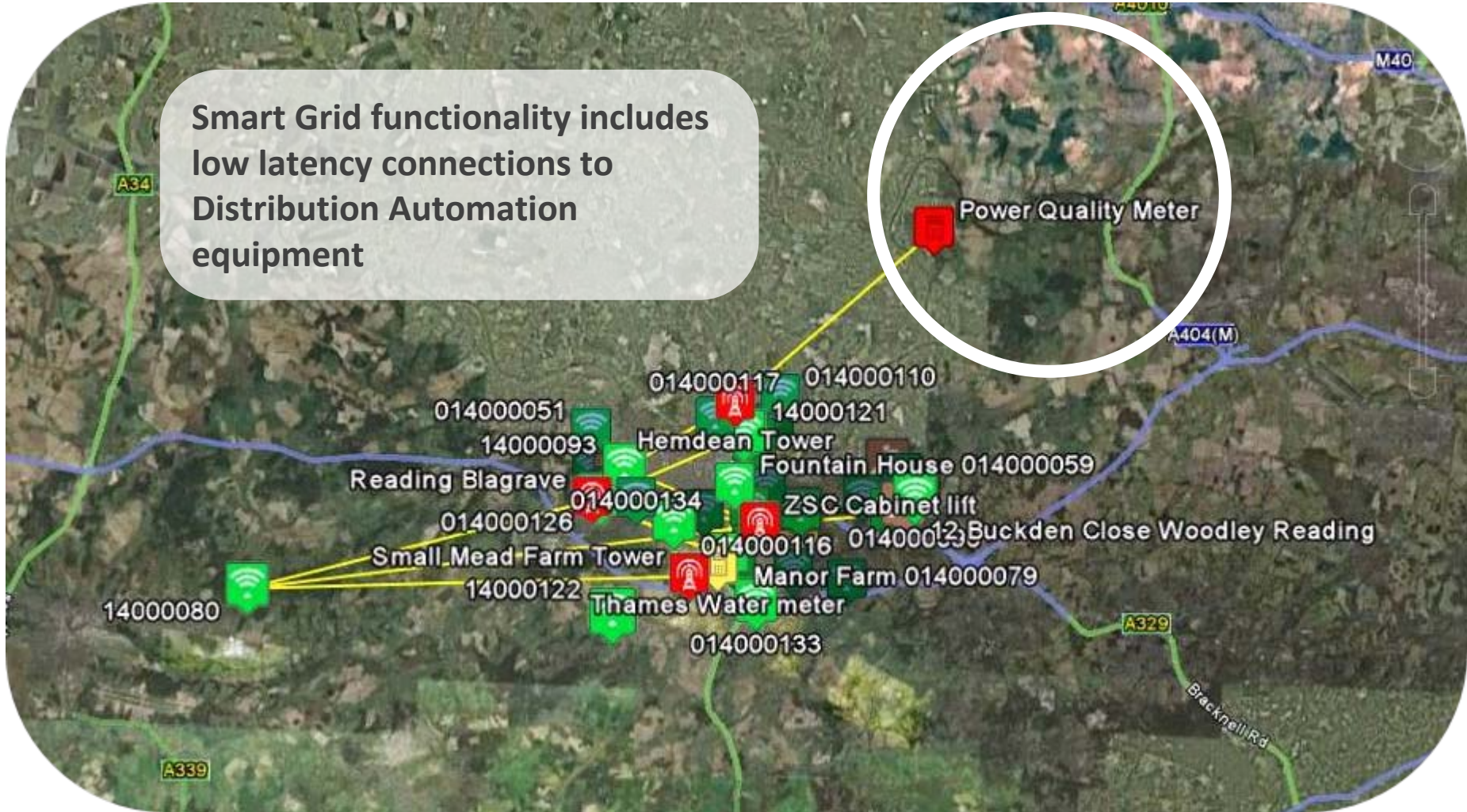
33 14dB
path length 11.5 miles

14000080



Building a smart grid

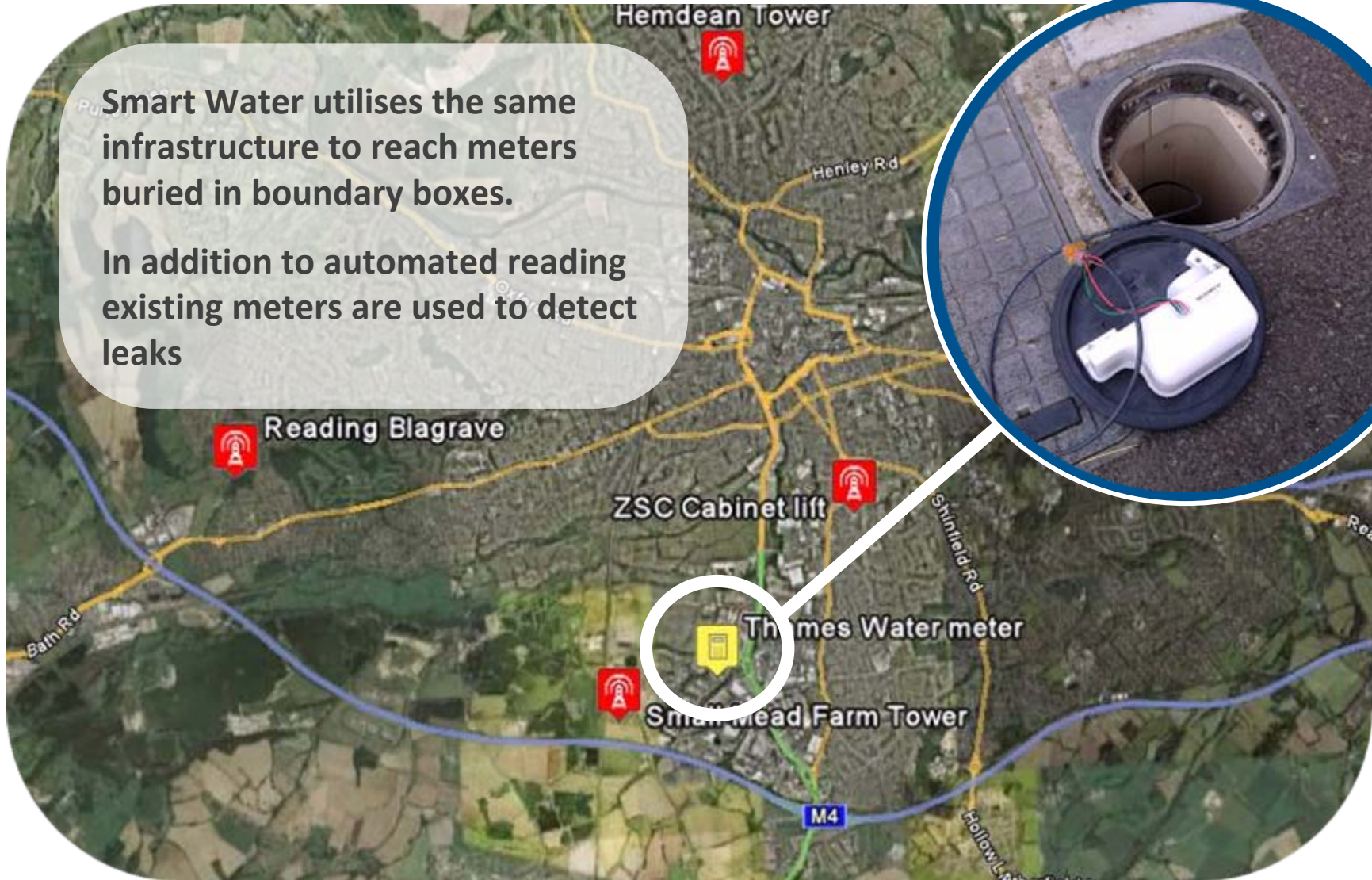
Smart Grid functionality includes low latency connections to Distribution Automation equipment



A solution that can incorporate the needs of the water industry

Smart Water utilises the same infrastructure to reach meters buried in boundary boxes.

In addition to automated reading existing meters are used to detect leaks



Conclusions

- Long range radio can deliver on its promise
 - Large area coverage and universal connectivity
- The proof of concept network will continue to grow
 - Further Electric, Gas, Grid and Water end points
 - New network partners
 - New applications for the Smart Home
- We aim to publish the results of the trial in February 2011
- We encourage other participants from across the industry to join us

Hosted by:

Janet Wood, Editor, Utility Week





THANK YOU . . .

www.smartreach.com

