The new model of selling IoT connectivity presents a challenge for traditional MVNO and MNO providers

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The market for IoT connectivity worldwide continues to evolve rapidly – if anything, at a faster pace during 2018 than in 2017. New providers, such as Twilio and 1NCE, are entering the market. More importantly, these providers are building their IoT businesses on new models that have been inspired more by cloud players such as AWS than traditional network operators such as Vodafone. These new models that are built for scale are likely to become the standard for much of the market as revenue per connections for IoT fall further (thanks to the growing presence of NB-IoT and LTE-M).

IoT connectivity is also gaining interest from investors outside the sector. For example, ARM acquired Stream Technologies in June 2018 to realise its ambitions to provide services that complement its core business. In addition, the private equity firm Montagu paid a reported GBP400 million (USD530 million) for Wireless Logic, a substantial multiple for a firm that generated GBP45 million (USD60 million) in revenue and GBP16 million (USD21 million) of EBITDA in the year to April 2017.

This article explores the implications of these developments and is based on our recently published report *IoT MVNOs: case studies and analysis (volume II)*, which profiles eight IoT MVNOs.[1]

The changes in the market create a challenge for both MNOs and for established MVNOs that have built their businesses around the model of a consultative sale and bespoke contracts and pricing.

New entrants are creating a new model for buying connectivity

The new-entrant, AWS-inspired IoT MVNOs are creating a new category of connectivity, distinct from the traditional 'consultative sale' model of selling connectivity and contracts where connectivity is part of a solution that includes other features such as hardware and platforms (see Figure 1).

Companies can be present in more than one category at a time – for example, an MNO can sell pure connectivity to some customers and a mix of connectivity and other capabilities (even complete solutions in some cases) to others.

[1] Analysys Mason's report provides profiles of the following companies: 1NCE, Arkessa, BICS, monogoto, Nokia WING, Sierra Wireless, Tata Communications MOVE and Twilio. Please note that Nokia WING is not an MVNO but may form part of the response of MNOs to these new players. Stream and Wireless Logic are not profiled because they may change strategy post-acquisition.

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Figure 1: Three categories of connectivity type [Source: Analysys Mason, 2018]

	Transactional sale of connectivity	Consultative sale of connectivity	Sale of connectivity and other services
Offer	A simple, clear offer that can be bought without negotiation or long procurement.	Connectivity is sold to the customer following a consultative process, which may involve joint development of specifications and sometimes includes formal RFI/RFP stages.	Connectivity is sold in conjunction with other services, such as hardware, applications and security.
Price	Public	Available on application	Available on application
Target market	Organisations with some degree of familiarity with IoT connectivity, including: • enterprises that are developing internal projects; • technology start-ups (such as those working in consumer electronics); • solution developers and systems integrators.	• Companies buying IoT solutions for the first time that need support and guidance; • Companies buying IoT solutions with non-standard requirements; • Companies with limited technical expertise.	Companies that want to simplify the IoT development process because they do not have either the skills, resources or appetite to do so internally.
Example MVNOs	Twilio, 1NCE and monogoto.	Aeris,[2] Arkessa, BICS, Cubic, Globetouch, Truphone, Wireless Logic and most MNOs.	• Sierra Wireless and Telit. • Most large MNOs (AT&T, China Mobile, Telefónica and Vodafone) fit into this category.

The emergence of a new type of connectivity offer has multiple implications for traditional operators and alternative providers

The following implications arise following the introduction of these new categories of connectivity type.

- ***The public – and often low – prices will put pressure on prices offered by all providers***. Even customers that will not use a provider such as Twilio or 1NCE will look at their prices and challenge significantly higher rates from traditional MVNOs and MNOs. These traditional providers may struggle to justify such a high premium (for example, AT&T and Verizon charge between two and three times more than Twilio for an equivalent connection (for more detail about this development, see Analysys Mason's article *Twilio highlights the threat to operators' IoT connectivity business*).

- ***Lower prices will force providers to pay greater attention to the cost base.*** The new entrants will hope that MNOs do not react to the low prices (or are slow to do so). This is a risky strategy. Assuming that established providers do react to new entrants' initiatives, all parties will need to look at their cost base. In the consumer market, MVNOs have mostly succeeded in offering low prices where they had a cost advantage, such as low-cost distribution (in the case of Lebara) and support channels (such as GiffGaff). IoT MVNOs will also need sustainable cost advantages, but these may be more difficult to identify if the underlying technology is common to all (for example, virtualised core networks). Distribution and support

[2] Profiles of Aeris, Cubic Telecom, Globetouch and Truphone can be found in the first volume of our IoT MVNO case studies report. Available at: www.analysysmason.com/Research/Content/Reports/iot-mvno-analysis-rdme0.

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will be less important in a world of eSIMs and self-service. MVNOs will also rely on wholesale deals for access.

- ***Competition could become more about features than price***. Public pricing, and the lower prices that will likely result, may shift competition away from price. Again, we are assuming that the larger players will reduce prices, as they eventually did in the consumer market to compete with low-cost MVNOs. The spread of prices between different providers will narrow and connectivity providers will compete on other factors, such as features and services. These could include the features themselves (platforms, security and hardware) and how they are accessed (such as via API), as well as the levels of support and service. To draw an analogy with the cloud market, AWS' competitive advantage is its extremely extensive feature set and the ecosystem it has built, not its price.

- ***The consultative model may be under threat from IoT MVNOs' business strategies.*** The traditional model of selling connectivity, with multiple discussions, RFI/RFP phases and bespoke products, may be under threat. Certain customer segments will always need extra guidance and support that self-service models cannot deliver – in particular, for more complex and higher bandwidth services. However, customers that want to connect low-cost and low-bandwidth devices (such as consumer electronics) may not be willing to pay extra for higher quality services.

All providers need to consider what these developments mean for them. Operators' existing business models have supported steady, but not substantial, revenue growth. New models may help unlock more-rapid revenue growth and be required for new, lower-cost NB-IoT and LTE-M connections but are likely to damage those not able to adapt.

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