

Telefonica



Validating LPWA demand

LPWA IoT Network Event 2016

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Research suggests that evolution sometimes meant becoming simpler, not more complex

September 28, 2012



Adult sponge, *Amphimedon queenslandica*.

(Phys.org)—The view that animals have become more complex over time could be a thing of the past, according to the latest research.

Researchers, led by Dr David Ferrier of The Scottish Oceans Institute at the University of St Andrews, found that some modern-day animals like sponges, comb jellies and placozoans (a flat, splodge of an animal with no head, tail, gut or limbs) may have actually evolved by losing some genes and perhaps became simplified from a more complex ancestor, from which the entire animal kingdom evolved.

LPWA, Network evolution meant becoming simpler

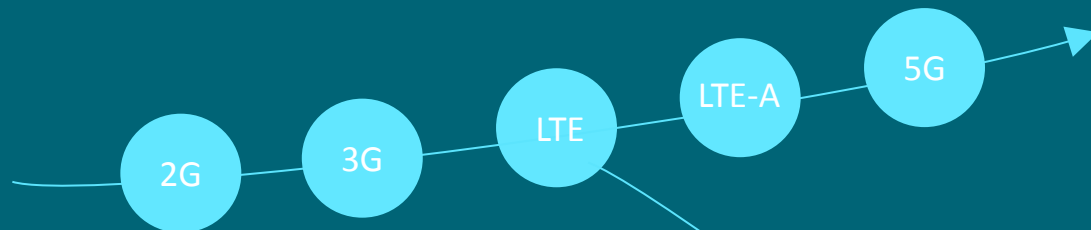
Mimicking Nature

Evolution by increasing Complexity

Data traffic per device



Battery Life of devices



Data traffic per device



Battery Life of devices

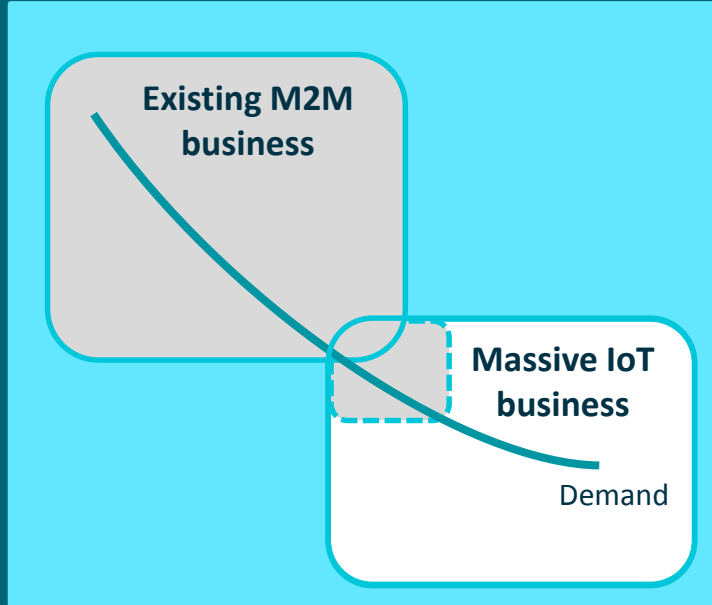


Evolution by becoming simpler

LPWA targets massive IoT usecases

and the business cases would work when reaching huge volumes

Price of
serviced
object



Quantity of
connected Object

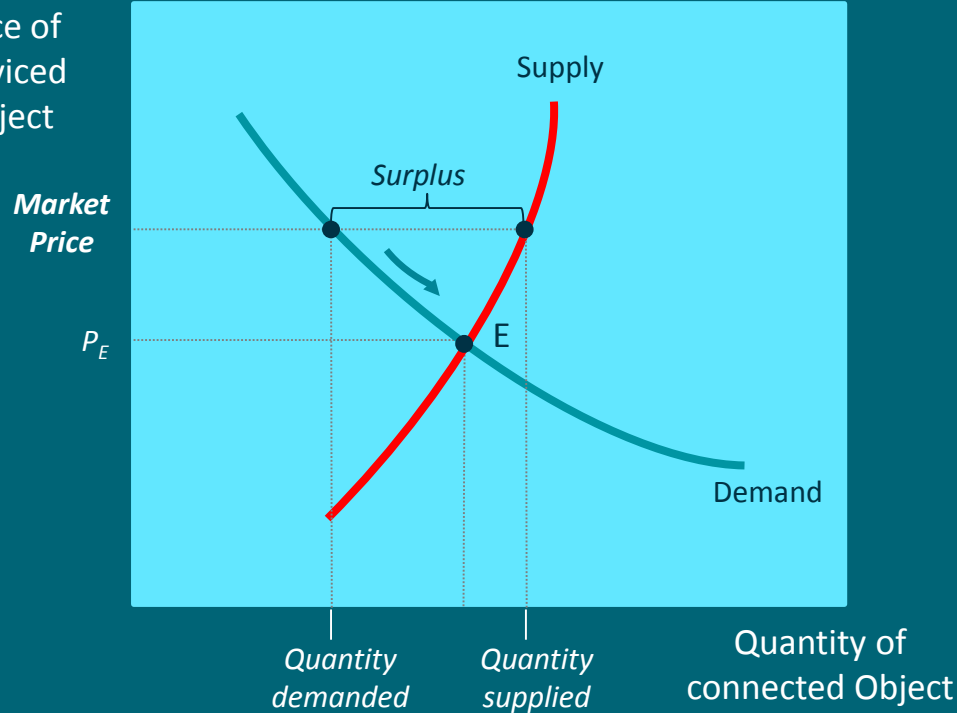
LPWA will require new
business model beyond pure
connectivity

LPWA Demand is not yet living up to the expectations

and we need to focus on getting Lower e2e service Price

Today's scenario

Price of serviced Object



The market price is higher than the equilibrium price because of

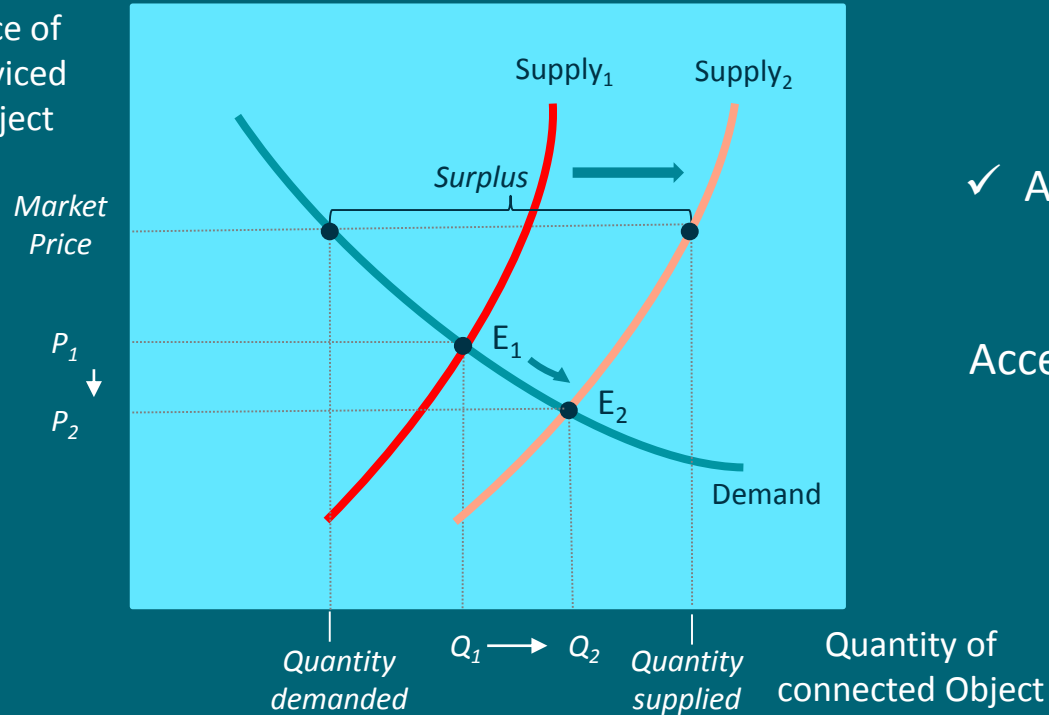
- Module cost (still high)
- Device cost (really high)
- Scalability (not enough)
- Interoperability (lack of)
- Open Labs (to be created)

NB-IOT brings a shift of the supply

A good move that need to be complemented by a demand shift

NB-IOT scenario

Price of serviced Object



✓ Adding NB-IOT (more supply) means higher volumes at a lower price

Accelerating plans to lower e2e service price is key

LPWA forecast are yet biased toward the supply

Low-Power, Wide-Area (LPWA) Networks Address a 'Sweet Spot' in IoT according to Strategy Analytics

STRATEGYANALYTICS
Research, Experts, and Analytics

by Andrew Brown | Sep 04, 2014

Over 5 billion connections using LPWA networks forecast, with \$13.4 Billion in revenue by 2022

Boston, MA - September 03, 2014 - Low-Power, Wide-area (LPWA) networks are opening new M2M use cases where

WITH 3 BILLION CONNECTIONS, LPWA WILL DOMINATE WIDE AREA WIRELESS CONNECTIVITY FOR M2M BY 2023

Machina
Research

25 February 2015

Over the past 18 months, Low Power Wide Area (LPWA) networking technologies have emerged from the shadows and are now centre stage: Sigfox recently announced a USD115 million round of funding,

Worldwide: LPWA networks could grow to 3.5 billion connections in 2025, with several sectors contributing to growth

analysys
mason

"Our current view is that the 1 billion milestone for cellular M2M subscribers will be reached in 2022," said Tobias Ryberg, a senior analyst at Berg Insight, in a statement. The firm's projections call for the install base of cellular-enabled M2M devices to grow at a brisk pace, expanding at a compound annual growth rate (CAGR) of 22.9 percent to reach 744.2 million by 2020.

BERG
INSIGHT 

Pyramid Research

Sectors

Consulting

Published Research

Home > About Us > Media Center > Press Releases > LPWA IoT Will Grow Rapidly and Represent 55% of IoT Connections by 2020, says Pyramid Research

LPWA IoT Will Grow Rapidly and Represent 55% of IoT Connections by 2020, says Pyramid Research

28 April 2016

Low Powered Wide Area (LPWA) Internet of Things (IoT) connections will witness huge growth, from just 20 million in 2014 to 861 million by 2020, which will be equivalent to 55% of all IoT connections, according to Pyramid Research.

Telefonica has already validated LPWA business cases where demand existed

Verified Use Cases for LPWA (demand)



Metering



**Security
(alarms)**



**Asset
Tracking**



**Urban furniture
(smart city)**

Usecases under demand evaluation



**Industrial
process**



**Smart city
(street lighting,
parking, waste)**



**Agriculture and
livestock**



**Building
management**

Telefonica has been working to understand LPWA market and demand

Demand

- Telefonica has been validating LPWA demand with customers for the last two years
- Focused on flagship usecases to be replicated across our footprint

Supply

- 2015 invested in Sigfox
- We primary bet on NB-IOT (roll out plans from 2017) complemented by Sigfox for low complexity applications
- NB-IOT and unlicensed solutions (Sigfox) could coexist (for specific scenarios)

Revenues

LPWA Revenues will not come mainly from pure connectivity but providing both e2e services and a complete IoT connectivity portfolio (combining connectivity adds value)

We have been quite busy (and will be)

Validating demand with customers



Telefonica

Thanks!

