RESEARCI

• analysys mason

IoT Scorecard 2018: evaluating operators' LPWA strategies

• • • • • • • • • • • • • • • •

Michele Mackenzie and Tom Rebbeck

About this report

Analysys Mason's *IoT* Scorecard 2018: evaluating operators' *LPWA* strategies is an evaluation of operators that are active in the LPWA market. The Scorecard considers each operator in terms of how it is performing in matters related to low-power, wide-area (LPWA) networks and determines best practice.

All operators surveyed for this report are leading IoT operators that are developing strong LPWA propositions. We have not included operators that are at an early stage of LPWA network development.

We surveyed 12 operators for this report: AT&T, China Mobile, China Telecom, China Unicom, Deutsche Telekom, KPN, Objenious, Orange, Tele2, Telefónica, Verizon and Vodafone.

Our findings are based on questionnaire responses and/or briefings from each operator, or public sources.

This report focuses primarily on operators with operations in Asia, Europe and North America, and takes into account both home market and international operating companies.

Analysys Mason extends special thanks to the executives who participated in this research.

KEY AREAS ADDRESSED IN THIS REPORT

In this report, we assess which operators are performing best in the following areas of the LPWA market:

- strategy and vision
- networks
- ecosystems
- connectivity and GTM
- value chain
- vertical markets

WHO SHOULD READ THIS REPORT

- Strategy executives and directors in IoT business unit and/or those that are responsible for LPWA strategy.
- Operator marketing executives that are interested in an overview of how operator LPWA strategies compare.
- End users of IoT solutions that are interested in comparing the relative strengths of operators that offer worldwide, regional or domestic IoT services with regard to LPWA networks.



Ecosystems: operators will need various initiatives to build an ecosystem of support for their LPWA technology

The operators with the strongest ecosystems of support for their chosen LPWA technology will have the greatest chance of success.

Operators may develop ecosystem initiatives, sometimes in collaboration with vendor partners. Having initiatives of this type is critical. Operators need to:

- engage to foster collaboration in the ecosystem and build awareness of their chosen LPWA technology among target customers, sectors and developers
- select partners carefully: it is better to have a few trusted partners than a list of many that do not bring value to the proposition
- develop prototype solutions and deploy trials and proof-ofconcepts (PoCs); this will involve working in partnership with different players in the value chain.
- build expertise and solutions in various components of the value chain together with ecosystem partners
- scale and monetise the solutions by working through the complexity and developing products and services that can be replicated. The transition from PoC to a scalable solution is a significant barrier for enterprises.

The types of initiatives that operators are deploying (Figure 9) are not mutually exclusive and are not always LPWA-specific.

Figure 9: Types of ecosystem-building initiatives



17

Ecosystems: operators' LPWA labs are all similar in scope, but differentiate operators from other IoT players

The most common ecosystem-building initiative has been the LPWA lab, which has been pivotal in building trust and credibility for LPWA technology.

Initiatives are not always differentiable, but building them is critical to success. Operators have worked to build ecosystems of support for LPWA networks prior to commercial launch. Some focus on testing and certification while others focus on fostering collaboration. All of them provide a wide portfolio of capabilities.

Measures of success are not always quantifiable. Success is currently based on the number of enterprise engagements rather than the number of commercial projects or revenue. KPN estimates that 50% of live projects started life in the IoT Academy.

Incubators and venture funds do not feature yet. Few operators have incubators or are investing in companies to build their LPWA portfolio. Deutsche Telekom has its hubraum initiative which is not IoT-specific but has launched NB-IoT and LTE-M prototyping. Both KPN and Orange have invested in Actility which supports their LoRa networks, and Deutsche Telekom has taken a share in 1NCE. We expect more investment activity as the market matures.

Scale. Overcoming the technical and commercial barriers to scale is still a challenge. Operators are generally working to provide scalable platforms and commercial assets such as sales channels. The Chinese operators are subsidising modules. However, the shift to replicate or productise early LPWA projects is not yet apparent.

Figure 10: Operator initiatives to build LPWA ecosystems

Operator	What we like about the ecosystem strategy
AT&T	AT&T's IoT Accelerator programme was launched to bring certified LTE-M modules to market quickly.
China Mobile	In addition to its NB-IoT labs, China Mobile is fostering its ecosystem through the China Mobile IoT Alliance.
Deutsche Telekom	Deutsche Telekom has established the Open IoT Lab with the Fraunhofer IML to make use of their expertise in hardware. Its primary focus is to develop application-specific NB-IoT prototypes for manufacturing, logistics and aviation. It has launched some products (such as low-cost tracking devices).
KPN	KPN's objective for the IoT Academy is to "match demand to supply" and it has been relatively successful. It estimates that 50% of its LoRa customers came through the IoT Academy. KPN is productising some of its early projects, enabling easy integration with enterprise IT systems to facilitate scale.
Telefónica	Telefónica's Thinx IoT lab is consistently branded across its footprint and fosters collaboration across the ecosystem as well as providing technical expertise. It is also coordinating efforts across the IoT value chain with other partners.
Verizon	Verizon has invested significantly in building its ThingSpace platform, providing capabilities and channels for developers.
Vodafone	Vodafone was one of the first to build awareness of NB-IoT through its lab initiative in 2016 before full scale deployment. It has engaged with more than 450 enterprises to date.



Contents

Executive summary

Strategy and vision

Networks

Ecosystems

Connectivity and GTM

Value chain

Vertical markets

About the authors and Analysys Mason



About the authors



Michele Mackenzie (Principal Analyst) is an analyst for Analysys Mason's *IoT and M2M Services* research programme, with responsibility for M2M and LPWA forecasts. She has 17 years of experience as an analyst. She produces reports and forecasts on M2M and IoT in industry sectors such as transport, healthcare and smart cities, and analyses the impact of IoT network technologies such as LPWA networks. Prior to joining Analysys Mason in February 2014, Michele was a freelance analyst with a focus on M2M and IoT technology and trends. She has written reports for Machina Research and produced research for other clients in areas such as mobile broadband and digital media.



Tom Rebbeck (Research Director) leads Analysys Mason's *Enterprise and IoT* research practice drawing on more than 18 years of experience in the telecoms sector. He is based in our London office, but works for clients worldwide. Tom is a specialist on the Internet of Things (IoT) and other enterprise services and has written widely on the role for operators as telecoms markets develop. As well as published research, he has worked on projects for a range of clients – including operators, regulators, industry bodies and vendors. Many of these projects have been supported by original research, such as expert interviews and customer surveys.



Analysys Mason's consulting and research are uniquely positioned

Analysys Mason's consulting services and research portfolio



CONSULTING

We deliver tangible benefits to clients across the telecoms industry:

 communications and digital service providers, vendors, financial and strategic investors, private equity and infrastructure funds, governments, regulators, broadcasters, and service and content providers.

Our sector specialists understand the distinct local challenges facing clients, in addition to the wider effects of global forces.

We are future-focused and help clients understand the challenges and opportunities that new technology brings.

RESEARCH

Our dedicated team of analysts track and forecast the different services accessed by consumers and enterprises.

We offer detailed insight into the software, infrastructure and technology delivering those services.

Clients benefit from regular and timely intelligence, and direct access to analysts.



Research from Analysys Mason



Consumer services programmes

Mobile Services Mobile Devices Fixed Broadband Services Convergence Strategies Video Strategies

Operator investment programmes Operator Investment Strategies Network Traffic Spectrum

Telecoms software and networks programmes

Software Forecast and Strategy Telecoms Software Market Shares



Network-focused

Next-Generation Wireless Networks Video and Identity Platforms Service Design and Orchestration Automated Assurance Network Automation and Orchestration Digital Infrastructure Strategies Customer-focused

Digital Experience Customer Engagement Monetisation Platforms AI and Analytics



.

Compare markets and operators Financial values in USD, EUR or local currency

Export data to Excel and save searches

Digital economy programmes

Digital Economy Strategies

Future Comms

SME Strategies

IoT and M2M Services

Global Telecoms Data

Middle East and Africa

European Core Forecasts

European Country Reports

Operator historical data

Americas

DataHu

Asia-Pacific

IoT Platforms and Technology

*



Consulting from Analysys Mason

REGULATION AND POLICY

.

- Policy development and response
- Ex-ante market reviews, remedies, costing...
- Universal Service Obligation (USO)
- Scarce resources: radio spectrum management, auction support, numbering...
- Ex-post/abuse of dominance
- Postal sector



analysysmason.com/consulting

TRANSACTION SUPPORT

- Commercial due diligence
- Technical due diligence
- Mergers and acquisitions (M&As)
- Debt and initial public offerings (IPOs)
- Joint-venture structuring
- Mid-market financial sponsors

STRATEGY AND PLANNING

- Commercial expertise
- Technology optimisation
- New digital frontiers





PUBLISHED BY ANALYSYS MASON LIMITED IN AUGUST 2018

Bush House • North West Wing • Aldwych • London • WC2B 4PJ • UK

Tel: +44 (0)20 7395 9000 • Email: research@analysysmason.com • www.analysysmason.com/research • Registered in England and Wales No. 5177472

© Analysys Mason Limited 2018. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, mechanical, photocopying, recording or otherwise – without the prior written permission of the publisher.

Figures and projections contained in this report are based on publicly available information only and are produced by the Research Division of Analysys Mason Limited independently of any client-specific work within Analysys Mason Limited. The opinions expressed are those of the stated authors only.

Analysys Mason Limited recognises that many terms appearing in this report are proprietary; all such trademarks are acknowledged and every effort has been made to indicate them by the normal UK publishing practice of capitalisation. However, the presence of a term, in whatever form, does not affect its legal status as a trademark.

Analysys Mason Limited maintains that all reasonable care and skill have been used in the compilation of this publication. However, Analysys Mason Limited shall not be under any liability for loss or damage (including consequential loss) whatsoever or howsoever arising as a result of the use of this publication by the customer, his servants, agents or any third party.

