



CYANCONNODE

— Omni IoT —

ISGAN Conference 2017
John Cronin, Executive Chairman

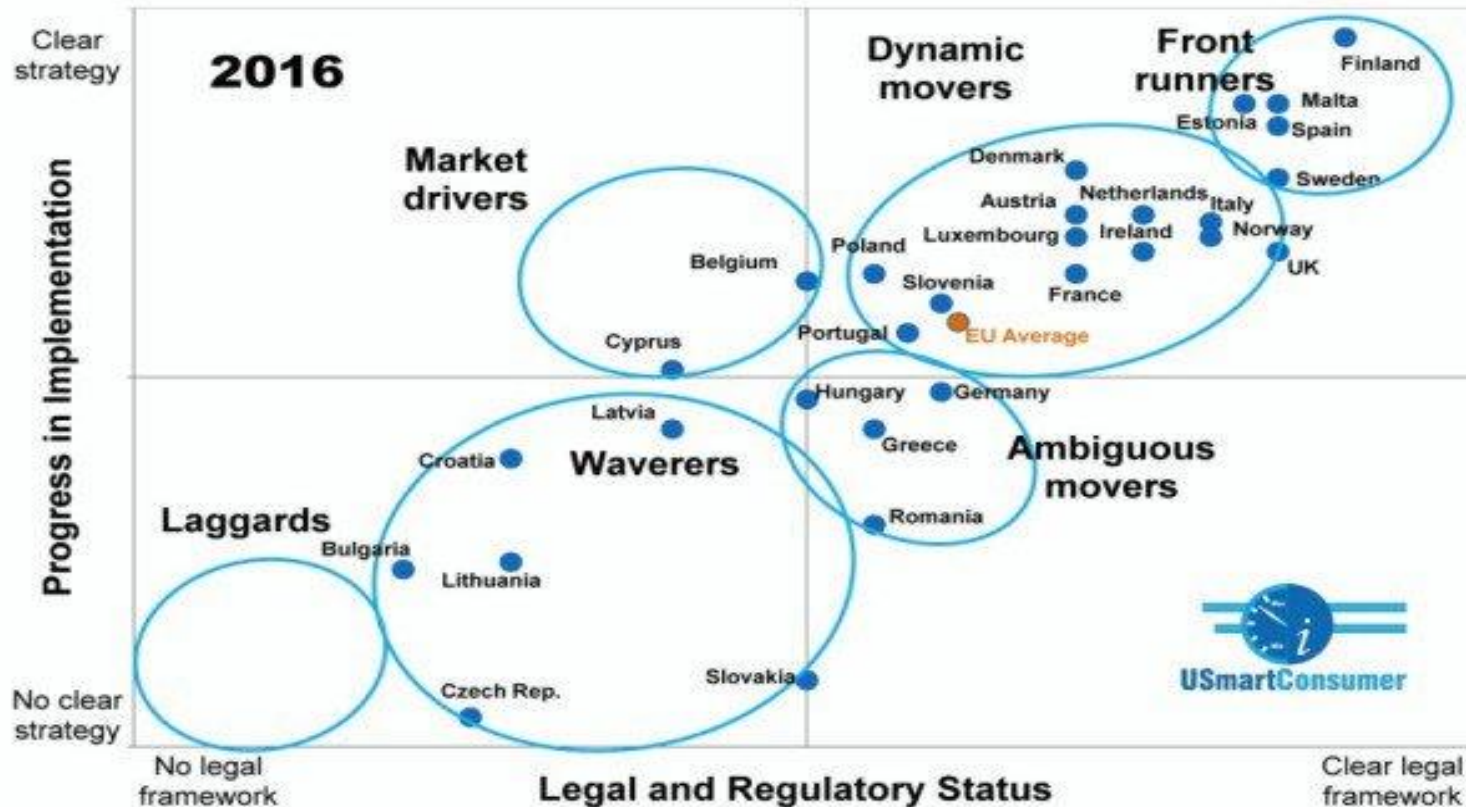
European Smart Meter Roll-outs – Lessons For India

- A world leader in narrowband RF mesh networks for IoT communications
 - CyanConnode's IoT platform provides secure machine to machine communication
 - Enabling service companies that want to systemise operations to improve their customer experience and reduce cost to serve
 - Based on IPv6 narrowband mesh technology, enables cost effective networks that deliver data intelligence.
- CyanConnode has the technology and global experience to support resilient IoT networks that scale
 - Customer deployments in India, Bangladesh, Iran, China, Thailand, Europe and the Middle East
 - Contract in place for UK Smart Metering Implementation Programme

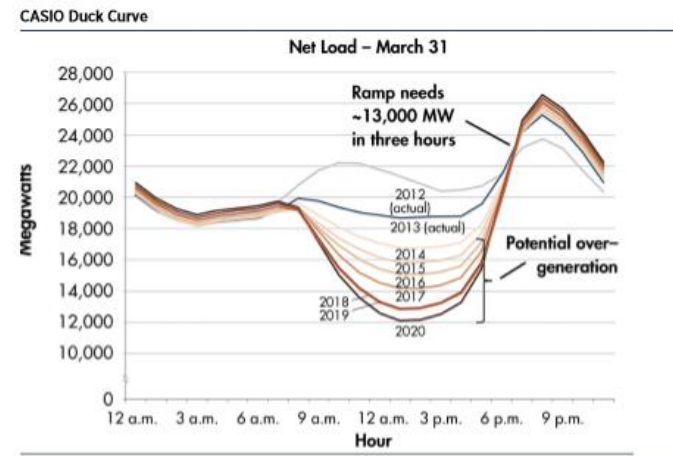
- European Commission's Energy Efficiency Directive 2012 established a set of binding measures to reach the following targets by 2020:
 - 20% increase in energy efficiency
 - 20% reduction of CO2 emissions
 - 20% renewables
- Dependent on the reconfiguration of the European electricity grid into a “smart grid”

Smart metering – empower consumers and increase awareness of energy efficiency

- The EU aims to replace at least 80% of electricity meters with smart meters by 2020
- Close to 200 million smart meters for electricity and 45 million for gas will be rolled out by 2020
- It is expected that almost 72% of European consumers will have a smart meter for electricity.
 - About 40% will have a smart meter for gas
- The cost of installing a smart meter in the EU is on average between €200 and €250
- On average, smart meters provide savings of €160 for gas and €309 for electricity per metering point (distributed amongst consumers, suppliers, distribution system operators, etc.)
- Expected to reduce emissions in the EU by up to 9%
- Average energy saving of 3%



- EU regulation - reduce costs and carbon to optimise energy consumption
- The UK network is **38%** efficient due to peak/trough variations
 - Electricity cannot be stored
 - Turbines variability takes many hours
- Smart meters enable demand response management, changing consumer behaviour
- Smooth power would increase that number towards **70%**

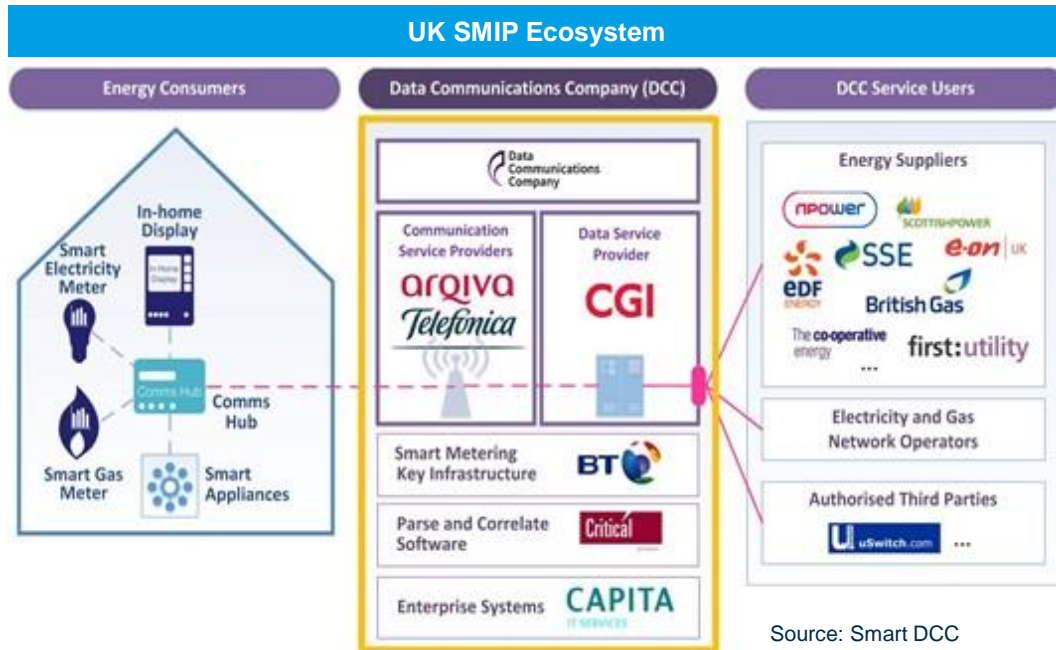




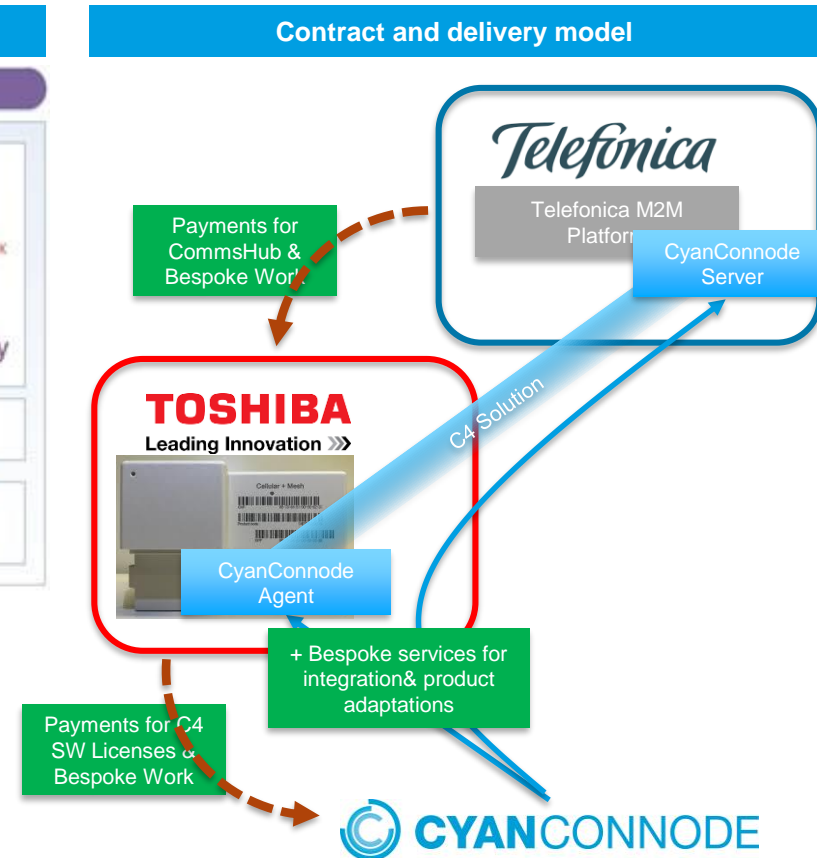
- ~50M smart meters, 30M households
- Established standards
- 7.7M smart meters have been installed – figure set to triple over the next 12 months
 - In 2018, installations will increase from several thousand to tens of thousands a day
 - Mass adoption will trigger the introduction of new tariffs, products and services
- Consumer awareness and acceptance of “smart” capabilities is increasing
 - 20 million people want a smart meter fitted in the next 6 months
- Energy is central to the smart city revolution – as its an enabler

UK Smart Meter Implementation Programme

CyanConnode's solution connecting meters in 'not-spots'



Source: Smart DCC



Sweden - EON

- CyanConnode selected to complement P2P GSM
- Retail: Decreased cost and increased customer satisfaction
 - >50% less customer calls to CS, new services, accurate billing, spot price offerings etc
- Distribution: Decreased cost and increased quality of service
 - Improved cash flow, outage information, remote connect/disconnect, better management of settlement losses etc



Finland – Helsinki Energy

- Roll-out completion – 1 year
 - >50 meters per installer/day
- Stable performance level: 99.6% @ 9 hours and 99.9% @ 129 hours
- Last gasp functionality – increase customer satisfaction and network quality
- Dynamic load control for group of metering points (e.g. boilers)



UK

- Market model drives complexity in the solution
- Complexity drives time line
- Phased roll-out
- Calculated ROI (benefits) best in class in Europe
- Operate on the same backoffice platform to support market model

Sweden & Finland

- Cost and complexity increase exponentially, depending on the number of meter vendors/types and communication technologies used in a system
- A staged roll out - project process may take longer but more cost effective
- Make space and invest in your future unknown needs from the beginning
- Life cycle cost...

- Europe - Regulator driven market
- Each country defines their requirements independently
- Push for open standard technology and solutions
- Innovative use of meters and communication infrastructure
- Driver – cost and energy efficiency through changing consumer behaviours

Links

<https://www.smartdcc.co.uk/more/presentations/>

<https://ec.europa.eu/energy/en/topics/markets-and-consumers/smart-grids-and-meters>

http://www.escansa.es/usmartconsumer/documentos/USmartConsumer_European_Landscape_Report_2016_web.pdf

<http://www.telegraph.co.uk/business/britains-smart-cities/smart-meter-revolution-keen-an-eye-on-our-energy/>

Thank You!