5G FWA operators must design the right retail tariff offer to generate strong subscriber take-up

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Many kinds of operators worldwide, from fixed-line incumbents to challenger mobile network operators (MNOs), continue to launch 5G fixed-wireless access (FWA). Each player faces the same challenge of developing the optimal 5G FWA retail tariff strategy to successfully generate profitable subscriber take-up (see Figure 1). This article provides recommendations on the best strategies for designing 5G FWA retail offers.

Figure 1: 5G FWA operator types and deployment outlook

5G FWA operator type	Deployment outlook
mmWave 5G FWA	Large-scale deployments are likely to be few in number, but there is potential for 5G FWA to be useful in smaller towns with limited FTTP competition.
Fixed incumbents using 5G FWA as part of a technology mix	FTTP roll-outs may be cost-prohibitive in some areas, so 5G FWA may be useful and could form part of a copper decommissioning strategy.
Challenger MNOs	Some MNOs see 5G FWA as a way to enter the fixed broadband market. Success will depend on FTTP competition and matching FWA offers with existing mobile propositions.
Wholesale fibre fee-avoiders	Some integrated operators see 5G FWA as a way of avoiding wholesale fibre fees. The case for migrating low-usage DSL customers is clear but migrating existing FTTP customers to 5G FWA may be challenging.
MNOs in markets with very high cellular traffic levels	Some markets have monthly cellular traffic levels of a few tens of gigabytes per capita. Moving traffic from handsets to 5G FWA routers with better spectral efficiency can deliver cost and revenue benefits.

Source: Analysys Mason, 2021

MNOs that launch 5G FWA must ensure that their broadband propositions are a good fit with their mobile offers

MNOs that launch 5G FWA may find that their mobile market positioning and their fixed-wireless offers do not align well. For example, MNOs with premium market positioning may struggle to persuade their mobile customers to subscribe to 5G FWA propositions because these customers may prefer FTTP connectivity, which potentially offers superior technical performance to 5G FWA. A high volume of traffic from 5G FWA could also negatively impact network performance for mobile customers, and this could jeopardise MNOs' premium mobile market positioning.

MNOs that launch 5G FWA must therefore ensure that the launch is tied into the wider company's offers. T-Mobile USA provides a good example of this approach. The company has focused on increasing its mobile market share in smaller towns and more rural areas, and these geographies are also a focus area for its 5G FWA roll-out. T-Mobile USA is expanding its retail distribution network in such areas, which will help to serve both fixed and mobile customers. Its 5G FWA retail offers are also well-aligned with its mobile plans because they offer simplicity in the form of a single tariff. Neither T-Mobile USA's FWA or mobile offers include hidden fees, and both also come without fixed term contracts.

5G FWA operators must carefully consider their CPE strategies

The cost of 5G FWA customer premises equipment (CPE) remains high – typically about USD250 for mid-band devices (although this varies considerably depending on purchase volumes). Operators must decide to what extent they should subsidise such device costs. In many developed markets, it will make sense for operators to avoid charging an upfront fee for CPE because the evidence suggests that take-up is highly dependent on such costs, particularly because operators in developed markets do not typically charge an FTTP installation fee.[1] Over the next 12 months, Analysys Mason also expects the cost of 5G FWA CPE to fall significantly,[2] which provides another incentive for operators to not charge an upfront fee for these devices.

5G FWA operators must also decide whether to use indoor or outdoor CPE. Outdoor devices require a professional installation, and in developed markets, this could easily push up costs by USD100 or so. However, such devices can deliver a better quality of experience for 5G FWA customers. For example, Telenor in Norway uses mid-band spectrum for its 5G FWA roll-out but uses outdoor CPE to ensure a good quality of service for its customers. This is important because as the incumbent, the company must maintain its premium market positioning in the Norwegian market. It is therefore not necessary for operators to use indoor CPE when using mid-band spectrum. In addition, the 5G FWA installation process is simpler than it is for FTTP and does not need highly specialised staff.

Speed tiering of 5G FWA plans can deliver benefits to operators

Some 5G FWA operators, such as Telenor in Norway and STC in Kuwait, have launched speed-tiered 5G FWA plans. Such offers have the potential benefit of enabling operator to upsell more-expensive, higher-speed plans to their customers. These offers can also reinforce the perception that 5G FWA can provide a good-quality and reliable service, the value of which may otherwise be more challenging to persuade customers of if promising average level speeds. Alternatively, offering just one 5G FWA retail plan with no speed-based differentiation offers simplicity to customers.

5G FWA connections are capable of supporting live TV channels

Operators must consider which value-added-services to offer over 5G FWA connections. For example, we are not aware of any 5G FWA operator that has launched a full managed IPTV service, but Telenor in Norway plans to do so, helped by its outdoor CPE deployment strategy. This IPTV offer is important because it will enable Telenor to offer a homogenous service set across its fixed broadband footprint. Other operators may view cord-cutters as a target segment for 5G FWA and may therefore choose to not offer any video service. However,

[1] See Analysys Mason's *5G Fixed Wireless Access retail tariffs: case studies and analysis* (Vol. I) and *5G fixed-wireless access retail tariffs: case studies and analysis (volume II)*.

[2] See Analysys Mason's *5G FWA CPE costs will fall significantly, thereby improving the business case for mid-band roll-outs*.

several operators such as Optus in Australia and T-Mobile USA offer linear OTT video over 5G FWA, which reflects the performance capabilities of the technology.

5G FWA operators will find it difficult to compete with FTTP players

Many operators that have launched 5G FWA are in markets where FTTC-VDSL has been the main technology for next-generation access (NGA) roll-outs. 5G FWA speeds can be higher than VDSL speeds and are a significant upgrade over legacy ADSL. 5G FWA retail tariffs are also typically unlimited. For this reason, it makes sense for integrated incumbents to use 5G FWA as part of a copper decommissioning strategy and to therefore migrate their ADSL base to 5G FWA, particularly in areas where FTTP costs per-home-passed are prohibitive.

In markets where FTTP predominates, there has been less emphasis on rolling out 5G FWA. 5G FWA deployments have been used in markets such as Australia and New Zealand to circumvent wholesale NGA fees, but we have not yet observed examples of operators migrating their existing wholesale FTTP customers to 5G FWA. This strategy would be challenging, and operators would likely need to offer discounts to such customers.

We are generally more confident about the 5G FWA take-up prospects in less dense geotypes, and such deployments could encompass those using mmWave spectrum (such as that being conducted by Fastweb in Italy). While we are optimistic about T-Mobile USA's 5G FWA prospects in less dense areas, we are more pessimistic about its prospects in dense urban areas with more competition from FTTP and cable. In order for T-Mobile USA and other players to generate significant subscriber take-up in such geotypes, retail pricing would need to much lower than we have observed to date.