

# 2G/3G switch off – strategic challenges need to be overcome

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*The rise of 4G means that it will soon become not cost-efficient for operators to continue to run their 2G and 3G networks. However, the growth of the M2M/IoT markets, including connected cars, means that 2G and 3G network switch-off is becoming almost impossible to achieve. A single legacy network provides a solution to these challenges. Forward-thinking operators prepared to drive the process are likely to take advantage.*

The significant rise in the M2M/IoT markets, including the connected car, is an important growth story for the industry.<sup>1</sup> The downside to this growth is devices on the network with exceptionally long asset lives. Smart meters, for instance, have asset lives measured in decades. The fact that these devices are 2G-only exacerbates the problem that the service needs to remain available to customers, but also needs to be cost-efficient.

The solution to supporting these devices on a legacy network is to share the problem. In retail banking, for instance, credit cards started impacting cheque-based payment transactions. It is over twenty years since the banks collectively took a long-term view and centralised cheque processing.

Similarly, mobile operators facing the problem of how to deal with a long-term, but dwindling, section of the subscriber base should consider sharing the problem through a single legacy network.

A single legacy network differs from traditional network sharing due to the drivers and participants. Traditional network shares were often between third or fourth players needing to save on the costs of future roll-out. A single legacy network is more likely to be between older 900MHz operators that have a more complex and enterprise-focused subscriber base. Their need to evolve their business to 4G is as urgent as those of the rest of the market, but they still need to maintain their contractual commitments to support customers with legacy technologies.

For operators considering how to share the legacy problem, there are a number of key strategic areas which need careful consideration.

## Structure

Sharing requires creating some sort of entity. A whole spectrum of options exists, from a full joint venture (JV) to a joint 'clean team' who are still employed by their respective parents. JVs offer more cost transparency, which may be useful in setting a legacy network price to the industry. For example, access to towers space can be easily set at market rates, ensuring the legacy network pays its economic way.

## Asset transfer

Different asset ownership models exist, and the most appropriate choice of model for a particular context depends on the number of operators involved in the single legacy network. A 'geo-share', such as 3GIS in

<sup>1</sup> See <http://www.analysismason.com/Research/Content/Comments/legacy-networks-M2M-Oct2015-RDME0-RDTN0/>

Sweden, with no asset transfer might be appropriate if there are just two operators; this structure benefits from reduced challenges with asset valuation.

Transferring the assets provides more flexibility for the single legacy network and more transparency on economic return for the shareholders. Complexities around equipment that is shared between 4G and the legacy 2G and/or 3G technologies (e.g. backhaul, cabinets) needs consideration, but these can be handled on a case-by-case basis and are not showstoppers.

## Profit or cost model

The most appropriate model depends on the long-term strategy for the single legacy network. A cost model works well for a closed JV, where allocation of costs can be done using a pre-agreed mechanism. However, if a third-party (non-operator) shareholder were to be introduced, then a profit-making entity would certainly be required.

## Third-party shareholders

Allowing a third party to invest in the shared legacy network could provide an equity injection allowing for cash release to existing shareholders, monetising the legacy assets for return to shareholders or investment in the 4G/5G future.

## Third-party customers

With a fully functional standalone 2G and/or 3G network, it would be possible to provide a service to other customers, including mobile virtual network operators (MVNOs) and vertical M2M providers. This is probably one of the most complex decisions to make because of the impact such a decision may have on the 4G business of the operators jointly owning the single legacy network. The revenue impact of an MVNO should reduce costs for the shareholding operators and the removal of voice-/text-only customers from their 4G base should be APRU-accretive. These upsides need to be considered alongside the market cannibalisation risk of providing competitive economics to MVNOs.

Allowing a non-shareholding operator onto the single legacy network could easily be done by offering MVNO terms, but the additional benefit that operators would receive from earlier 4G re-farm in the 1800MHz/2.1GHz bands might be reason enough to limit customers to the initial shareholders.

The creation of a single legacy network makes commercial and technical sense. Strategically, however, the challenges are considerable. Even if two operators are to agree in principle to sharing the legacy problem, delivering the benefits will be reserved for those operators prepared to drive the agenda.

Analysys Mason is a global adviser in telecoms media technology, with an industry-leading track record in supporting operators through complex problems, including network sharing. If you are responsible for 2G or 3G switch-off and are facing some of the issues we have identified, or are considering other strategic options, we would be delighted to hear from you.