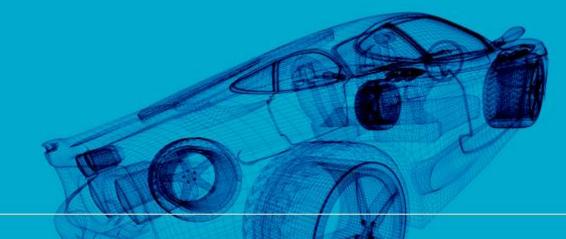


The Future of the Electric Car

Joe Barrett: EVP Qualcomm May, 2012



Qualcomm Halo Wireless Electric Vehicle Charging



Qualcomm Pedigree

- 26 Years of Wireless Innovation
- \$15 Billion Fiscal 2011 Revenues
- \$2.5 Billion R&D Spend
- ~20,000 Employees
 - 85% in Research into all aspects of Wireless
 - Engaged with Major Standards Bodies & Regulatory Bodies
- Long history in Wireless Power Research

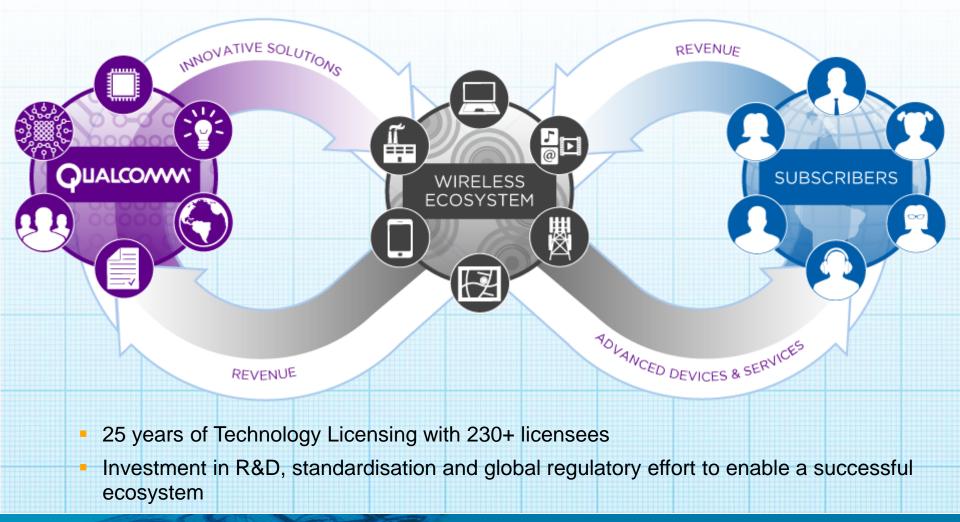






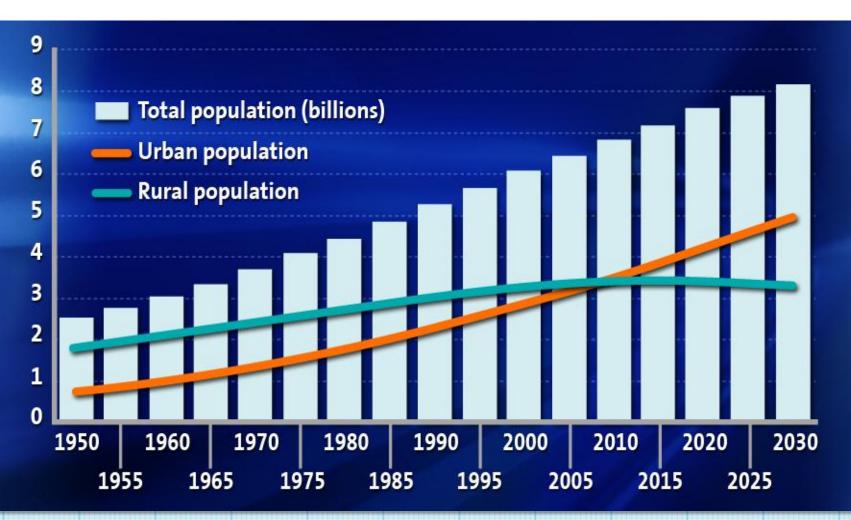
Qualcomm Business Model

Technology and Value Chain Enabler





Why Solve Urban Mobility?



Urban Traffic Congestion and Parking Issues

Source: GM 2012



Health Impacts of PM_{2.5}

- Poor air quality could contribute to 50,000 premature deaths per year across the UK
- Airborne pollution in the form of fine particles (PM_{2.5}) comes mostly from combustion sources; transport, domestic and industrial.

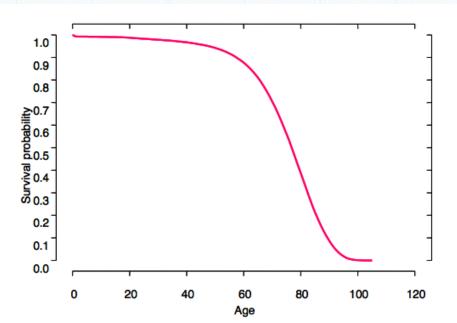
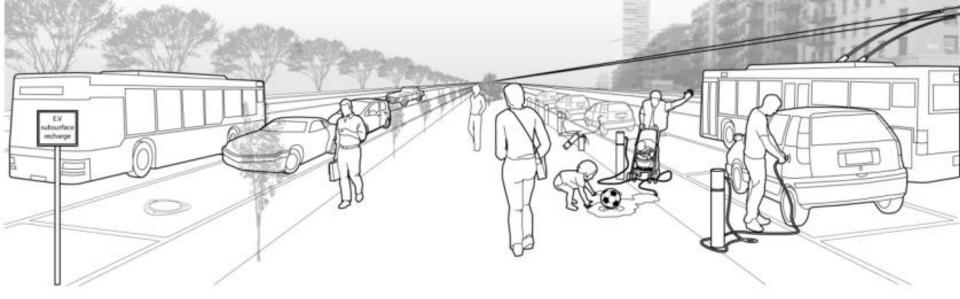


Figure 1 Typical shape of a survival curve showing the cumulative effect of mortality risks on the probability of surviving to various ages.

Source: Report on estimation of mortality impacts of particulate air pollution in London Dr Brian G Miller - 2010

Urban Clutter – the unintended Qualcomm



Durability

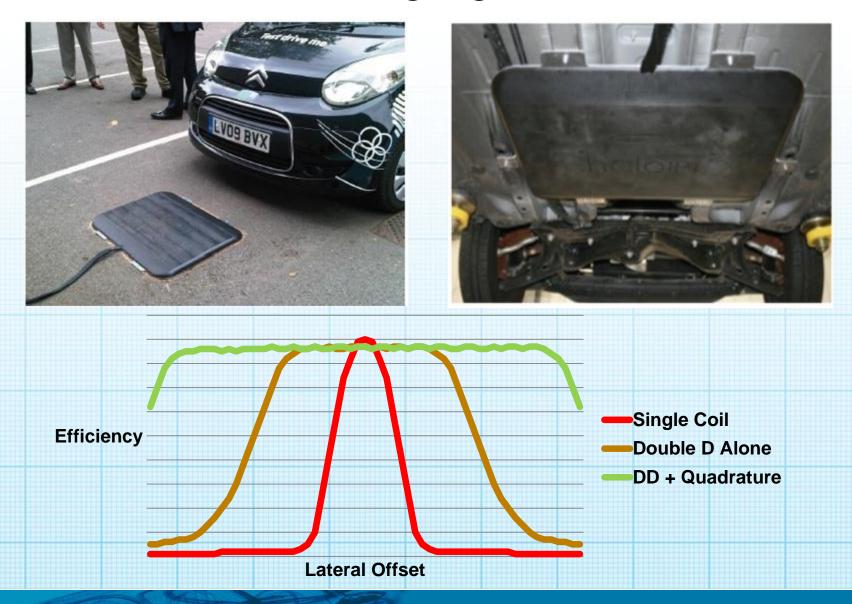
- No moving parts
- Extremely rugged and tough
- Waterproof, weatherproof
- Impervious to chemicals, debris
- Low profile, crash-safe
- Vandal-proof, theft-proof
- No cord to steal or unplug

Aesthetics

- Doesn't damage historic city aesthetics
- Avoids unnecessary street clutter
- Maintains precious footpath area
- Eyesore of overhead cables is removed for buses
- Provides a subtle branding option for networks



Some Innovation Highlights







London Trial 2012



3.3kW Citroen

7kW Phantom

20kW Lola-Drayson











For more information visit: www.qualcommhalo.com



Qualcomm Halo Wireless Electric Vehicle Charging