

The Future is Smart!

Speculative Buy

Price: 0.18p

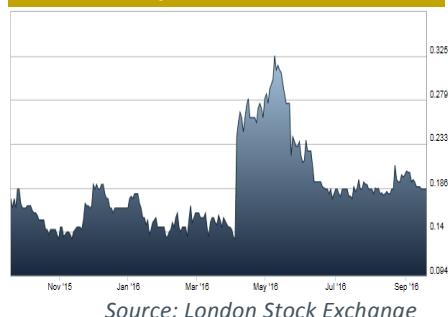
Price Target: 0.60p

Sector: Technology Hardware & Equipment

Key Data

Market:	London (AIM)
TIDM:	<u>CYAN.L</u>
1 Year Hi/Lo:	0.34p – 0.12p
Existing Shares:	14,398m
Market Cap:	£26.13m
ISIN:	GB00B0P66Q02
SEDOL:	B0P66Q0
Co. Website:	cyantechology.com

Share Price Performance



Cyan Holdings was founded in 2002 and listed on AIM in 2005. It operates through the brand 'CyanConnode' and provides wireless communication technology for smart metering, lighting and the Internet of Things.

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It's an absolutely huge problem. The International Energy Agency calculates that 'non-technical' losses represent around 17% of total global energy production

Meanwhile, the World Bank has demonstrated that it is three times cheaper for utilities to save 1kWh of electrical energy by improving distribution network efficiency than investing in new generating capacity. Such losses in developing regions, along with the need for much greater demand response management, are now the single most pressing issue for utility groups worldwide

But there is a solution - Smart Metering – which now represents a giant, unfulfilled, scalable and truly global growth opportunity with the potential to attract large, long-term and exceptionally sticky customers

With the 'Internet of Things' revolution rapidly gathering pace, the Group's recent acquisition creating the brand CyanConnode, not only provides an ideal geographical mix of revenue streams, but also effectively 'future-proofs' its business offering

Beaufort's assessment of the enlarged, post-raise, post-acquisition Group suggests a valuation of around £123.9m

Cyan Ultimesh™

Provides narrowband RF mesh network technology, optimised for exceptional performance and total cost of ownership



Connode Panmesh™

Provides open standards-based (IPv66LoWPAN) solutions for IoT applications

Cyan Holdings Plc – ‘Future-Proofing’ the Smart Opportunity

- Smart metering represents a giant, unfulfilled, scalable and truly global growth opportunity with the potential to attract large, long-term and exceptionally sticky customers.
- The ‘Internet of Things’ (‘IoT’) revolution is gathering pace. It will play a disruptive role in optimising business automation, interconnectivity and efficiencies across a wide range of data-generating product areas, such as smart cities, healthcare monitoring and energy control. Combined with Advanced Metering Infrastructure (‘AMI’), which forwards collected information to central network management, it is capable of providing comprehensive demand awareness, processing, interaction and decision-making tools.
- Such grid management tools and services create opportunity to dramatically raise efficiencies for utility groups. More than a decade of product research, proprietary development and solid investment, has resulted in Cyan Holdings’ (the ‘Group’) development of robust market-leading technologies ideally suited to emerging/developing territories, whose energy supplies can routinely become overwhelmed by both ‘technical’ and ‘non-technical’ losses.
- As a UK-based integrated system and software design company, CyanConnode’s (the ‘Company’) core competence is in delivery of mesh-based flexible Radio Frequency (‘RF’) wireless solutions. They provide intelligent ‘last-mile communications’ for utility metering (through low cost, low power units) as well as street lighting (for energy efficient control). Its solutions are supported by a substantial eco-system of large-company partnerships which lends credibility and vision to future product evolution.
- The business model offers an ideal mix of revenue streams, including initial hardware and service sales during installation/rollout period followed by ongoing software license and customer support fees sold on the basis of a recurring revenue stream and long-term contracts.
- Exceptional recent progress in multiple emerging economies, including the award of numerous Indian contracts plus a prospectively transformational initial-£10m order from Iran, confirming Cyan has passed the inflection point from which significant traction can now be achieved.
- The recent acquisition of Connnode Holding AB (‘Connnode’ or company), funded through a £12.6m placing and subscription, completes the picture, providing a ‘hand-in-glove’ fit with the Cyan’s existing business. As a well-established supplier of wireless communication solutions for smart metering, street lighting and the IoT with existing customers in the UK, Europe and Asia, the enlarged-Group has broadened the scope of its technological offering, while capturing a much broader base of international customers.
- Connnode brings full standards-based technology to Cyan that global customers will increasingly demand in order to facilitate rapid and comprehensive integration into their own networks. It opens hitherto unpenetrated western markets, focussed on demand response management rather than loss elimination, including as much as £37m life-of-contract value from its participation in the UK’s Smart Metering Implementation Programme (‘SMIP’), the world’s most technologically ambitious deployment project.
- The combined CyanConnode brand now possesses the technical skills and resources to deliver end-to-end, scalable and robust ‘future-proof’ solutions which find applications across both emerging and developed-country markets. Indeed, its skillset and IP provides it with a longer-term vision to develop global leadership in the provision of narrowband mesh radio systems.
- Beaufort’s assessment of the enlarged, post-raise, post-acquisition Cyan Holdings suggests valuation of £123.9m. It was derived from a peer group valuation, while recognising it is ideally positioned to provide packaged solutions to utility operators that urgently need to regain control of their distribution network. Their payback comes in the form of accrued efficiencies which optimises grid infrastructure and emulates customer behaviour. Indeed, as the operating advantages become increasingly evident, the extent to which demand for benchmarked CyanConnode products and technology begins to overwhelm the Group’s operational structure could become a key risk. Right now, however, that might be considered a nice problem to have.

Cyan Holdings Plc – Corporate Overview

Board of Directors	Position
John Cronin	Executive Chairman
Simon Smith	Chief Financial Officer
Harry Berry	Non-executive Director
Paul Ratcliff	Non-executive Director
John Read	Non-executive Director

Source: Cyan Holdings

Senior Management Team	Position
Geoff Sarney	SVP Global Sales and Marketing
Vikas Kashyap	VP Asia
Stephen Page	Chief Technology Officer
Christer Osterlind	VP Operations
Heather Peacock	Co Secretary
Michael Westberg	VP Europe
Sylvain Vittecoq	VP Engineering

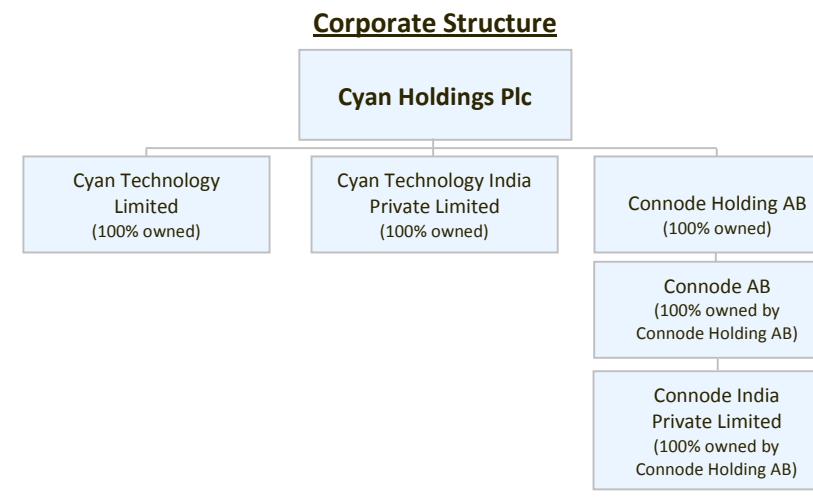
Source: Cyan Holdings

Company Information	
Company Secretary	Heather Peacock
Registered Office	Buckinway Business Park Cambridge CB24 4UQ
Company Website	cyantechology.com
Nominated Adviser/Broker	Cantor Fitzgerald Europe London E14 5RB
Broker	Beaufort Securities Limited London EC2A 1NT
Registrar	Share Registrars Ltd Farnham GU9 7LL

Source: Cyan Holdings

Market: London (AIM)	
Admission Date:	7 December 2005
Sector:	Technology Hardware & Equipment
TIDM:	CYAN.L
Share Price:	0.18p
1 Year High/Low:	0.34p – 0.12p
Market Cap:	£26.13m
No. Existing Shares:	14,398m
ISIN:	GB00B0P66Q02
SEDOL:	B0P66Q0
EIS Qualifying	YES

Source: London Stock Exchange, Financial Conduct Authority



Recent Capital Raisings	
July 2016	£10.1m Placing at 0.18p
June 2015	£4.6m Placing at 0.2p
Aug 2014	£3.5m Placing at 0.35p

Source: Cyan Holdings

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CYANCONNODE

Major Shareholders	Holdings
JST (Biggles Enterprises)	7.9%
Herald Investment	6.8%
Legal & General	6.8%
William David Johns-Powell	3.2%
John Cronin (Director)	2.0%
Simon Smith (Director)	1.2%
Harry Berry (Director)	0.4%
John Read (Director)	0.3%
Paul Ratcliff (Director)	0.05%

Source: Cyan Holdings

Company Overview	
Cyan Holdings Plc is listed on the AIM market in London and is headquartered in Cambridge UK. The Group has three wholly owned subsidiaries, Cyan Technology Ltd (a company registered in England and Wales), Cyan Technology India Private Limited (a company registered in India and based out of Delhi), and Connode Holding AB (a company registered in Sweden). In addition, Connode Holding AB has one wholly owned subsidiary, Connode AB (a company registered in Sweden and based in Stockholm), which also has a wholly owned subsidiary, Connode India Private Limited (a company registered in India and based in Mumbai). The companies provide wireless communication technology for smart metering, lighting and the Internet of Things. The Group was founded in 2002 and listed on AIM in 2005. Cyan Holdings operates through the brand 'CyanConnode'.	Source: Cyan Holdings

Source: Cyan Holdings

Cyan Holdings – The Recent Acquisition, Placing, Subscription and Consideration

On 30th June 2016, a General Meeting called by Cyan Holdings plc ('Cyan' or 'the Group') formally approved the acquisition of Connnode Holding AB for a total consideration of £6.8 million. This was provided in the form of £4.3 million in cash plus £2.5 million in equity consideration. The cash consideration was financed through an equity fund raise of £10.1 million consisting of a placing of 4,341,777,600 ordinary shares and a Subscription of 1,280,277,650 ordinary shares at a price of 0.18 pence each. The main vendor of Connnode was the Nordic private equity and asset management company, CapMan (www.capman.com), who were at the end of their fund lifecycle.

As part of this transaction, Cyan also agreed to acquire Connnode India, which exclusively distributes the Connnode solutions in India. Under the terms of the Connnode India Acquisition Agreement, the company was acquired for up to US\$1.46 million, of which US\$1.3 million is a conditional deferred payment, which will be subject to sales performance and customer payment criteria being achieved. In addition, the current owners of Connnode India will have the opportunity to earn a percentage royalty per software license sold in India according to the terms of the Cooperation Agreement.

The equity consideration payable to CapMan was split out in two tranches: i) 744,583,888 new ordinary shares subject to a six-month lock-in followed by a 12-month orderly market period; and ii) 659,620,000 new ordinary shares subject to a 12-month orderly market period. One of the Subscribers, Biggles Enterprises Limited, which is part of the J. S. Technical Services Company, with whom the Group signed a distribution agreement in May 2016, agreed to subscribe for 1,111,111,111 Subscription Shares in consideration for £2 million. The other subscribers comprise all of the Directors, certain senior management and a consultant of Cyan who subscribed for in aggregate, 169,166,539 New Ordinary Shares for a consideration of £0.3 million. In order to enable the Group to commit further capital over the next 12 months towards the delivery of its growth strategy for both Cyan and Connnode, the Board also secured £4.3 million working capital funding as part of the total net proceeds. As a result, the undertaking strengthened the Group's balance sheet. In total, the number of placing shares, subscription shares, consideration shares and additional consideration shares represented 49.68% of the Group's enlarged share capital. As at year end 31 December 2015, Connnode had net assets of circa £0.7 million and generated EBITDA of £0.2 million from revenues of £2.5 million, based on 1 GBP = 11 SEK (Swedish Krona).

Fund Raising: Use of Gross Proceeds	£m
Acquisition	4.3
Conditional Deferred Consideration in respect of Connnode India held in escrow	0.6
Working Capital for Cyan	3.6
Working Capital for Connnode	0.7
Fees and Expenses	0.9
Gross Proceeds	10.1
Value of Equity Consolidation	2.5
Total Transaction Value	12.6

Source: Cyan Holdings

Half-Year Result – Six Months to end-June 2016 (Released 22 August 2016)

Financial Highlights

- Revenue of £1,029,526 (H1 2015: £157,328), which represents a 554% increase over the same period last year
- Operating loss of £2,858,715 (H1 2015: £2,289,524)
- Basic and diluted loss per share of 0.04p (H1 2015: 0.05p)
- Cash and cash equivalents at 30 June 2016 of £2,370,504 (H1 2015: £628,069)

Operational Highlights

- Delivery against two contracts worth £1.5 million to Enzen Global Solutions
- Transformational £10 million purchase order for smart metering in Iran
- Follow on order for a further 5,000 meters from Larsen & Toubro for Tata Power in India
- Agreement with JST Group to distribute smart metering technology in Thailand

Post Period Highlights

- Completed the acquisition of Connnode, providing:
 - a smart metering contract with potential revenues of up to £37 million for the UK Smart Metering Implementation Programme;
 - a pipeline of commercial opportunities in Europe and Asia; and
 - a full standards (IPv6/6LoWPAN) technology platform already developed
- Additional working capital funding raised of £4.3 million for the enlarged Group, supported by institutional investors
- Strategic partnership with Enzen in Ireland

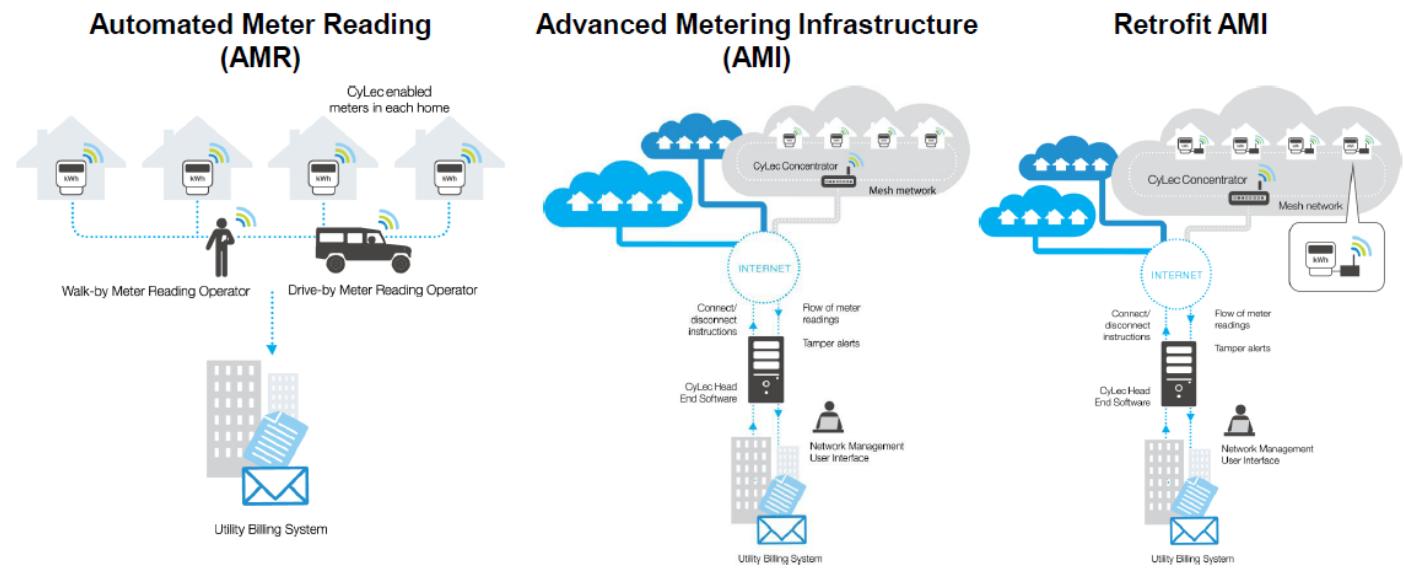
Advanced Metering Infrastructure

Advanced Metering Infrastructure ('AMI') are systems that include hardware, software, communications, consumer energy displays/controllers, customer associated systems, Meter Data Management ('MDM') software, and supplier business systems. AMI supports communication with metering devices such as electricity meters, gas meters, heat meters, and water meters, either on request or by schedule, enabling the measurement, collection and analyse energy usage.

Government agencies and utilities are turning toward AMI systems as part of larger 'Smart Grid' initiatives. AMI extends current Automatic Meter Reading ('AMR') technology by providing two-way communications between the consumer's meter and the utility. This communication platform allows the utility to use meter data for big data analysis, the detection of meter tampering, 'pay-as-you-go' services and even remote service connection/disconnection. In addition, commands can be sent to the home for multiple purposes, including 'time-of-use' pricing information and demand-response actions. Wireless technologies are critical elements of the Neighbourhood Area Network ('NAN'), aggregating a mesh configuration of up to thousands of meters for back haul to the utility's IT headquarters and processing centre.

The network between the measurement devices and business systems allows collection and distribution of information to customers, suppliers, utility companies, local and national governments and other service providers. This enables these organisations to participate in demand response services. Consumers can use information provided by the system to change their normal consumption patterns in order to take advantage of lower prices. Suppliers' pricing can then be used more effectively to curb growth of peak consumption. Systems only capable of meter readings do not qualify as AMI systems, although this can be made possible through a process of retrofitting existing installations.

Smart Metering Value Chain



Source: Cyan Holdings

Utilities are Hurting – They Need an Urgent Fix

The true scale of the problem is not widely understood. Energy loss is a major issue that imposes significant financial and environmental losses, along with associated power-outage, on utilities and energy providers and their customers worldwide. While most commentators focus on the rising international need for new power generation it is, in fact, much simpler and more cost-effective to directly tackle the problem of energy losses rather than add new capacity. In a detailed review, for example, the World Bank¹ demonstrates that it is three times cheaper to save 1kWh of electricity by improving the efficiency of the distribution network than it is to invest in new generation capacity. Indeed, the World Energy Council identifies non-technical losses and high rates of non-recovery as one of the principal reasons for poor performance amongst utility providers. Northeast Group, the market researcher, for example estimated that the 2015 total aggregate cost to utilities amounted to over US\$63 billion due in lost or unbilled revenues.

The International Energy Agency² has estimated total global energy losses to be close to 0.3 billion gigatonne of oil equivalent/year, representing approximately 17% of global energy production. It has even suggested that this could be enough to potentially jeopardise sustainability of the power sector in several developing countries. All this, of course, translates into very significant missed revenue opportunity for utilities groups worldwide. The different elements that make up these losses are defined as either ‘technical’ or ‘non-technical’. Non-technical losses are dominated by theft and/or diversion, although some also accrue from equipment or meter malfunction, calculation or accounting mistakes. Technical losses on the other hand relate to how the system, grid, transmission or distribution inefficiencies, create over-heating, line resistance, mains vibration, earth conduction, etc. and, according to World Bank statistics³, presently average around 8% of total generation globally. In general, utility groups are disadvantaged by having very limited information regarding exactly when or where such losses occur and, even when they have assessed the true extent of the problem, this is of little help when no corrective or remedial action can be taken.

Energy theft is, of course, a far less pressing problem in developed western or Asian territories where non-technical losses might typically be less than 1%. Yet to date, it has been these governments who have been the significant drivers of the smart metering sector. Different priorities mean that they urgently need to establish comprehensive response management tools across their distribution networks, in order to guarantee surety of supply without the need to add costly, often fossil-fuelled, new capacity or further to their carbon footprint. Advanced planning in these territories means that their installation phases can now be expected to peak during the coming decade and that, by 2020, momentum will have passed from west to east as vast programmes ramp up in countries like China and India. The absence of modern nationwide telecommunications in many such countries, however, presents utility groups with a number of different challenges in their goal to create robust, ultra-reliable, responsive two-way communications across their networks.

Smart metering technology and data analytics are capable of resolving both of these problems. Applying such tools to large batches of user-collected ‘big data’, behavioural patterns and demand cycles can be identified. Statistical approaches can then be applied to identify and remedy incidents of local stress on national grids, locate theft/energy diversion or identify the faulty equipment responsible for incorrect billing in a timely manner. While a key advantage of smart metering is that it is able to provide user readings remotely, this also means that utilities will not be receiving routine visual inspection reports, be they from the domestic residences, on distribution wires or even pole-or-surface-mounted transformers, from their traditional door-step callers. Analytical algorithms can and do, however, substitute for this by routinely identifying parts of the network operating with low efficiencies, or those that might otherwise be suffering from power tapping or diversion.

Compiling a database of historical information will also enable the utility to cope with unusual and ‘once-in-a-lifetime’ events, which otherwise might result in extended down-time across large geographical regions. Within this, consumption and event data, when combined with other relevant sources of information can provide the basic inputs for a modern Customer Information System, as a tool both for utilities to strengthen business performance and improve customer engagement, while also allowing local authorities and governments to make responsive allocation of services and facilities in accordance with the environmental legislation.

¹ http://siteresources.worldbank.org/EXTESC/Resources/Background_paper Reducing losses in the power sector.pdf

² <http://www.observatoire-du-nucleaire.org/IMG/pdf/2009-keyword-aie.pdf>

³ <http://data.worldbank.org/indicator/EG.ELC.LOSS.ZS>

Smart Metering - The Ideal Solution

Utilities can gauge the overall extent of non-technical system losses by conducting an energy balance assessment. Flows are generally metered at low voltage residential, commercial and industrial user delivery points and compared with outgoings at high/medium voltage substations, the difference of which places a figure on total losses. Smart metering is then needed to refine this assessment down to what will typically be tens of thousands of customers and hundreds of distribution transformers and network interconnections, in order to begin mapping for efficiency and optimisation.

Within developing/emerging countries, major industrial and commercial users might represent 30% of the total revenue take of any distribution company (who are likely to be consuming power across high-medium-low voltage, two and three phase supplies); the utility will typically already have installed a costly SIM-based smart meter or Power Line Communication ('PLC') for such customers who will in any case be considered low risk with respect to payment and/or non-technical losses. Such solutions, however, are either too expensive or not suited for use in downstream residential units or for the myriad of smaller scale industrial and commercial, which instead require a more efficient means of data collection. CyanConnode's narrowband RF mesh network is an affordable low power, flexible wireless communication that provides an ideal solution to such real-world problems.

CyanConnode's smart metering solutions provide a key to supporting solutions for utilities to:

- *Ensure correct and automatic billing*
- *Identify and locate consumption anomalies/discrepancies*
- *Analyse and optimise network infrastructure*
- *Locate and analyse energy losses on the network*
- *Detect tampering conditions*
- *Provide remote supply shut-down*
- *Aggregate regional population consumption and impact of changing tariff*

Such solutions mean that smart metering can and will become an integral part of the utilities' future revenue protection system. Although installation programmes could be necessarily long and complex, the outcome will provide a solution that is both friendly to the environment and fairer to the customer, while also transforming the viability of international utility groups.

Realistically, in regions of exceptionally high non-technical losses, payback should be achieved within three to four years as progress toward a scenario of regularisation as financial losses are rapidly identified and eliminated. As well as providing an environmentally-friendly solution, it can also educate users on how to become more energy efficient, by identifying opportunities for users to reduce peak-loading or permit dynamic demand devices to passively shut down supplies when stress in the grid is sensed. Of course, smart metering also provides foundation two-way communication for governments striving to create comprehensively networked 'smart cities' and opportunity for the effective deployment of the growing IoT market.

Being an evolutionary goal for progressive government, the drive towards broad adoption of the 'connected home' will create giant business opportunities far beyond the foundation concept of smart metering. Companies with installed customers bases and capable of offering best systems solutions plus ability to actively process the volumes of data generated will find themselves ideally placed.

The Smart Market Opportunity – Grids and Meters

To-date, most smart grid investment has been concentrated in developed countries. North America, Western Europe, and East Asia represent nearly 83% of the currently installed base of smart meters and many have introduced pioneering distribution automation, analytics, home energy management, and other smart grid initiatives. Together, the countries responsible for the 10 largest deployments are expected to spend an aggregate total of between US\$150 billion and US\$220 billion on smart grid infrastructure between 2012 and 2022. The UK deployment alone, for example, comprising about 53 million electricity and gas smart meters, is expected to cost about £12 billion (around US\$19 billion, or US\$380 per deployed meter) over five years, requiring a five-fold increase in meter fittings per year across the country.

The developing world is, however, positioning itself to quickly catch up. Reportedly, over 50 such countries have begun to explore some form of smart grid deployments, and in many cases have advanced regulatory frameworks and pilot projects in place. With GDP growth rates more than double those in the developed world (at +4.8%/year from 2015 – 2019), they should have the funds available to undertake significant grid modernisation. For this particular sample, the overall smart meter penetration rate is expected to exceed 60% by 2026 and will cumulatively account for investment of US\$226 billion across six smart grid market segments over the next decade out of a total projected global spend estimated at over US\$380 billion, according to a recent study published by Northeast Group, LLC. So the geographical focus of smart meter deployments has already begun its shift from West to East, with the Asia Pacific region, specifically China, set to dominate global deployment from 2020.

To date, most international smart metering projects have been driven by governmental mandates. These include China (where it is part of the country's current Five-year Plan), certain US states such as California and Texas, and a European Union directive for 80% of its meters to be 'smart' by 2020. There are, however, also some notable deployments being planned that have alternatively considered a 'market-driven' approach. Uncertainties about the costs of deployment and the ability to monetise the benefits have resulted in some national cost/benefit analysis exercises producing negative or marginal outcomes. Despite such assessments, some utilities are still proceeding with deployment as the longer-term business case becomes clearer; for example, Sweden mandated its rollout despite the original negative benefits case.

Smart grids drill down into eleven independent separate market segments. The sector is dominated by 10 global equipment and service suppliers. Smart metering has emerged as the dominant entry point into the smart grid journey for most distribution utilities. The 10 largest deployments worldwide are forecast to add 500 million smart meters by 2020, approximately tripling the current installed base.

Smart Grid Market Segments and top-10 Sector Vendors

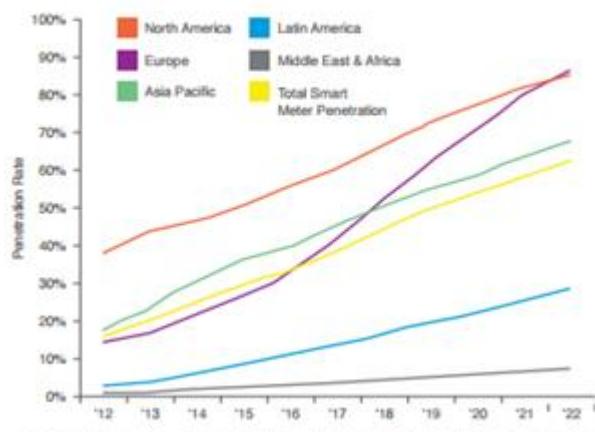
GTM Research's Top 10 Vendors in the End-to-End Smart Grid	Market Segments
ABB	Smart Meters
Aclara	Grid Networking
eMeter (acquired by Siemens)	Distribution Automation
IBM	SoftGrid
Landis+Gyr (Toshiba)	Demand Response
Opower	Consumer Engagement (HAM)
Itron	Building Automation (BAN)
SEL	Integrated Circuits/Chips
Siemens	Greentech
Silver Spring Networks	Smart Enterprise
	Security

Source: Greentech Media

A 2014 report written by Telefonica ‘The Smart Meter Revolution’⁴ goes further, predicting that more than 800 million smart meter devices will be installed worldwide by 2020, by which time Asia and Europe will have become the main drivers of market growth. Within this it predicted that smart meter revenues will grow to US\$7.4 billion by 2018, up from US\$5.2 billion in 2012. Other reports suggest the opportunity is bigger still; one from research group MARKETSANDMARKETS, for example, estimates the overall market will expand from US\$11.1 billion in 2014 to US\$18.2 billion by 2019, representing a CAGR of +10.2% over the period. Another, this time from P&S Market Research suggests it will reach US\$20.7 billion in 2020, growing with a CAGR of +10.6% during 2015-2020 while Northeast Group estimates an annual market worth US\$26.5 billion by 2025. While these understandably contain quite wide variation, they form a consensus that smart meters are rapidly developing into a giant world opportunity and that installation activity will likely peak in the West during the coming decade, whereafter deployment will roll to the East.

European smart meter penetration is presently about 21% and Europe is expected to exceed North America, which currently has the world’s highest rate of deployment, before 2020. Following this, focus is likely to fall on China, where high demand is expected to drive penetration to almost 70% by 2022 as part of its 5-year plan to upgrade its utility infrastructure having enjoyed CAGR of +11.2% during 2015 – 2020 according to P&S Market Research, at a time when US sales could potentially be hit individual State funding delays and Europe peaks. The [Office of Gas and Electricity Markets](#) (‘Ofgem’) in Great Britain, [State Grid Corporation of China](#) (‘SGCC’), and [Tokyo Electric Power Company](#) (‘TEPCO’) are key government organisations driving the deployment of smart meters in their respective countries. While African take-up beyond this is likely to be slow, both the Middle Eastern and Latin American markets retain significant potential to surprise on the upside.

Smart Meter Penetration Rate of All Electric Meters
by Region, World Markets: 2012 - 2022



Source: Navigant Research

Top Smart Electricity Metering Markets, Installed Base, World Markets: 2020

Country	Units	Installed at 31 Dec 2020
China	(Meters)	437,847,228
United States	(Meters)	132,042,022
Japan	(Meters)	58,750,000
France	(Meters)	35,300,000
Italy	(Meters)	33,600,000
Germany	(Meters)	32,900,000
Brazil	(Meters)	29,576,569
United Kingdom	(Meters)	26,920,000
Spain	(Meters)	21,800,000
South Korea	(Meters)	21,328,625
Total	(Meters)	830,064,443

Source: Navigant Research

⁴ <http://www.businessgreen.com/bg/news/2326288/global-smart-meter-installations-to-top-800-million-by-2020>

Rationale for the Connnode Acquisition

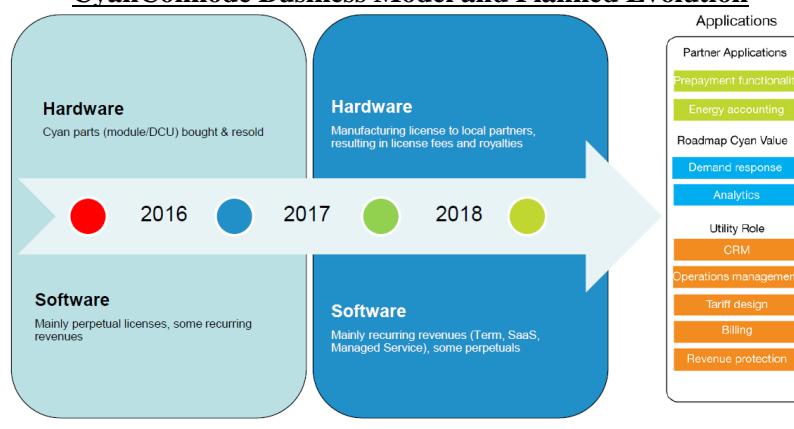
Cyan is a UK-based integrated system and software design company. Its product suite provides an ideal metering solution for the energy (and prospectively other utility) infrastructure found in emerging markets. Such infrastructure is characterised by a lack of connectivity, common technical standards and reliability of communication networks that are prevalent in developing economies. Cyan innovation has successfully addressed this problem through the incorporation of a narrowband RF mesh solution, which utilises low power radio frequency based communication technology. These are best suited to applications requiring long-range and reliable communications. Cyan's solutions use sub GHz frequencies that maximise the range of its low power network and provide excellent penetration through obstructions, such as buildings, in smart metering deployments. Its optimised solutions include hardware, software and network management and by understanding all the elements of the end-to-end solution Cyan is able to increase the performance of its technology. Specifically, Cyan's RF systems offer a transmission-reception range (being in excess of 2km given direct line-of sight or at least 60m through two heavily constructed mortar or reinforced walls) appropriate to the diverse, densely populated locations and irregular urban zones identified amongst the Group's current target markets.

Connnode (www.connnode.com) is a Stockholm-based communications software company with offices also in Mumbai. Its offering is a standards-based solution that also uses RF mesh technology, which complements Cyan's own product architecture while targeting different geographical markets. It brings the enlarged-Group significant working relationships with blue-chip partners, having undertaken successful deployments with global smart grid and meter sector leaders, like Landis+Gyr AG, in certain major projects. Value creation is significantly derived from code writing and algorithm licensing, as opposed to 'off the shelf' products (enabled-hardware licensed-supply and support). To date its markets have been identified primarily in developed territories, having an existing presence in Europe, the UK and Asia. Importantly, the UK market represents a significant opportunity for the expanded Group to build its presence in a high margin geography, through Connnode's ongoing participation in the Smart Metering Implementation Programme with existing blue-chip partners.

Cyan + Connnode = CyanConnnode - Business Evolution

The smart meter sector CyanConnnode address is now entering a global installation phase, which is expected to develop into a frenzy of activity in the coming years. Given that this will peak a 10-year view and be followed shortly thereafter by maturity, however, it is now not realistic to build a longer-term business plan based on the manufacture and installation of smart meters, but rather to develop sector-related activity weighted more toward technology royalties, software IP, licensing and managed services to build ongoing, predictable and expanding annual revenues. It also opens opportunities to develop further scenarios to monetise an installed and franchised 'connected consumer'. The acquisition allows CyanConnnode to complete exactly this migration, away from being a hardware-centric business to one that expects to secure incremental value through very high margin software-based services which will develop multiple new 'Internet of Things' opportunities.

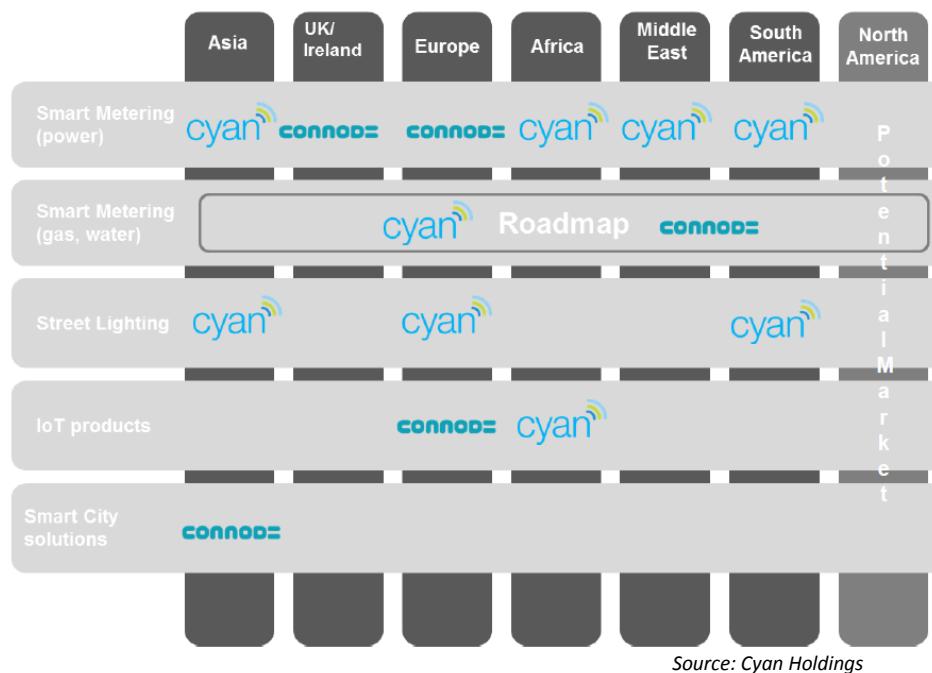
CyanConnnode Business Model and Planned Evolution



Source: Cyan Holdings

Beyond this, CyanConnode's standards-based solution, Panmesh, can be expected to find new demand in emerging regions as operators increasingly adopt IPv6-based Neighborhood Area Networks to access highly secure IP-based Machine-to-Machine ('M2M') platforms that use radio mesh networks to create self-healing, self-configuring and intelligent platforms. Effectively, Panmesh is a means by which to efficiently connect and manage very large populations of devices for 'smart' applications; these can be either for metering, where its mature platform has demonstrated almost faultless availability or, as an IoT platform to fit seamlessly into existing M2M infrastructure or, as a 'pipe' to enable service providers to offer a pure IP communication solution. The Group Board consider that the acquisition of Connnode has enabled it to avoid an estimated £2.5 million cost plus 16-20 man years (perhaps 18-months elapsed time) required to develop its own proprietary IPv6/6LoWPAN (which is an acronym of IPv6 over Low Power Personal Area Network) standards-compatible product solution.

Enlarged Group – Complementary Offering



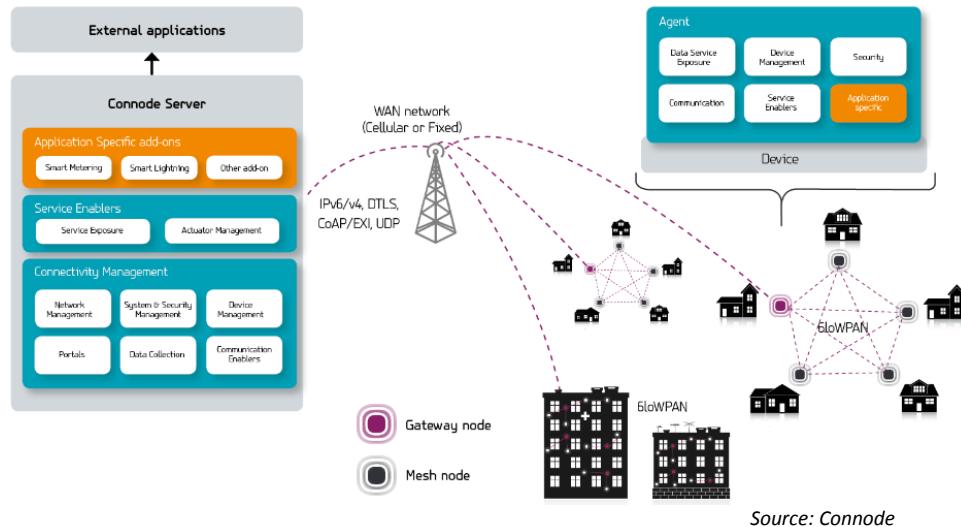
Enlarged Group – Complementary Offering

CyanConnode intends to utilise (Connnode's) existing relationships to further expand its complete product set in European and Western markets with, amongst others, Telefonica, Toshiba, Landis+Gyr AG and Itron. It is expected that the two companies will evolve a more comprehensive, hybrid solution, under the CyanConnode brand label, which will raise the competitive barrier in smart metering and lighting one notch further.

In developed markets CyanConnode has facilitated an installed base of over 700,000 smart meters, which has included a significant role in the Finnish Smart Meter Programme and an ongoing contract with the UK's SMIP, the world's most ambitious and technically advanced project. In emerging territories, the acquisition will accelerate (and defend) CyanConnode's position, providing new direct relationships with a large India utility and Intel Corporation. It is already participating in a tender process for a smart city pilot system being created by an Indian energy utility; if successful CyanConnode will link smart meters, street lights and public services using its RF wireless solution and WAN network. Having also a commercial opportunity with a Tier 1 power distribution company in India, which potentially offers multi-million pounds of software licensing revenues, these will deepen CyanConnode's existing opportunities in the territory and elsewhere, which include its £10 million Micromodje contract in Iran.

From its European hubs in Cambridge and Stockholm, together with the operations in India, CyanConnode will deliver a world-class communication multi-application network. CyanConnode is also seen to present the potential to carve out a dominant position in global provision of narrowband mesh RF solutions.

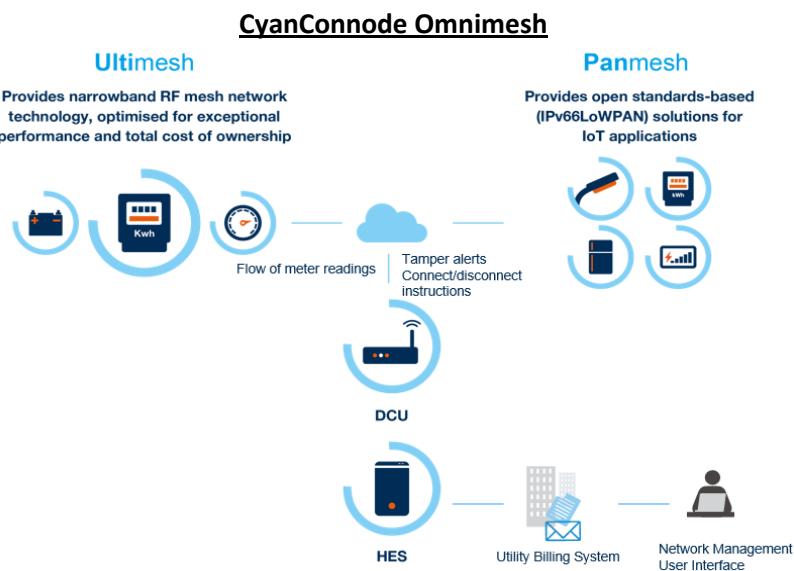
How Does it Work? – Panmesh



Source: Connnode

The CyanConnode Omnimesh

Using the CyanConnode brand, the Company will offer customers both the legacy (Cyan and Connnode) products and services as well as a combined hybrid solution of the two technologies potentially offers a more enticing business proposition. Omnimesh combines Ultimesh narrowband RF mesh network technology, which is optimised for exceptional performance and total cost of ownership, with Panmesh which provides open standard-based solutions for IoT applications. Effectively, this will be seen to ‘future-proof’ the combined offering, providing customers with core narrowband mesh competence with the opportunity to be included under a broad standards-based canopy as the user’s network becomes more sophisticated and, potentially, other applications are added. The complementary fit significantly broadens the enlarged-Group’s global footprint, while enhancing its competitive position as customer demands become more exacting.



Source: Cyan Holdings

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Financial Implications

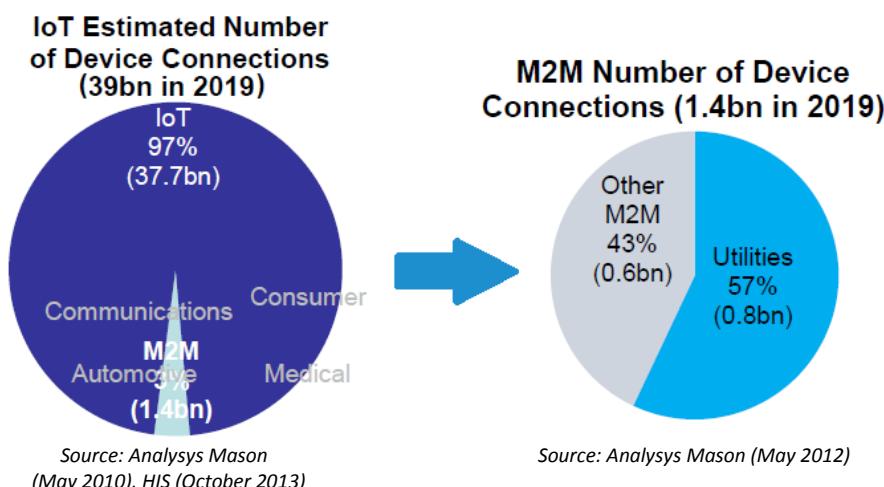
During the financial year ending-December 2015, Connode recorded revenues of £2.3 million (2014: £2.1 million), EBITDA of £200k (2014: -£336k) & EBIT of £50K (2014: -£270k). Its net assets totalled £0.5 million. No immediate or material cost synergies are expected to accrue from the acquisition, although full integration will take place over the coming 6 to 12 months, during which time it will increasingly provide support in delivery to projects such as UK SMIP and in India. It will be realistic to assume higher operational costs, adding perhaps 10-15% to each of the next two prospective years, during the period of ramping up contract activity.

Considering Connode has arrived with estimated existing project lifetime revenues in excess of £25 million solely from the UK SMIP contract, that it comes with exceptionally high complementarity by product, technology as well as geographical offering, an acquisition price of less than 3x historical (2015) sales appears to represent very good value. In a best case scenario some £37 million including license fee/support revenues which could achieve gross margins of over 90%.

The 'Internet of Things'

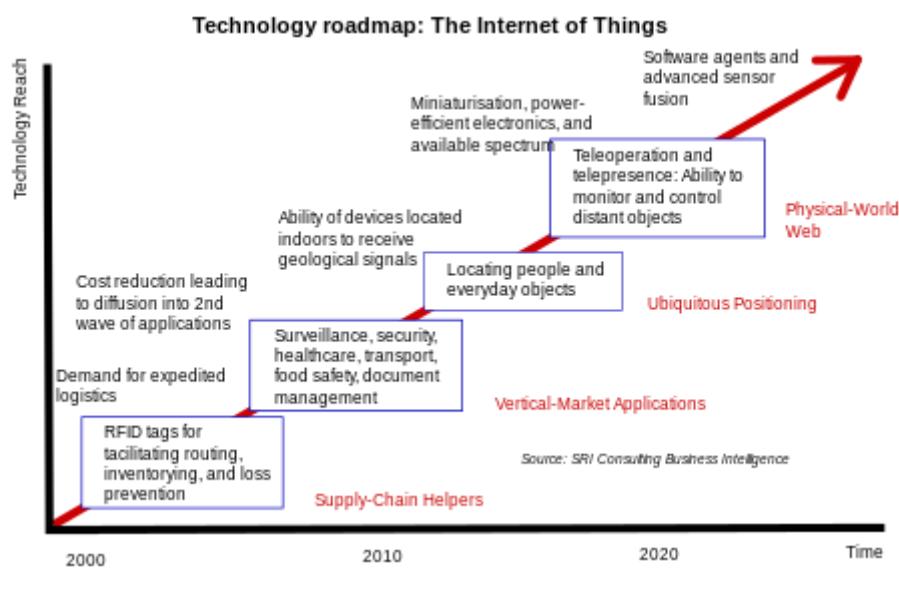
This concept originated from the idea that 'the Internet Protocol could and should be applied even to the smallest devices' and that low-power devices with limited processing capabilities should be able to participate in the IoT. CyanConnode believes that enterprises wishing to compete with the Company's offering will be forced to replicate its technical solution at a similar or more aggressive price point. Furthermore, the blue-chip customer base which has already contracted with CyanConnode (including Toshiba and Telefonica), along with customer deployments, provides an additional layer of confidence and an ideal entry into the hitherto unpenetrated European market.

CyanConnode's position has been clearly validated by Northeast Group in their May 2015 IoT report which focussed on four different themes: partnerships/M&A, emerging markets, smart metering foundation for smart cities, migration hardware to software/analytics. As such, it will seek to transition emerging market consumers to next generation technologies by securing essential services, ensuring they are financially viable and capable of evolving to meet today's and future needs.

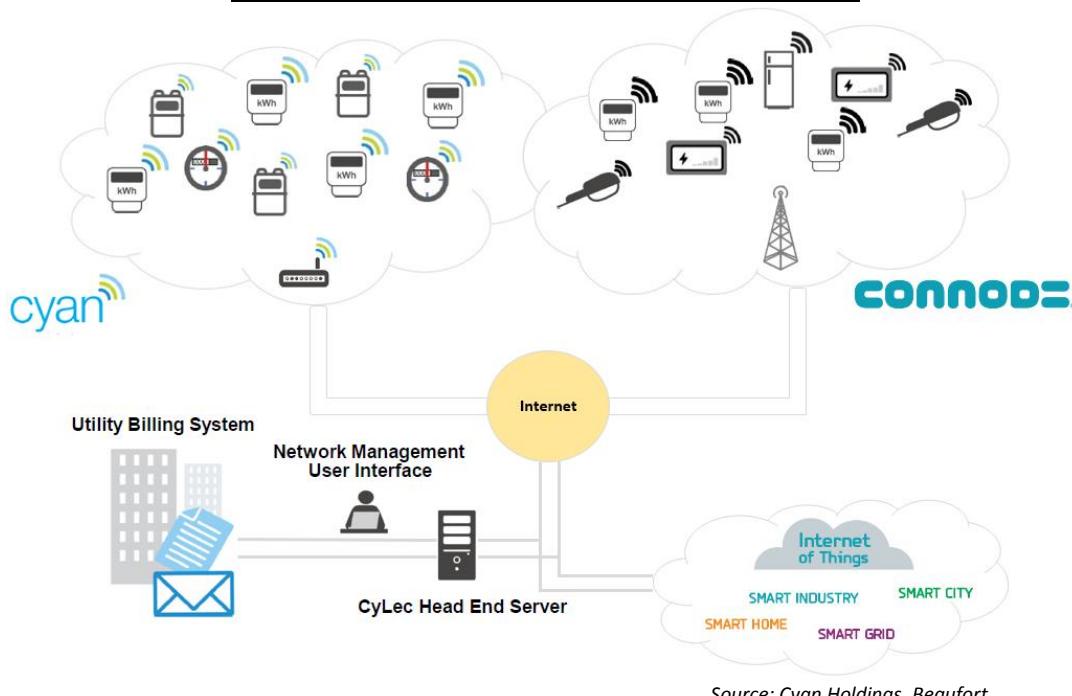


The Internet of Things ('IoT') – An Explanation

IoT represents a network of physical devices, vehicles, buildings and/or other items embedded with electronics, software, sensors, actuators, and network connectivity that enable these objects to collect and exchange data on standard-based coded platforms. In 2013 the Global Standards Initiative on Internet of Things defined the IoT as 'the infrastructure of the information society'. The IoT allows objects to be sensed and controlled remotely across existing network infrastructure, creating opportunities for more direct integration of the physical world into computer-based systems, and resulting in improved efficiency, accuracy and economic benefit. When IoT is augmented with sensors and actuators, the technology becomes an instance of the more general class of cyber-physical systems, which also encompasses technologies such as smart grids, smart homes, intelligent transportation and smart cities. Each thing is uniquely identifiable through its embedded computing system but is able to interoperate within the existing Internet infrastructure. Experts estimate that the IoT will consist of almost 50 billion objects by 2020.



CyanConnode - Narrowband RF Mesh Solutions



Source: Cyan Holdings, Beaufort

Cyan Holdings - Valuation Methodology

Beaufort has based its valuation on an UK/International Peer Group assessment. Having identified a sector relevant, market-quoted list of unique companies supplying similar market opportunities, a current year EV/sales multiple is derived. Assuming steady state is achieved by 2019, Cyan's prospective sales for the period by this multiple, will provide a core business value, to which current cash plus the net generated during the period 2016 -2019 is subtracted before weighting risk and discount back based on assumed WACC of 12%.

Cyan Holdings Peer Group Comparisons											
Company Name	Ticker	Market Cap (£m)	Revenue (£m)	EBITDA (£m)	EV/Sales Hist.	EV /Sale Pros.	EV/EBITDA Hist.	EV/EBITDA Pros.	P/E	P/E Pros.	
Smart Metering Systems Plc	SMS LN	422.4	53.9	27.9	9.3	8.5	13.0	15.8	27.1	26.6	
Telit Communications Plc	TCM LN	305.7	333.5	39.9	1.2	1.1	10.5	7.9	36.9	14.5	
Silver Spring Networks, Inc.*	SSNI US	554.4	376.6	69.8	1.4	1.9	16.5	31.1	9.8	68.5	
Ittron, Inc.*	ITRI US	1,407.9	1448.9	99.1	1.1	1.1	13.3	9.9	152.2	20.7	
Sierra Wireless, Inc.*	SWIR US	354.4	467.5	23.3	0.7	0.6	17.1	10.8	300.2	22.2	
Echelon Corporation*	ELON US	17.4	29.8	-9.1	N/A	N/A	N/A	N/A	N/A	N/A	
Fusionex International Plc	FXI LN	76.6	77.0	35.2	3.3	N/A	26.7	N/A	14.5	N/A	
WANdisco Plc	WAND LN	71.8	11.0	-20.0	8.8	8.4	N/A	N/A	N/A	N/A	
NetSuite, Inc*	N US	6,759.1	570.1	-51.9	10.2	7.9	N/A	92.5	N/A	189.9	
Novatel Wireless, Inc*	MIFI US	102.3	170.0	-22.7	0.8	0.8	N/A	15.2	N/A	N/A	
Average:						4.1	3.9	16.2	26.2	90.1	57.1

*Exchange rate used: GBP 1 = USD 1.30

Source: Bloomberg (16 August 2016), Beaufort

Peer Assessment	EV/Sales 2017 Multiple	EV (£m)
Optimistic Case	4.6x	141.0
Base Case	4.1x	120.6
Cautious Case	3.7x	111.6

Source: Beaufort

Cyan Holdings Plc
Aggregate Risked Fair Value Range*
Range: £123.9m

*Assumes current cash in hands: £3.3m

Source: Beaufort

The Smart Revolution – Metering and Much More

A smart meter is one that, either independently or in cooperation with other ancillary devices, provides measured and calibrated consumption detail (for electricity, but also other utility services such as gas or water) over a defined time period. It provides remote access to an individual consumer's usage trend and information while also contributing to wider pools of 'big data' for analysis by region or population. Such information can be invaluable for suppliers seeking to schedule demand forecasting and demand side management as well as accurate billing. Issues such as load shedding can for example be addressed by timely information from each meter, smart analysis of readings, and two-way communication of control messages for load limitation.

Focus on Metering – CyLec and CyNet

Cyan has historically focused on smart metering in emerging markets and partnering worldwide with utilities, system integrators and meter manufacturers to create cost-effective smart metering ecosystems that yield significant benefits for energy providers, consumers and the environment.

Using its Ultimesh RF module with embedded software provides secure two-way communication with excellent range and penetration, while its self-forming self-healing network provides proven full mesh capability for effective, real-time meter reading in densely populated areas. The solution can be installed using a standard UART interface, prospectively enabling meters from different providers to form a single smart network. Ultimesh-enabled smart meters can be read remotely using free-access sub-GHz narrowband RF network. Meter data is sent to a Data Concentrator Unit ('DCU'), which collates the data and sends it via GPRS or internet to the CyanConnode's Head End Server ('HES'), which can be integrated with a data management system. All application layers, such as smart metering and lighting, operate on the same narrowband RF mesh networks that are optimised for exceptional performance.

CyanConnode's enterprise environment has been developed to deliver a robust, scalable and fault tolerant platform. The HES software provides a secure interface, using SSL transport encryption and authentication, between the DCU and nodes on the mesh network. It is configured for the export of data to a Meter Data Acquisition System ('MDAS') and Meter Data Management System ('MDMS') and to support MIOS and web services/Google protocol buffers. The main functions of the HES are:

- *Instant access to metering information*
- *Rapid issue resolution and facilitated demand side management*
- *Improved fraud detection and remote meter disconnection*
- *Concentrator manager – manages the GPRS links to remote DCU*
- *Persistent store – caches scheduled meter readings, logs asynchronous events such as tamper events, meter commands and associated responses*
- *Service manager – provides HTTP RESTful interface to MDAS or MDMS, manages web service requests for recent/historical readings, event logs and commands to individual meters*
- *Demand control/limit, variable/pre-pay tariff commands*

Algorithms embedded in the DCU, allow management and control of multiple meters with over-the-air monitoring and upgrades for rapid issue resolution. Programmable functionality within the customer's MDMS provides automatic control and allows greater flexibility to change tariffs and billing cycles for demand offset. In addition, the DCU supports autonomous collection of meter readings and extensive data/command logging. This allows Ultimesh to maintain collection of readings and control in locations with limited and intermittent GPRS coverage. Advanced architecture and software integrates seamlessly with existing technology, turning legacy meters into smart meters and allowing utilities instant access to metering information via a MDMS.

Focus on Street Lighting

The principal benefits of CyanConnode's energy efficient smart lighting solution, is power measurement and saving. In recent years the lighting market has been predominantly focussed on replacing traditional lamps, such as High Pressure Sodium ('HPS') with energy efficient Light Emitting Diode ('LED') units. As the benefits of LED lamps are realised, the market is pursuing further cost savings enabled by intelligent lighting systems. CyanConnode's lighting control solution delivers bi-directional communication to enable 'smart' functionality; setting rules for energy saving and demand management as well as status data for maintenance. It is configured to allow suppliers to provide a user interface, enhanced for localisation worldwide, using standard easy to implement web based applications.

Energy efficiency is one part of the cost benefits of installing the solution. The other cost saving benefit is how the system can be used to support lower day-to-day running costs. These include predictive maintenance that enables early identification of faulty light bulbs and plan for their replacement before failure. Fitting CyanConnode's solution, based on Ultimesh technology, to existing or new lighting installations, using high-intensity discharge lamps ('HID') with dimming control, provides better energy efficiency, colour temperature and lower average power consumption. CyanConnode has observed, for example, that by replacing 250W HPS lamps with 140W HID lamps, fitted with its solution, a power saving in excess of 150W can be achieved.

CyanConnode's lighting management system features a robust and secure data storage for network management information, which manages individual lamp GPRS links with a remote Data Control Unit. The software uses a web-based management console, with a web interface for easy installation and configuration of lamps. Dimming rules for certain times of day can be configured and automatically applied as required. From the central hub, lamp failure can also be remotely monitored, facilitating maintenance scheduling. The system also provides a set of Application Programming Interfaces ('APIs') allowing third parties to write individual Graphic User Interfaces.

CyanConnode's Global Ecosystem of Partners

In order to establish a 'go-to market' strategy, CyanConnode has chosen a number of key partners with whom to extend its existing commercial supply relationships with target customers. These are key to delivery of complete end-to-end solutions globally and such relationships will be difficult for other sector players to replicate.



Source: Cyan Holdings

A recent addition includes a multi-year strategic partnership with Eppix eSolutions to enable the integration of SAP Hybris software with CyanConnode's Enterprise platform. This will allow the integration of CyanConnode's enterprise-level, HES with a MDMS to create the first SAP-based MDMS for the global utility market. This SAP-based MDMS will provide middleware between CyanConnode's HES and a utility's Enterprise Resource Planning software. The MDMS, which is based on the SAP Hybris range of digital commerce solutions such as billing, eCommerce and marketing platforms, will enable utilities to deliver customised products and superior customer service. Eppix eSolutions is the technical services brand of Usha Martin Technologies, part of the Usha Martin Group, a US\$1 billion business conglomerate.

Existing Global Markets and Future Opportunities

CyanConnode Current Orders

Contractor	Type	Country Location	Contract Value	Orders (meters/lights)	Prospective Customer Universe
Aska	Lighting	China		54,000	
Enzen/CESC Myscore	Metering	India	£1 million	21,824	2,000,000
Enzen/PVVNL	Metering and Lighting	India	c.£0.5 million	13,000	3,500,000
Tata Power	Metering	India	N/A	10,000	650,000
Micromodje	Traffic Cameras	Iran	£67,000	2,000	
Micromodje	Metering	Iran	£10 million	360,000	33,000,000
Toshiba	Metering	UK	£25 million - £37 million	1,800,000	3,000,000

Source: Cyan Holdings

Future Market Opportunity

A review by Milner Strategic Marketing (November 2014) concluded that the emerging markets being addressed by CyanConnode has a potential smart meter and smart lighting opportunity valued in excess of US\$30 billion, based on over 700 million domestic locations and 36 million street lights.

	No. of Domestic Electricity Meters	% Smart Meters	Potential Smart Meter Market Value	No. of Street Lights	No. of Smart Lights	Potential Smart Lighting Market Value
India	167 million	<1%	US\$8,509 million	10 million	0%	US\$1,519 million
China	459 million	52%*	US\$11,646 million	22 million	3%	US\$3,234 million
Brazil	70 million	4%	US\$3,548 million	2.6 million	0%	US\$390 million
Sub-Saharan African Countries**	31.5 million	7%	US\$1,649 million	1.57 million	0%	US\$230 million

* China includes 'semi-smart' meters

Source: Milner Strategic Marketing (November 2014)

** South Africa, Nigeria, Ghana, Mozambique and Zimbabwe

Positive Industry and Political Feedback

"Smart metering deployment represents a common first step into smart grid solutions at scale for many utilities"



"My own intention is that in the next 5-6 years, India should be 100 per cent smart"

Piyush Goyal, Indian Minister of State (IC) for Power, Coal and New & Renewable Energy



"Lighting that is connected to highly secure, reliable IT infrastructure will form the backbone of the smart office of the future"

Bill Bien, SVP, Head of Strategy and Marketing, at Philips Lighting



"The overall smart meter penetration rate for the 50 countries in this [emerging markets] study is expected to reach 61% by 2026"



"Smart meters will have a great future in this country"

Amber Rudd, UK ex-Secretary of State for Energy and Climate Change



"The Internet of Things offers a potential economic impact of \$4 trillion to \$11 trillion a year in 2025"



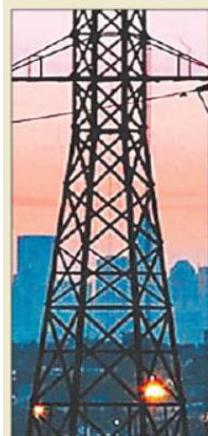
Source: Cyan Holdings

India - A Giant Long-term Opportunity

India plans to install 130 million smart meters by 2021. It is forecast to invest US\$21.6 billion in smart grid infrastructure during period 2015 – 2025⁵. With some of the highest non-technical losses in the world and some 300 million people who do not yet have a household electricity supply, the Indian central government rolled-out its programme mandating smart metering as a pre-requisite for utility companies to obtain debt relief.

LOST IN TRANSIT

A quarter of the generated power goes missing on the way to the consumer in India



249,488 MW

Total installed power generation capacity in the country

137,352 MW

Peak demand actually being met

PM'S TARGET

- 24x7 power supply to all homes in India in 5 years

PRESENT TENSE

300 mn People in India who don't get electricity supply

- 25 units of every 100 units generated are lost in India, on an average

MOUNTING LOSSES

₹1.2 lakh cr Total distribution losses of state distribution companies. Their cumulative debt stands at **₹3 lakh cr**

Source: Hindustan Times (September 2014)

Country/Continent	Total number of meters currently deployed (m)	Number of smart meters already deployed (m)	Smart meters as share of total deployment
USA	150	46	30.7%
Europe	281	61.2	22.0%
Australia	9.5	3	31.6%
Canada	15	7.3	49%
India	200	-	<<1%

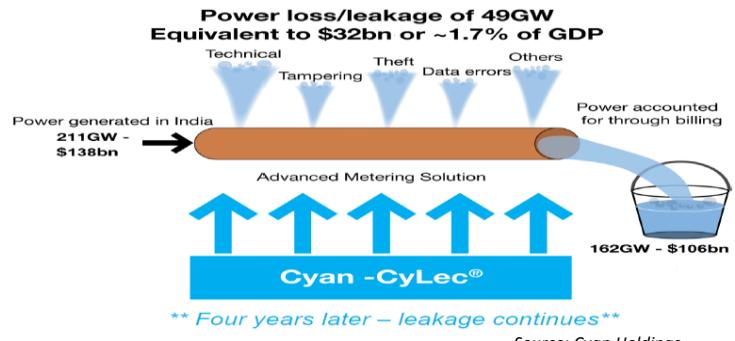
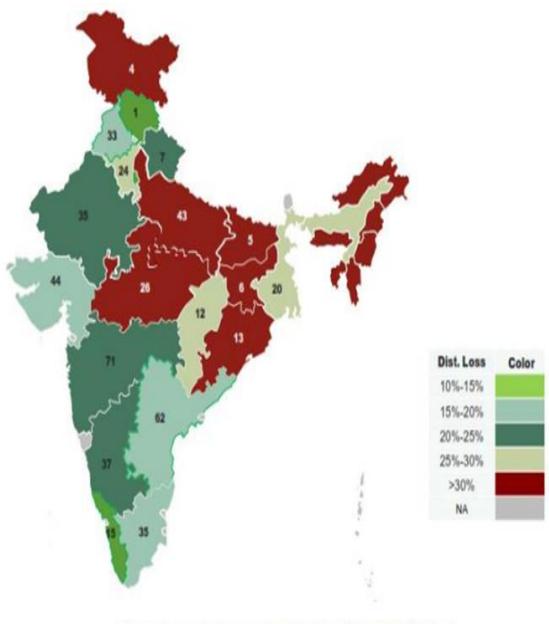
Sources: India Smart Grid Forum

The concept of Aggregate Technical & Commercial ('AT&C') losses was introduced in India in the past decade to measure the realistic picture of energy & revenue loss situation at distribution level. India Electricity Grid Code 2010, then established rules, guidelines and standards to be followed by various persons and participants in the system to plan, develop, maintain and operate the power system, in the most secure, reliable, economic and efficient manner, while facilitating healthy competition in the generation and supply of electricity. Smart Grid Vision & Roadmap for India aims to transform the Indian power sector into a secure, adaptive, sustainable and digitally enabled ecosystem that provides reliable and quality energy for all with active participation of stakeholders.

High technical losses in the system are primarily due to inadequate investments over the years for system improvement works, which has resulted in unplanned extensions of the distribution lines, overloading of the system elements like transformers and conductors, and lack of adequate reactive power support. The commercial losses are mainly due to low metering efficiency, theft and pilferages, billing errors and poor collection efficiency. This may be eliminated by improving metering efficiency, proper energy auditing and improved billing/collection efficiency.

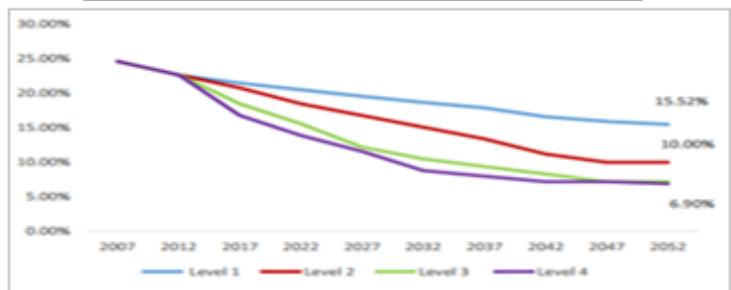
In 2012-13 AT&C losses stood at around 23% in India, which is one of the highest in the world, with some states recording a figure exceeding 50%. Losses translate to over 49GWh of electricity each year which accounts for a loss of over US\$32 billion (assuming Rs 5/kWh as average tariff). Transition to smart grids will enable utilities to monitor and control power flows in real time and help reduce the losses and also help achieving the overarching objectives of the government to provide 24x7 power for all households.

⁵ <http://www.prnewswire.com/news-releases/india-to-spend-216-billion-on-smart-grid-infrastructure-by-2025-300021970.html>

AT&C Losses and Energy Consumption (State Wise)

Source: Cyan Holdings

India Smart Grid Roadmap - Stated Loss Reduction Target Levels 1-4



With the objective to reduce Transmission & Distributions ('T&D') losses and strengthen the distribution sector, Ministry of Power and GoI has launched several programmes such as APDRP, R-APDRP, IPDS and National Smart Grid Mission. The AT&C efficiencies accrued by each of the four 'levels' are outlined above. Each are considered ambitious, but achievable over an extended schedule out beyond 2050. Level 3, for example, assumes that investments are made as envisaged in the India Smart Grid Roadmap, towards achieving stated loss reduction goals, demand response and integration of renewable energy. Building on the success of the pilot projects, various technologies are leveraged under a clean energy policy drive to achieve financially viable and sustainable smart grids. The T&D losses would reduce to below 12% by 2027 out of which distribution losses will be 7% and transmission losses will be 5% and would reach around the global benchmark of 7% by 2047 of which transmission losses will be 3% and distribution losses will be 4%.

In November 2015⁶, the India Ministry of Power announced a program to implement smart metering for all consumers serviced by state distribution companies with completion deadlines ranging from December 2017 for high power usage households through to December 2019 for the remainder. This will be financed via the States taking over 75% of existing State power distribution company debt (through the issuance of new 10 year bonds) together with an arrangement for the States to take over future losses of the distribution companies. At present, India has 200 million legacy meters deployed and it is estimated 130 million smart meters will be installed by 2021⁷. Cyan's business model is designed to support an organic approach to smart metering rollouts, from initial deployments in thousands to millions of end points, through incremental instalments. This staged approach allows its customers to realise the benefits of its technology and create the basis to expand the scale of their deployments in line with their needs and business cases. The Ministry of Power has allocated 14 smart grid pilot projects that will be implemented by various state-owned distribution utilities in India⁸.

⁶ http://powermin.nic.in/pdf/Uday_Ujjawal_Scheme_for_Operational_and_financial_Turnaround_of_power_distribution_companies.pdf

⁷ http://asian-power.com/sites/default/files/asianpower/print/APMay_2013_Ir_12.pdf

⁸ <http://www.indiasmartgrid.org/pilot.php>

Government of India Approved Smart Grid Pilot Projects in India			
Utility Name	Functionality	Project Area	No. of Consumers
CESC, Mysore Karnataka	AMI Residential, AMI Industrial, PQM, Peak Load Management, MG/DG	VV Mohalla, Mysore	24,532
TSSPCL, Telangana	AMI Residential, AMI Industrial, Outage Management, Peak Load Management, Power Quality Management	Jeedimetla Industrial Area	11,904
APDCL, Assam	AMI Residential, AMI Industrial, Outage Management, Peak Load Management, Power Quality Management, DG	Guwahati Distribution Region	15,000
UGVCL, Gujarat	AMI Residential, AMI Industrial, Outage Management	Naroda of Sabarmati circle and Deesa of Palanpur circle	39,422
MSEDCL, Maharashtra	AMI Residential, AMI I, Outage Management	Baramati Town	25,629
UHBVN, Haryana	AMI Residential, AMI I, Outage Management	Panipat City Sub-division	31,914; revised to 11,000
TSECL, Tripura	AMI Residential, AMI I, Peak Load Management	Electrical Division No.1 of Agartala town	46,071
HPSEB, Himachal Pradesh	AMI Industrial, Outage Management, Peak Load Management, Power Quality Management	KalaAmb	650
Puducherry (PED)	AMI Residential, AMI Industrial	Division 1 of Puducherry	
JVVNL, Rajasthan	AMI Residential, AMI Industrial, Peak Load Management	VKIA Jaipur	
CSPDCL, Chhattisgarh	AMI Industrial, Peak Load Management	Siltara – Urla area of Raipur District	
PSPCL, Punjab	AMI, PLM	Industrial Division of City Circle Amritsar	
KSEB, Kerala	AMI Industrial	Selected Distribution Section offices spread over the geographical area of Kerala	
WBSEDCL, West Bengal	AMI Residential, AMI Industrial, Peak Load Management	Siliguri Town in Darjeeling District	

Source: Central Power Research Institute, India

India – CyanConnode's Existing Orders and Pipeline

CyanConnode has made substantial progress in India, including the first commercial implementation of AMI by a public utility in the country. Two contracts have been secured, worth in aggregate approximately £1.5 million to Enzen Global Solutions Pvt Ltd ('Enzen'), which are being implemented on behalf of Chamundeshwari Electricity Supply Corporation Limited ('CESC') and Paschimanchal Vidyut Vitran Nigam Limited ('PVVNL').

CESC distributes power to more than 2 million domestic customers across five districts in Karnataka; the purchase order worth approximately £1 million is for implementation in Mysore. CyanConnode will provide facility management services to CESC in Mysore for a period of two years post deployment. The project is being completed in phases with the first meters installed, commissioned and live at the end of 2015 with the remainder coming on stream during 2016. It was the first of 14 smart grid pilots under the Smart Grid Task Force in India being funded by India's Ministry of Power to be rolled out. A further purchase order was secured in November 2015 from PVVNL, in Uttar Pradesh, for an initial value of some £0.5 million (including recurring managed services) with first meters being installed and commissioned in H1'2016. PVVNL distributes power to more than 3.5 million consumers, providing significant scope for follow-on orders.

Reaffirming its leadership in the Indian smart metering market, in January this year CyanConnode also received a follow on order for a further 5,000 meters from Larsen & Toubro for Tata Power. Tata Power Mumbai is a Tata Group company and part of India's largest integrated power company with a significant international presence and over 650,000 retail customers in Mumbai. CyanConnode's AMI platform supports fully automated, accurate billing for Tata Power. On a recent billing cycle, Tata Power achieved 100% success rate in communicating meter readings from the Ultimesh-enabled meters to their consumer billing system. In addition, the AMI platform enables Tata Power to manage grid emergencies with increased efficiency, improving the reliability of the customer's power

supply and optimising peak power demand management. The CyanConnode RF modules were installed inside the Larsen & Toubro smart meters that have been deployed by Tata Power. The smart meters, integrated with Tata Power's control centre, are now providing data to generate customer bills, real-time information on outages and other factors related to the quality of power.

Due to the investment already made in training Tata Power staff to install smart meters and operate the AMI solution, delivery of this follow on order can be achieved without on-site assistance from CyanConnode staff, which demonstrates the scalability of its business model. Discussions have now commenced with Tata Power regarding a Framework Order to meet their future needs over a multi-year period.

Summary of Current Contract work in India

CESC – Mysore	Tata Power Mumbai
<ul style="list-style-type: none"> £1m for over 21,000 smart meters – full end-to-end AMI 18,000 smart meters installed, with completion in H2 2016 	<ul style="list-style-type: none"> Second order (H1'2016) received and delivered for 5,000 meters Follows successful deployment (H1'2015) of 5,000 smart meters – full end-to-end AMI
PVVNL	Pipeline
<ul style="list-style-type: none"> £0.5m order for over 13,000 smart meters – full end-to-end AMI 12,000 smart meters delivered, with completion in H2'2016 	<ul style="list-style-type: none"> 32 opportunities being pursued, representing utilities with 62 million customers Some tender responses have been submitted via local partners and decisions expected before end of 2016

Source: Cyan Holdings

CyanConnode is also working with a large Indian energy company as the strategic partner for communication solutions and applications for building a Smart Sustainable City Network. In the first phase, the energy company will connect the smart meters, street lights, traffic signals and other public distribution automation equipment, using CyanConnode's IPv6 based wireless mesh solution. This will be the first roll-out in India of smart meters fully compliant to the communication standards recently adopted in the M2M roadmap by the government of India. The solution features Intel technology for high-performance IoT Smart City Gateways, capable of supporting distributed intelligence and with the ability to handle a large number of connected nodes, both IPv6 mesh and other IoT protocols. The Directors believe that the potential software license revenue opportunity alone represents approximately £21 million of revenue over a multi-year period.

Iran – Transformational Order from New Territory

In April 2016, CyanConnode announced it has received a purchase order from telecommunications contractor Micromodje worth approximately £10 million for a 360,000 unit smart electricity metering implementation in the Islamic Republic of Iran. The purchase order was significantly larger than any received to date and effectively marked an inflection point in the Group's commercial progress. Having seen international sanctions on Iran lifted on 16 January 2016, this is believed to be one of the first substantial purchase orders secured by a UK business, with support from the specialist UK Trade and Investment team. It followed a pilot deployment of the CyanConnode solution for smart metering of street traffic cameras in March, which rapidly confirmed the quality of its solutions along with the support CyanConnode provide to local implementation partners.

This £10 million purchase order is for the supply of both CyanConnode's AMI hardware solution and its Head End Server software. The 360,000 units will be installed for high value, high demand customers that represent an estimated 25% of total national power consumption of Iran. Hardware revenue will be recognised as delivered to Micromodje, with the 360,000 smart meters expected to be rolled out over a two-year period starting in 2017. CyanConnode's HES will be hosted by its partner Micromodje with annual software license income being recognised over a five-year contractual period following successful smart meter installation. As over 50% of the total order value consists of software license income, the recurring revenues from this purchase order will continue well beyond the two-year hardware installation period. The software licenses will be paid annually in advance and charged on a per meter per year basis.

The National Smart Metering Program of Iran (FAHAM in Persian) has the stated goal to replace the electricity meters for all customers, representing approximately 33 million meters, in seven years with funding provided by the Iran Power Generation, Transmission and Distribution Management Company (TAVANIR). CyanConnode has started a dialogue with Micromodje on the next planned rollout of 1 million units, potentially providing access to the overall Iran market requirement of 33 million smart electricity meters over seven years, or approaching £1 billion in total contract value.

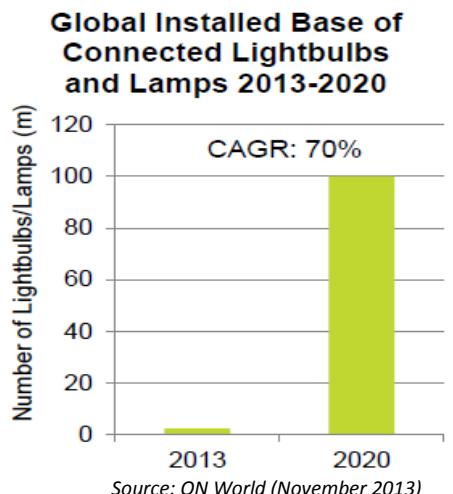
NewCapec – Rolling Out Smart Cities in China

Founded in 2000, Newcapec Electronics Co.⁹, Ltd. is China's leading provider of smart card applications and overall solutions. It has become the country's first listed company on the GEM (Growth Enterprises Market) board in smart card industry, having a primary listing on the Shenzhen Stock Exchange. It has 35 branches across China and in excess of 900 employees. With over 12 years of smart card system expertise, the company is committed to smart card studies, Intelligent Recognition, smart metering and RFID technological innovations with IoT support. It entered a Proof of Concept pilot study with CyanConnode in 2015, with a view to initiating commercial roll out into smart cities as part of a Chinese government initiative where it sees an overall US\$163 billion market potential.

Smart Lighting – Opportunities in China

CyanConnode's technologies open many new doors for utility and public infrastructure cost savings beyond the metering for which it is now carving out a key market position. The scope of this opportunity should not be underestimated. According to ABI research (Jan 2015), the global installed base of smart street lights will reach 40 million by 2019 and by 2020, two-thirds will be using RF communications technology. In an independent energy saving assessment issued by Zhejiang Testing Lab China in Oct 2014, a power saving of between 65-70% were achieved when using CyanConnode's smart lighting solution.

⁹ <http://www.newcapec.net/products/smart-meter>



Cumulative investment in LED and smart streetlights (including installation value)



New LED and smart technologies have initiated something of a revolution in the street lighting.

There are estimated to be a total of around 308 million installed street lamps globally and this number will grow to an estimated 354 million by 2026. Higher efficiencies derived from LED illumination and smart control means that change is now unstoppable. Higher, long-term reliability and lower power consumption of LEDs accrues significant savings, and the higher upfront costs of early systems are now being reduced with economies of scale. Right now, the payback period estimated at less than 10 years simply by replacing existing standard bulb or sodium lamp with a low voltage LED system based on current prices, although these are expected to decline quite sharply as products standardise and volumes multiply.

Modernisation of outdoor public lighting, however, does not only involve bulb replacement but incorporation of networked 'smart' streetlights as part of the more general move toward the new 'smart city', which also potentially links other public facilities like parking meters, traffic lights, CCTV, etc. Being able to reduce costs through off-peak dimming as well as automatic notification of product failure adds significantly to the lifetime cost of operation as well as the extent of added-value.

While developing territories may continue to find the upfront costs prohibitive, sources of multilateral or vendors financing can be found, as well as larger projects from the likes of the World Bank which, in 2014 announced a US\$1 billion fund to sponsor such projects. Northeast Group, in 2015 projected LED and smart streetlights to reach 84% and 37% respectively of the total market by 2025, creating a total US\$63.5 million global opportunity.

Cyan's Smart Lighting Solutions – Recent Activities in China

- Master distribution agreement signed with Aska Technology in April 2014
- 39,000 smart lighting modules shipped to customers in China
- Most recent order of 15,000 smart lighting control modules from Aska in July 2014

Competition in Smart Meters

The scale of the smart meter/smart lighting opportunity will, undoubtedly attract a large number of 'me too' players.

Securing a long-term opportunity in this marketplace, however, will require more than just early mover advantage. In order for any products to have potential to become 'industry standard', the technology does not only need to be highly robust, simple to integrate with initial low cost of purchase, but also to effectively 'future-proof'. Only then will it have erected reasonable barrier to entrance.

CyanConnode's solutions clearly tick each of these 'boxes'. Its technology solves large, complex, cross domain problems utilising skills such as RF hardware and mesh network firmware design, regulatory approval experience and meter protocol and interoperability techniques, communications infrastructure development, together with enterprise software, scalability and security. Its 'unique selling point' centres on its capabilities in narrowband RF mesh, which allows it to provide free and highly robust, optimised communications when spectrum is scarce in order to deliver the required functionality, and from that to backhaul into WAN for highly efficient connection or communication flexibility (GSM, 3G, GPRS, WiFi, Fibre, etc.) or further into standard-based IP protocol. Certain emerging market vendors have pieces of the solution, but not the technical skills, resources or market credibility to deliver a comprehensive end-to-end solution. Participation in numerous of the world's biggest and most sophisticated smart metering projects, together with a list of blue-chip industrial and distribution partnerships, means that the CyanConnode brand will always find itself considered when tenders are being requested for major projects.

RF Wireless - The Obvious Solution

The success of smart metering in emerging markets remains, necessarily, highly technology dependent. In the absence of comprehensive GPRS mobile data services, which in any case would require each smart meter unit to have its costly own SIM chip-based operation, the only offerings that could compete with CyanConnode's open-access narrowband RF mesh two-way communications solution are products adopting either Power-Line Communications ('PLC') or Zigbee-based protocols. In general, internet connected solutions, or IP Metering, would not be considered able to provide the security or systems integrity required for long-term operation by utility groups.

Snapshot of Available Communications Technologies/Protocols

Technology/Protocol	Last Mile/NAN/FAN	Home Area Network (HAN)	Backhaul/WAN and Backbone
Wireless	6LoWPAN-based RF mesh, ZigBee, Wi-Fi, Millimetre Wave Technology	6LoWPAN-based RF mesh, ZigBee, Wi-Fi, Bluetooth, Z-Wave, NFC	Cellular, Satellite, LPWA, Long Wave Radio, TVWS, Private Microwave Radio links (P2P and P2MP)
Wired	PLC, Ethernet, Serial interfaces (RS-232, RS-422, RS-485), DSL	PLC, Ethernet, Serial interfaces (RS-232, RS-422, RS-485)	Optical Fibre, Ethernet, PLC, DSL

Source: India Smart Grid Forum

With most electrical distribution networks in such territories having evolved over years without consistent technical standards or planned infrastructure, the ability to install a reliable PLC system across a wide urban conurbation would not only be very expensive, but also result in extended period grid outage.

Zigbee protocol-based modules are, by comparison, limited by useable transmission distances of just 10m to 100m ‘line-of-sight’ dependent on power output and environmental characteristics, meaning the effective usable distance in modern built-up areas is less than 30m. CyanConnode’s narrowband RF mesh technology, however, offers a better solution for a similar scenario. Adopting low sub GHz transmission frequencies, it achieves range greater than 60m with relatively low attenuation through brick and mortar construction and in perfect, unencumbered conditions as much as 2km might be achieved.

CyanConnode’s technology then takes this one step further, by offering an optimised solution, combining meter hardware, process control software and network management, in order to provide direct system control and opportunity to deliver cost savings in difficult ‘real world’ conditions.

Smart Metering Last Mile Communication Comparison

Environment	CyLec Sub 1GHz	ZigBee 2.4GHz	PLC
High Rise Apartments (New Build)	>60m thru barriers	<30m thru barriers	Planned Cables
High Rise Apartments (Existing)	See 1	See 1	See 3
Low Rise – Dense Urban		See 2	
Low Rise – Suburban			
Rural (Agricultural)	See 4		

Source: Cyan Holdings



1. In high density (apartments) superior range/penetration of sub 1GHz mesh (>60m between meters, across floors and substantial barriers) enables faster/easier lower cost deployment
2. ZigBee 2.4GHz range and penetration (through barriers) of below 30m makes it unsuitable for lower density and unplanned environments
3. PLC requires planned infrastructure, which is difficult to achieve with existing buildings and cables, and incurs high cost of network planning and installation
4. Power amplification version

Other operators that might be considered existing direct or prospective competitors to CyanConnode include the following, although none have the exact match of competences for developing market solutions:

1. Robulink Technology Ltd – Hong Kong - <http://www.robulink.com/english/ts-ov.html>
2. Silver Spring Networks – California, USA - <http://www.silverspringnet.com/solutions/metering-devices/>
3. Elster Group GmbH – Germany - <http://www.elstersolutions.com/en/elster-electricity-offerings>
4. Sensus – North Carolina, USA - <http://sensus.com/>
5. Iskraemeco – Slovenia - <http://www.iskraemeco.com/>

Connode – Completing the Picture

Connode, headquartered in Stockholm, Sweden, is a well-established supplier of wireless communication solutions for smart metering and the Internet of Things. Historically it has been funded locally by CapMan Oyj, a Swedish private equity fund and has benefited from over 100 man years of development and £10 million of investment to date. Cyan was aware of Connnode's product suite due to its involvement with targeted counter parties in India and also due to Connnode's involvement in the Smart Metering Implementation Programme. Cyan participated in a competitive process to acquire Connnode in Q4'2015, and completed extensive diligence on Connnode at that time. Connnode offers Cyan a highly complementary product range with further growth opportunities to create the global number one narrowband mesh radio solution IoT multi-application networks provider.

With an experienced team of 11 people based in Stockholm, Connnode has grown internationally and its products are incorporated into large scale wireless mesh networks. The pool of smart metering experts in the world is very small due to the fact that only a limited number of major projects have been rolled out; as such Connnode staff (mainly software developers) represent a key asset, particularly given their participation in the world's most technically advanced smart metering project, the UK's SMIP.

Connnode has significant legacy business, having facilitated over 700,000 systems deployed across Europe with a mix of blue-chip partners, including worldwide industry leader Landis+Gyr AG (www.landisgyr.com), E.ON and Helsinki Energy. It is presently working on a smart metering/smart cities projects in Mumbai, in enabling smart meters in 'not-spots' in the Swedish City of Malmo while participating in trials in Norway ahead of the country's own large scale deployment. It was also contracted by Telefonica through Toshiba in 2014 to provide wireless mesh communication for the UK SMIP. With all development work completed and simply awaiting installation, management believes that, after three roll-out delays (due to the high technical complexity of this innovative project), SMIP will commence in the final quarter of 2016, before ramping up in 2017 and 2018. The potential value of the SMIP rollout to Connnode is estimated at £25 million with a £37 million best case scenario during the rollout and following support lifecycle. Due for completion in 2020, the UK's Smart Metering Equipment Technical Specification (SMETS 2) effectively raises the bar for all such national (or even international) projects. The intended configuration of smart meters is that once connected to the utility supply, there is two-way communication through the customer's IHD, or In-House Display. The IHD and the smart meter are linked through a secure home area network, using Zigbee (a wireless technology similar to Bluetooth or Wi-Fi for internal connection that is also being adopted as standard for the IoT). The home area network therefore connects smart devices or smart appliances in the home or connects to the customer's mobile devices (for example for energy control apps). The smart meter and the communications hub connected to the meter then connect the home area network to Telefonica or Arqiva's managed wide area network, which in turn is connected to the Data Communications Company ('DCC').

Encompassing large scale (estimated 53 million devices installed in 30 million homes) hybrid IP and PFI networking, SMIP will allow the UK to move beyond 'smart city' to genuine 'smart country' operation. This will be a global first. Working with a list of blue-chip partners, participation will not only provide Connnode with a highly visible and profitable incremental revenue stream sufficient to deliver a step change in its prospective growth but, perhaps even more importantly, its contribution will also decisively benchmark the quality and sophistication of its product. This alone should be enough to open many doors to other major smart metering programs presently being specified by governments around the world.

Since its incorporation in 2011, Connnode has developed a product which is compatible with IPv6/LoWPAN, the latest version of internet protocol and a standards based technology which the directors believe will become essential to ensure forward compatibility with communications networks and available carriers, like cellular, PLC, Bluetooth and WiFi. Cyan estimates it would have had to invest £2.5 million with a lead time of 18 months in order to develop its own proprietary solution of choice for customers in western markets and, increasingly as networks modernise, Asian territories like India as well.

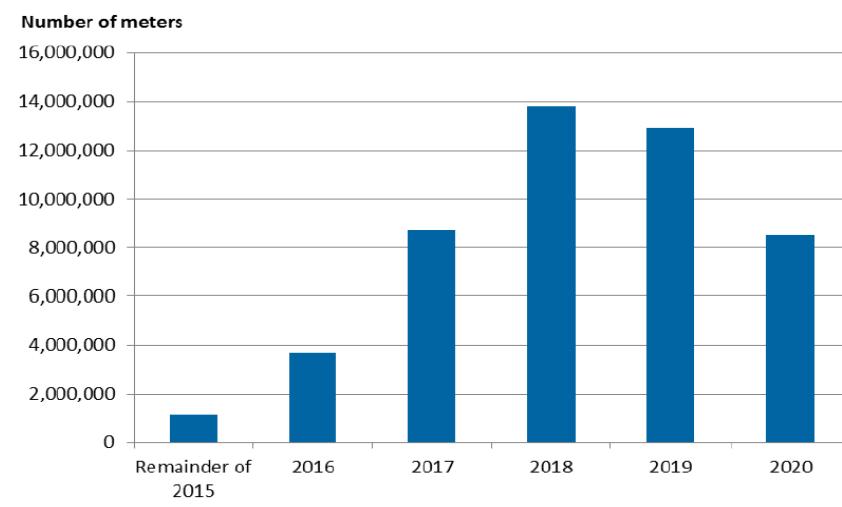
The UK Smart Metering Implementation Program

The UK Smart Metering Implementation Programme is a major infrastructure project involving the national roll out of 53 million gas and electricity meters across the UK by 2020 (a deadline imposed on the UK by the European Union). Participation in both this project and the Finnish Smart Metering Programme, significantly builds CyanConnode's reputation as a solutions supplier of choice. Telefonica was awarded a contract as the preferred communications service provider in two out of the three regions tendered by the UK Government. Telefonica's SMIP solution is based upon its existing cellular network in the UK, supported by CyanConnode's Connnode 4 solution, which connects households without reliable cellular coverage (known as 'hot-spots' by the mobile phone network operators). CyanConnode was awarded a contract for 1.8 million Connnode 4 units across the central and southern regions of the UK by Toshiba, with an expected rollout date starting during the second half of 2016. The Directors believe that CyanConnode is one of very few suppliers globally that has the capability to support smart meter deployment in areas where there is no cellular coverage. The product development is fully completed and now simply awaits installation. The complication of bringing together all the parts of programme, however, means that the expected 'go live' date of Q3'2016 has recently been forced to slip once more, and now is expected to commence in the fourth quarter instead. This appears to be primarily down to last minute snagging of the IT system that links in-house meters directly to the energy utilities. It is not, however, expected to affect the overall programme completion date and, considering the commencement of nationwide marketing and education of the project, Government commitment is not in doubt. Some 3.5m of the planned 53m unit roll-out have so far been installed in what is considered to be one of the UK's most expensive IT projects ever commissioned.

Last November, DECC released its fourth Annual Report¹⁰ on the UK roll-out. Its latest Impact Assessment for SMIP, published in January 2014, estimates a positive net present benefit of around £6 billion accruing from the successful implementation of a nationwide network of smart meters. The two largest elements of these benefits are direct energy savings and industry cost savings, which will help energy suppliers significantly improve their demand response management.

In accordance with the installation schedule detailed below, the implementation of Connnode 4 will accelerate sharply toward the end of 2016, before peaking two years later. The total UK SMIP contract value for CyanConnode is £25 million with £37 million best case scenario.

Current projections by the larger energy suppliers of the number of smart and advanced meters to be installed per year in domestic and non-domestic properties between 2015 and 2020 (as at the end of June 2015).



¹⁰ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/447144/6.656_DECC_JG_Annual_Report_2014-15_AW_WEB.pdf

Although official statistics suggests that UK mobile coverage (2G or higher) is presently 93%, with some 7% confirmed ‘not spots’, that would require some non-cellular solution, the reality is that this figure underestimates the ‘real-life’ situation where occupants in certain city dwellings (like in basements or other heavily sheltered locations) are unable to receive uninterrupted signal throughout their accommodation. Realistically, in order to provide a consistent robust service, this figure could expand significantly – hence the scenarios suggested by CyanConnnode below. These calculations are based on CyanConnnode receiving one-off license fee/meter plus annual support fees over the anticipated 15 year life of contract (with commercial supplements for change requests or modifications). Given that the Contract won covers some 42 million customers, however, a base case assumption is that 2.9 million meters will require CyanConnnode’s RF solution.

UK SMIP Revenue Scenarios

Revenue Source	Current Contract	Expected	Best Case
Contracted licence fees until 2020	£4.4m	£5.9m	£9.3m
Support fees (over 15 years)	-	£19.3m	£28.0m
Total	£4.4m	£25.2m	£37.3m

Source: Department of Energy & Climate Change

During its negotiations and due diligence process, Cyan has discussed the proposed Acquisition with both Toshiba and Telefonica, both of which have indicated their support for the Acquisition. As Connnode's SMIP contract contains change of control provisions which would allow Toshiba to terminate the contract upon a change in Connnode's ownership structure, Cyan has obtained written comfort from Toshiba that it does not consider the acquisition to be a prohibited change of control.

Panmesh – A Standard-based Solution

The Panmesh solution is a standard-based, highly secure IP-based MM platform that uses radio mesh networks to create scalable self-healing, self-configuring and intelligent networks. It contains two main software deliveries, being the Panmesh Server and Panmesh Agent. It comes with strong security solutions integrating into Public Key Infrastructure roles, policies and procedures; the Datagram Transport Layer Security (DTLS) communications protocol while Radio Link Layer encryption (AES-128 CCM) may be activated to secure the communication.

The Panmesh Server functions similarly to CyanConnnode's HES solution, being built on an open modular platform which provides device management, network management, system management and security management. It is a fully scalable and redundant Telco-grade platform, conforming to standards relevant to data and telecommunications protocols. The Server is a back-end application providing a web interface and web services for integration with external systems. The Server also comes with the possibility to activate add-ons for different use cases in industrial applications such as smart metering, smart lighting or other specific features.

The Panmesh Agent is embedded software which is integrated into a device and managed by the Server. It contains all the necessary functionality to establish a secure and manageable Mesh Network. A running Agent inside a Device creates a node in a mesh network. The Agent has functionality to either take the form of a mesh node, meaning one of many nodes in a mesh network or a Gateway node, meaning that the Node has access to a Wide Area Network (WAN). Similar to the Server, the Agent can be deployed with specific functionality to meet certain use cases in different industry verticals or without specific functionality and thus provide a data pipe for external applications.

Source: Connnode

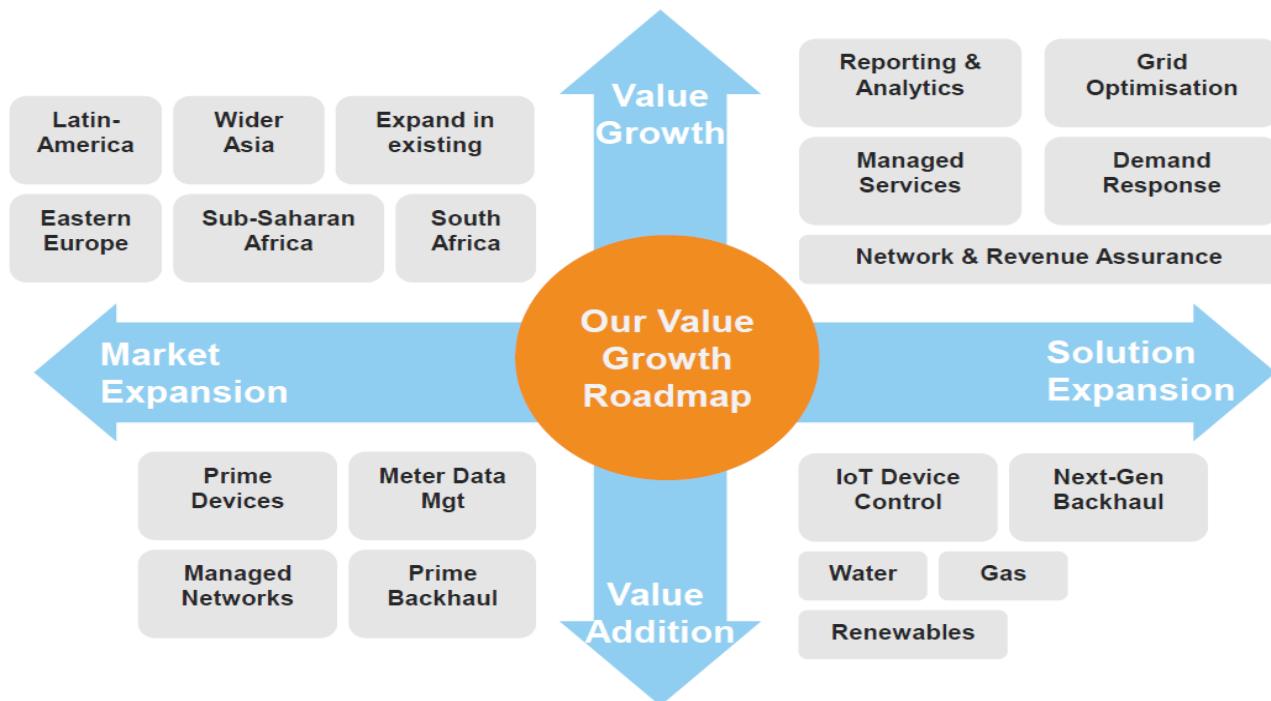
CyanConnode – Investment Strengths and Weaknesses

Strengths and Weaknesses	
Strengths	Weaknesses
<ul style="list-style-type: none"> ✓ A developing, global and long term market opportunity ✓ Technological barriers will ensure 'sticky' and high margin activity ✓ Business model based on IP licence fees, royalties and recurring revenues ✓ Key, reputation-building blue-chip contracts already in place 	<ul style="list-style-type: none"> - Dependence on small number of large contracts - Additional working capital funding may be required to seize market opportunity - Larger industrial groups could target market segment - Potential for delayed government mandates and/or access to funding

Appendix

- 1.0 CyanConnode – Go to Market Strategy
- 2.0 Board of Directors Profiles
- 3.0 UK Smart Meter Implementation Programme
- 4.0 Cyan Customer Orders and Pilot Deployments
- 5.0 CyanConnode Evolution
- 6.0 Audited Accounts for Cyan & Connnode

1.0 Cyan – Go to Market Strategy



Source: Cyan Holdings

2.0 Board of Directors Profiles

John Cronin

- Executive Chairman

John Cronin is a seasoned and successful professional. He has been instrumental in mergers & acquisitions worldwide, raised equity, debt facility and vendor financing funding between US\$50 million and US\$900 million and set up operations in international markets. In addition he has created significant value for shareholders with four company exits in Picochip, Azure Solutions, i2 and Netsource Europe totalling US\$600 million.

John's contribution to high-tech industries includes being Chairman, CEO, NED, or adviser to Antenova, GCI Com, Aria networks, Picochip, Arqiva, i2, Cambridge Networks, Kast, Azure, Next2Friends, Bailey Fisher, Netsource, Mercury (C&W), BT and direct to private equity and VC firms.

A highly successful Chairman, CEO and MD in international markets (Europe, Americas, SE. Asia) in the Technology, Media and Telecommunications sector including, Smart Metering, IT Software companies, OSS, Infrastructure, Hardware, Broadcast, Telecommunications, Utilities, Hosting and Managed Services, John Cronin joined the board in March 2012 initially as a non-executive director, and has now taken over as Executive Chairman.



Simon Smith

- Chief Financial Officer

Simon joined Cyan as a Non-Executive Director in March 2010 and was appointed CFO in October 2013. He is an experienced financial executive with over 25 years' experience in the software and semiconductor sectors.

Prior to establishing himself as an independent adviser and technology company Board member in the period from 2007 to 2013, Simon held the position of Chief Financial Officer/Director of Finance at multi-national businesses in both the UK and USA since 1997 and his experiences include multiple business acquisitions/disposals, fund raising, business planning, cash management and customer contract negotiation.



In the period from 2001 to 2007, he was Chief Financial Officer at semiconductor IP company Elixent, which was venture capital funded and sold to Panasonic Japan. In the period from 1997 to 2001, he worked at Silicon Valley (USA) software company McAfee as Senior Director of Finance and then CFO of their Software as a Service (SaaS) subsidiary myCIO.com, with McAfee acquiring 14 companies during this period. Before 1997, Simon was a Management Consultant in both the UK and USA where he managed a team of consultants on multiple implementations of ERP systems. Simon qualified with the Institute of Chartered Accountants in England & Wales in 1991.

Dr John Read

- Non-executive Director

Dr John Read is an experienced manager with a record of developing profitable high-tech semiconductor businesses. In the late 1990s he was a director of GEC Plessey Semiconductors and joint president of GPS Inc. in California. Since then he has been involved with a number of fabless start-ups: he was a director of Alphamosaic Limited (which was sold to Broadcom Europe Limited), and served on the Board of Anadigm Limited from 2000 to 2003. He is an active mentor for the Cambridge Entrepreneurship Centre and for SETSquared in Surrey. Other positions held include technical director of Texas Instruments in the UK, technical director at STC Telecommunications, and director of engineering at Honeywell's Solid State Electronics in Minnesota. Dr Read is a director of the semiconductor company Si-Light Technologies Limited and a director of Iceni Advisory Limited. He became a Director of Cyan in November 2005 and was appointed Chairman in October 2007, however stepped down from this role at the Company's AGM in 2012 and is now a non-executive director.



Harry Berry

- Non-executive Director

Harry joined the Board in May 2014. He has over 30 years' experience in the technology and telecommunications industries and has held a wide range of senior positions and responsibilities in sales, global product management, change management, and development programs. Harry joined BT in 1970 and was responsible for the creation of BT Brightstar, a corporate incubator focussing on BT's R&D portfolio to create technology venturing. Harry is currently European Partner with New Venture Partners, a global venture capital firm dedicated to corporate technology spinouts with over US\$700 million under management. He is also the Chairman of the Eastern Enterprise Hub, which is an organisation responsible for delivering entrepreneurship into academic establishments working with the University Campus Suffolk and colleges across the eastern region of England. Harry is also the Chairman of New Anglia Capital, which helps to provide funding for early stage businesses.



During the period from 2006 to 2011, Harry was an independent director on the Board of Subex Azure Limited (now Subex Limited), a leading global provider of Business Support Systems, headquartered in Bangalore (India) with operations in the UK, US, Singapore, Dubai and Australia. Subex is listed on the Bombay and National Stock Exchanges in India, with a further listing on the Professional Securities Market of the London Stock Exchange.

Paul Ratcliff

- Non-executive Director

With strong analytical skills, Paul started his career working in various IT, marketing and product development roles in large corporates before becoming a senior consultant for Coopers & Lybrand, within its London-based business information management practice. He is now multi-disciplined, entrepreneur with a wealth of practical experience in creating shareholder value by growing businesses and has been involved in a number of corporate transactions resulting in premium returns for investors. This includes the founding of his own software and services CRM company which he later sold for a substantial sum to a UK Plc.

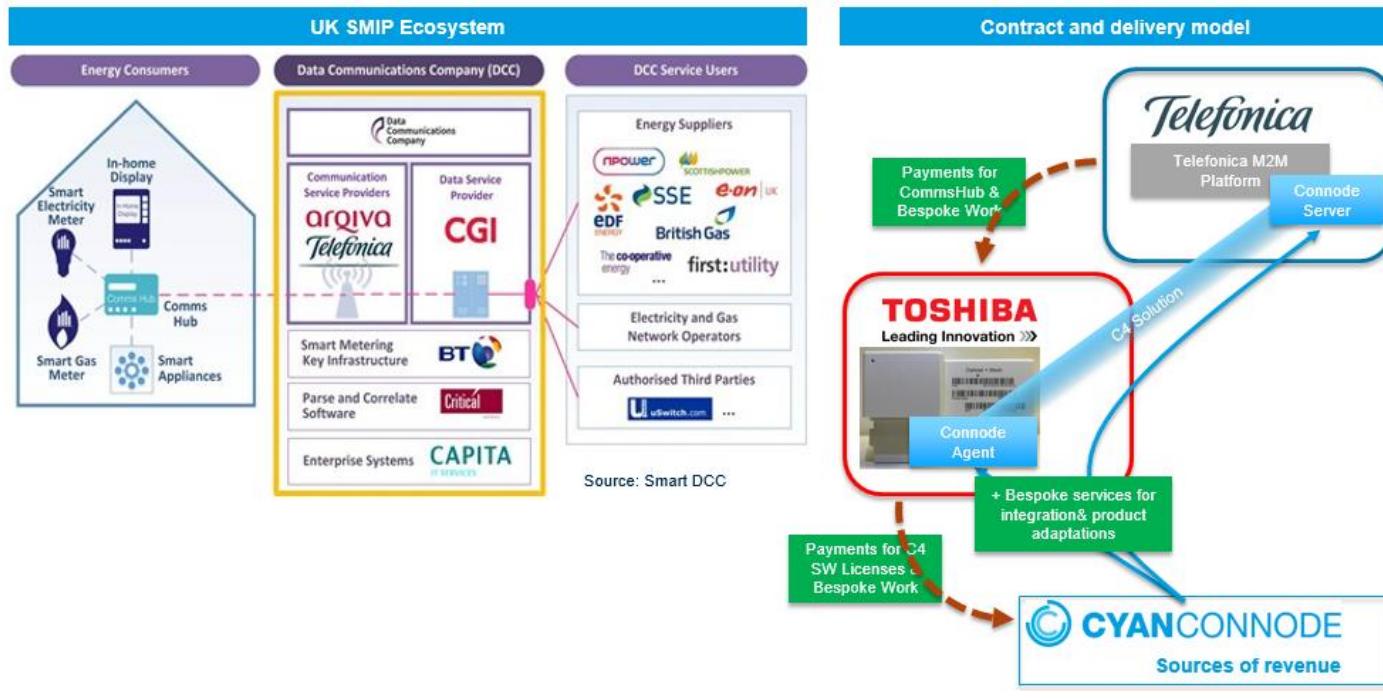


A highly successful Chairman and director in the SME environment, Paul currently holds non-executive Chairman and Non-Executive Director positions for a number of companies operating in a range of sectors including IT, managed services and software.

Paul holds an MBA (with Distinction) from the University of Warwick.

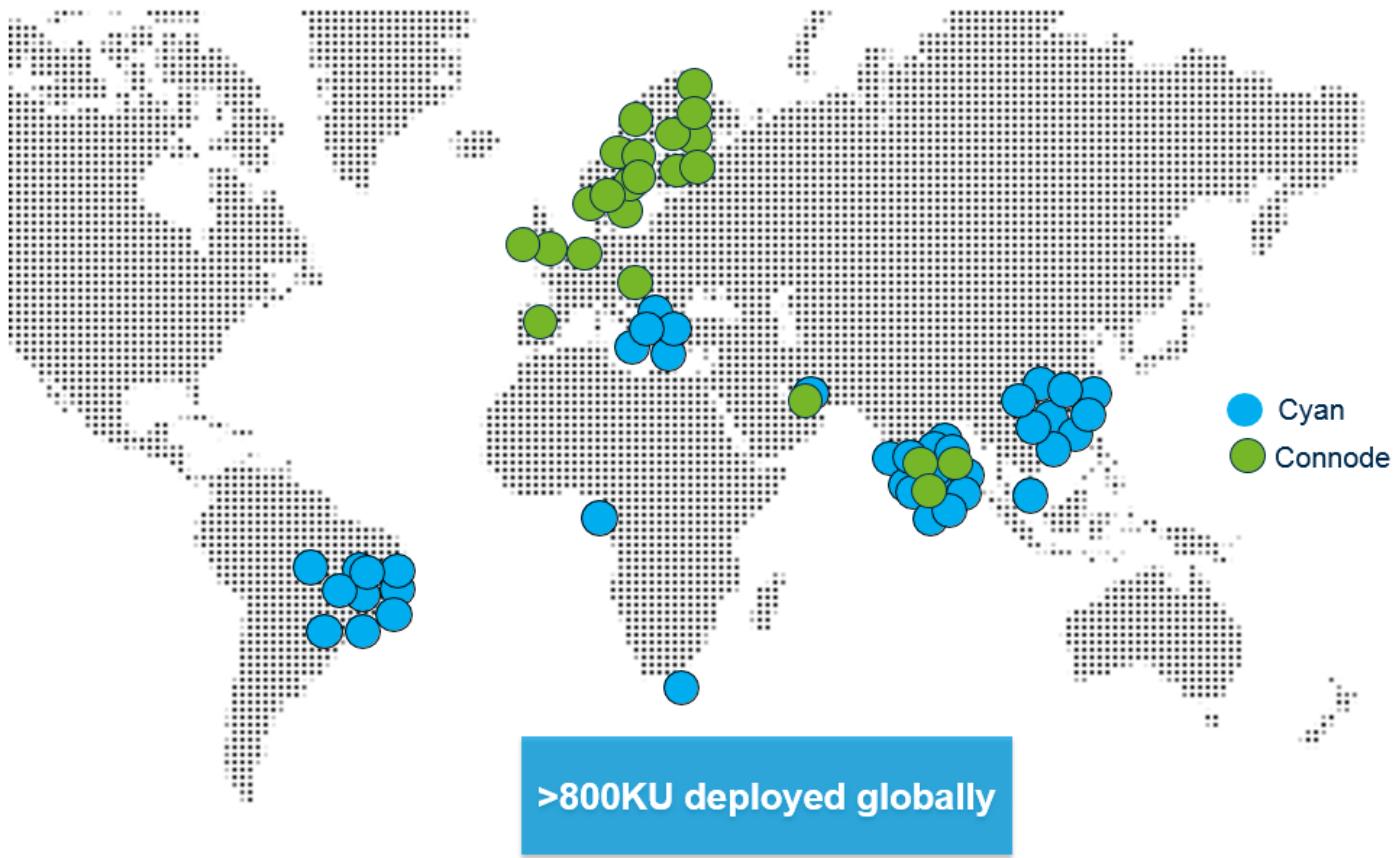
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3.0 UK Smart Meter Implementation Programme



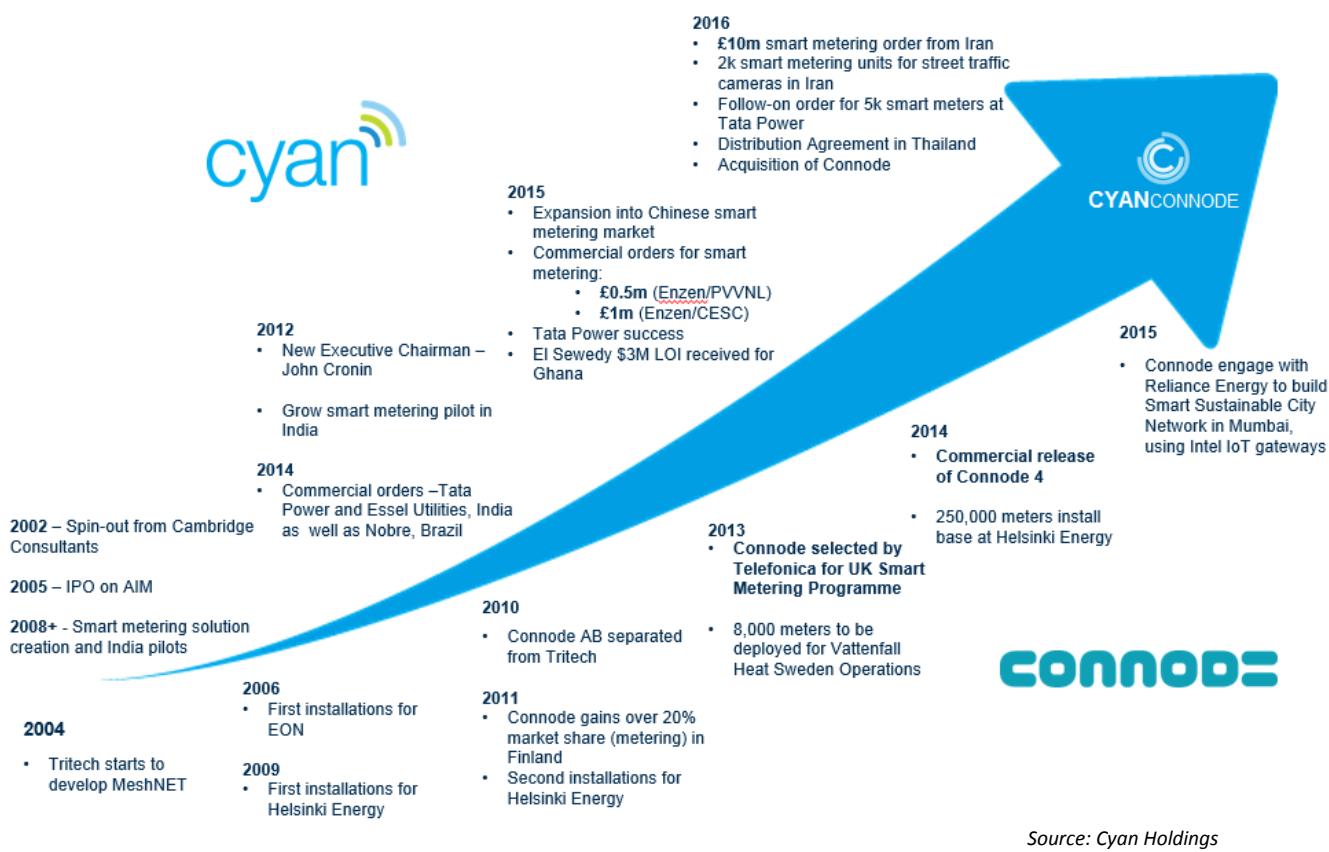
Source: Cyan Holdings

4.0 Cyan Customer Orders and Pilot Deployments



Source: Cyan Holdings

5.0 CyanConnode Evolution



6.0 Audited Accounts for Cyan & Connode

Cyan Holdings Plc – 2015 Summary

Consolidated P&L (£'000s)	FY2015	FY2014	FY2013
Revenue	272	194	138
Cost of Sales	(162)	(123)	(87)
Gross Profit	110	71	51
Operating Costs	(5,013)	(3,331)	(2,844)
Provision Stock Obsolescence	-	-	(473)
Operating Loss	(4,903)	(3,260)	(3,266)
Net Profit (Loss)	(4,316)	(2,854)	(2,992)

Source: Cyan Holdings

Consolidated Balance Sheet (£'000s)	31 December 2015	31 December 2014	31 December 2013
PPE	30	24	4
Inventories	587	575	583
Receivables (Trade/Other)	846	574	346
Cash	2,461	2,344	1,636
Total Liabilities	(748)	(508)	(298)
Net Assets	3,203	3,009	2,271
Total Assets	3,950	3,517	2,569

Source: Cyan Holdings

- Contract and sales traction developed through the course of 2015
- Increased investment in R&D (2015: £3.4m, 2014: £1.8m) to be able to secure and deliver customer contracts
- Growth of team in India to support contract momentum and delivery in territory
- R&D tax credits cash refund for 2015 received in April 2016 of £0.6m

Connode Holding AB – 2015 Summary

Consolidated P&L (SEK'000)	2014 Actual	2015 Actual
Total Revenue	28,788	27,187
COGS		
Total COGS	14,391	8,402
Gross Profit	14,397	18,786
Gross Margin	50.0%	69.1%
Operating Expenses		
Total Operating Expenses	10,594	5,721
Facility		
Office Rent	453	968
Total Facility	453	968
Personnel	11	11
Total Personnel	11,089	9,142
Total Services	509	540
EBITDA	-3,163	2,414
EBITDA Margin	-11.0%	8.9%

Source: Connode

Consolidated Balance Sheet	SEK'000
Intellectual Property	0
Fixed Assets	75
Stock and WIP	800
Total Accounts Receivable	1,200
Other Short-Term Receivable	160
Cash	5,750
Total Assets	7,985
Share Capital	-100
Statutory Reserves	4,554
Retained Earnings	-10,571
Profit/Loss for the Year	
Dividend Paid Pre Completion	
Total Equity	-6,117
Advance Payments from Customer	0
Provisions	-360
Total Supplier Liabilities	-608
Other Short-Term Liabilities	-900
Total Liabilities and Assets	-7,985

Source: Connode

Independent sources used by Beaufort in compilation of this report: Cyan Holdings, Connode, Crisil, Frost & Sullivan, Ministry of Power (India), PR Newswire, Asian Power, India Smart Grid Knowledge Portal, India Smart Grid Forum, Central Power Research Institute, India, Iran Energy Efficiency Organization, Sewedy Electrometer India Pvt. Ltd, Newcapec, Analysys Mason, HIS, Wikipedia, Milner Strategic Marketing, Hindustan Times, ON World, Department of Energy & Climate Change (UK), The World Bank, International Energy Agency, BusinessGreen, Navigant Research, Bloomberg, Proquote, Greentech Media, Financial Conduct Authority, London Stock Exchange, Central Power Research Institute (India), Northeast Group, MARKETSANDMARKETS, P&S Market Research, Telefonica, ABI Research

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Company Name	Disclosure
Cyan Holdings Plc	1,7

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