



Single Wholesale Networks Lessons From Existing and Earlier Projects

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The GSMA represents the interests of mobile operators worldwide, uniting more than 750 operators with over 350 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces the industry-leading MWC events held annually in Barcelona, Los Angeles and Shanghai, as well as the Mobile 360 Series of regional conferences.

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What is an SWN?

Policymakers in some countries are considering establishing single wholesale networks (SWNs) or wholesale open access networks (WOAN) instead of relying on competing mobile networks to deliver mobile broadband services in their country. Most of these proposals specify at least partial network ownership and financing by the government.

While there are variations in the SWN proposals discussed and implemented by different governments, SWNs can be generally defined as government-initiated network monopolies that compel mobile operators and others to rely on wholesale services provided by the SWN as they serve and compete for retail customers.

Why do countries want to do it/What issues are they hoping to solve?

Supporters of SWNs argue they can address some concerns better than the traditional model of network competition in some markets. These concerns generally include inadequate competition

or lack of coverage in rural areas, inefficient use of radio spectrum, and fears that the private sector may lack incentives to maximise coverage or investment.

What is the status of existing deployments?

Belarus

SWN Implemented	Coverage	Retail competition	Efficiency
<p>The LTE network was implemented in 2015 by infrastructure operator beCloud (doesn't provide B2C services, on-board existing MNOs) using 1800 and 2600 MHz.</p> <p>MTS joined the network immediately, life:) joined the initiative in 2016.</p> <p>A1 Belarus launched in Minsk, Pinsk and Gomel in March 2019. The service in the latter city had to be switched off due to poor quality (just 2 Mbps)</p>	<p>Population coverage for 4G in Belarus is around 78% and market penetration is 34.5% in Q3 2019 according to GSMA Intelligence</p>	<p>MTS and life:) provide LTE services across country, while A1 (Velcom) only offers services in two cities.</p>	<p>According to the study from Opensignal published in 2019¹, average LTE speed in Belarus is the lowest in Europe - 7.7 Mbps. Speedtest Global Index also claims that in Belarus average mobile internet speed is 50% less than the global average².</p>

Mexico

SWN Implemented	Coverage	Retail competition	Efficiency
<p>The LTE network was launched by Red compartita in 2017</p> <p>The network uses 90 MHz in the 700 MHz band</p>	<p>Significant delays to roll out, which should have begun in 2014</p> <p>Coverage is around 45% of the population</p>	<p>Most MVNOS using the network has few or no customers</p>	<p>The spectrum isn't optimally used, as the Red compartita network only serves a small minority of the population</p>

Rwanda

SWN Implemented	Coverage	Affordability	Retail competition	Efficiency
<p>Implemented in 2014 by KTRN for 4G only</p> <p>Using 800 and 1800 MHz</p>	<p>4G coverage 98% of population after 5 years</p>	<p>MNOs tend to offer 3G and 4G services at the same price</p>	<p>All 3 MNOs have some commercial agreement</p> <p>No new MVNOS, so competition in mobile remains unchanged at present</p>	<p>KTRN reported a loss for the last three years</p> <p>MNOs can negotiate a revenue share model with the SWN</p>

Projects in Kenya, Russia, South Africa have all either failed, been delayed or abandoned.


1. https://www.opensignal.com/sites/opensignal-com/files/data/reports/global/data-2019-05/the_state_of_mobile_experience_may_2019_0.pdf

2. <https://www.speedtest.net/insights/blog/global-index-2019-internet-report/>

What are the disadvantages?

The lessons from existing as well as abandoned projects should serve as examples to other countries contemplating this route. They highlight the challenges of SWNs and WOANs and are a

wake-up call to regulators that look to them as an alternative to tried-and-true approaches to network deployment.

Policy Goal	Reality
 Improve rural coverage	WOAN Operators deploy in city centres first, where it is easier/cheaper to deploy existing operators are
 Lowering retail price	Monopolistic, wholesale price determined by government or commercial negotiation.
 Increase competition	No new MVNO entry so far. WOAN offering is no better than what operator can offer to MVNOs
 More efficient resource usage	Wholesaler will be the pace setter for technology upgrade. There is no competitive advantage



What are the alternatives?

All governments have to carefully consider whether their approach is likely to increase the quality and reach of next-generation mobile broadband, compared with the existing well-proven approach of network competition. GSMA contends that a better way forward is for governments, regulators and mobile operators to collaborate on long-term solutions. The basic building blocks which can help make this happen are:

- Cost effective access to sub-1 GHz spectrum
- Support for spectrum re-farming
- Support for all forms of voluntary infrastructure sharing
- Support for spectrum trading in a secondary market
- Elimination of sector-specific taxation
- Non-discriminatory access to public infrastructure
- Support for streamlined planning and administrative processes
- Streamlining of Quality of Service requirements

There are also countries where more innovative approaches are being rolled out or considered. While they may not be suitable for all countries, they show that there are other ways forward.

Turkey – a reverse auction to build a shared rural network

- Telecom ministry found only rural areas with population <500 lacked mobile coverage;
- It was agreed that mobile services to last 1% of the population are not commercially viable;
- Government chose to subsidise a GSM-based Universal Service Network in these areas;
- One incumbent operator chosen via reverse auction to build and maintain the network;
- Network to be shared with all MNOs and provide coverage in 1796 settlements (with <500 pop);
- Turkcell was awarded the contract in 2013 with the requirement to build the network by 2016;
- Paid for by USF (incl. fees and revenue share paid by MNOs, regulator fines and budget);
- Cost estimated as being 66% lower than separate networks built in these areas by all MNOs;
- Project was successful and Turkcell chose to upgrade the network to 4.5G. The first sites are live.

UK – A joint proposal to boost rural coverage

Local operators EE (BT), Vodafone, O2 and Three UK have agreed a joint proposal, for consideration by Ofcom, to boost rural and remote coverage in not-spots. It includes creating a new company that is tasked with building a single joint mobile network in areas where none of the operators provide coverage currently. Funding for the company would be supported through reduced spectrum fees. The approach could be considered a single wholesale network but with a focus solely on areas where competitive networks are not currently commercially viable.

What is the GSMA's position?

Supporters claim that these wholesale networks will deliver greater coverage than market competition can. However, this claim often ignores the fact that in order to be built, the SWN require significant public subsidies and other forms of support such as cheap/free spectrum. These support options are typically not available to competing network operators.

The GSMA believes that network competition can and does deliver mobile network coverage. In areas where building networks is not economically viable there are other approaches. They include voluntary network sharing that can facilitate coverage in a particular area. The mobile industry is committed to working with governments to promote innovation and improve coverage for everyone and everything.



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