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TECHNOLOGIES THAT ACCELERATE DIGITAL ECONOMY

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Addressing Regulatory & Policy Context in FWA's Future Growth

A SAMENA Telecommunications Council Newsletter Publication

SAMENA ELITE

TECHNOLOGIES THAT ACCELERATE DIGITAL ECONOMY

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Addressing Regulatory & Policy Context in FWA's Future Growth

Bocar A. BA
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As wireless broadband increasingly shapes national connectivity strategies, policymakers face a critical moment in defining the regulatory framework for fixed wireless access. FWA is no longer a supplementary solution; it is emerging as a core option for delivering high-speed broadband to homes, businesses, and industrial sites. Its growth presents both opportunities and responsibilities for regulators, in strengthening connectivity while supporting broader national digital transformation goals. Addressing this prevailing regulatory and policy context is essential to guide FWA's sustainable growth.

Spectrum policy sits at the heart of this challenge. Providing operators with the right bandwidth under conditions that encourage long-term investment will determine how effectively FWA can meet rising expectations for coverage, reliability, and user experience. Planning for higher-frequency bands in dense urban areas is also essential to support growing demand for capacity. How spectrum is allocated, coordinated, and shared will influence whether wireless networks evolve into a seamless national platform or remain a collection of isolated solutions. Regulators must take a forward-looking approach that balances investment incentives with public interest objectives.

Competition is another priority in this evolving policy landscape. As mobile operators increasingly deliver fixed broadband through FWA, regulators must ensure markets remain open and dynamic. Policies that encourage fair access, monitor bundled offerings, and safeguard spectrum diversity will help prevent excessive concentration and preserve consumer choice. Proactive regulatory measures can support new entrants and innovative service models while aligning with national connectivity objectives.

Service quality will define the success of this wireless future. Households and businesses expect dependable, high-performing broadband. Regulators

can establish standards for network performance, transparency in advertised versus actual speeds, and resilience during periods of heavy demand. Clear expectations provide operators with a reliable framework to innovate while giving users confidence in wireless as a primary connectivity option.

Expanding meaningful coverage and digital inclusion remains a central focus. FWA can reach communities where fiber is slow to arrive, often at a fraction of the cost. Integrating FWA into universal service programs, incentive schemes, and public-private partnerships can accelerate progress toward national connectivity goals while ensuring that rural, semi-urban, and underserved areas are included.

The rise of wireless broadband signals a structural shift in connectivity across the SA-ME-NA and Central Asia regions, and Africa as well. Regulators that address the new regulatory and policy context with clarity and foresight will help FWA expand opportunity, foster healthy competition, and deliver reliable service to more people in less time. The decisions made today will determine whether FWA becomes a permanent pillar of digital infrastructure and a catalyst for inclusive, high-quality connectivity during 2026 and beyond toward 2030.

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OBSERVATIONS BY SAMENA COUNCIL

FWA as a Core Component of Broadband Growth in 2026

Fixed Wireless Access is entering 2026 as one of the most significant developments in global broadband. What had long been viewed as an option for areas where fiber was difficult or expensive is now emerging as a mainstream form of connectivity for homes, businesses, and connected devices. The momentum that gathered through 2025, supported by broader 5G coverage, rising CPE shipments, and stronger performance indicators, has set the stage for a year in which FWA grows in scale, becomes more differentiated, and takes on a larger role in national digital strategies.

By the middle of 2025, major market studies were already identifying FWA as a central tool for turning 5G investment into revenue, rather than a temporary or experimental offering. Operators in the United States, India, Europe, and parts of Asia were increasingly positioning FWA as a way to provide useful broadband in areas where fiber rollouts were slow or cost prohibitive. Forecasts from multiple analysis groups pointed to steady double-digit growth through the decade, with 5G FWA becoming one of the fastest expanding broadband segments. Throughout the year, operators began treating FWA as a core part of their product portfolios, and this is evident from the meetings of the ELITE FWA Club, organized by the SAMENA Council throughout the year in collaboration with Huawei and other members. Record subscriber additions in the United States, for example, reflected this shift, while emerging markets relied on FWA to support national connectivity and inclusion efforts. By late 2025, nearly half of all active 5G networks worldwide had incorporated FWA in some form, a clear signal that the technology had moved firmly into the mainstream.

Updated market indicators in the final quarter of 2025 reinforced the momentum behind FWA globally. In the United States, for example, licensed FWA coverage expanded by more than one hundred percent since the first national mapping exercise, driven by sustained mid-band spectrum allocations and the densification of 5G sites. A similar trajectory has started to emerge across the SA-M-ENA region, where operators are actively deploying mid-band spectrum and expanding 5G infrastructure to extend broadband to urban, semi-urban, and underserved areas. These efforts are further supported by evolving regulatory frameworks and government initiatives aimed at accelerating digital inclusion. The parallels between mature markets including the U.S. and the growing SA-ME-NA regional ecosystem illustrate how targeted spectrum planning, network densification, and policy support can combine to make FWA a primary broadband solution, capable of delivering reliable, high-speed connectivity to a broad range of users.

Similar improvements were reported in several other regions. These enhancements produced noticeable gains in consumer speeds, confirming that mid band 5G had become the primary source of wide area FWA performance. At the same time, there was renewed interest in higher frequency deployments in dense urban environments and specialized locations, with some operators beginning to combine mid band and higher band solutions in order to match local needs more precisely.

Policy Recommendations

- Regulatory frameworks need to support both investment and consumer confidence. A practical way to do this is to maintain a technology-neutral approach that recognizes FWA as a credible complement to fiber, especially in areas where fixed infrastructure is difficult or costly to deploy. Keeping the regulatory environment flexible allows operators to select the most effective combination of technologies for each locality.
- Spectrum availability will continue to influence the quality and reach of FWA services. Timely access to mid-band spectrum (1GHz to 6GHz, with specific use from 2.5GHz to 4GHz), along with clear guidance on higher band use in urban or high-capacity areas, will help operators sustain performance and meet rising demand. Policymakers may also wish to explore approaches using regulatory sandboxes to help encourage efficient spectrum use, including shared or lightly licensed models where appropriate, so that coverage can expand without unnecessary barriers.
- Support for hybrid deployment models that combine fiber and FWA can also help ensure that communities receive service quickly while longer term infrastructure plans continue to evolve.
- Providing guidance on how providers should communicate typical speeds, minimum speeds, and factors that may affect service can improve transparency and help consumers make informed choices. Independent verification or regular reporting mechanisms can further strengthen public confidence.
- In parts of the SA-ME-NA and Central Asia regions, where coverage gaps continue to persist, FWA should be considered within universal service and subsidy programs. Its ability to reach difficult locations at lower cost makes it a practical option for connecting underserved communities. Aligning funding programs with realistic deployment models, and ensuring coordination between operators, regulators, and development agencies, can help accelerate progress toward broader national connectivity goals.
- National broadband strategies may need to formally recognize FWA as part of the long-term connectivity roadmap. Different connectivity solutions need to work together to support economic development, digital inclusion, and service resilience.
- FWA can support national objectives without limiting innovation or investment. By encouraging balanced policies that account for both near-term needs and long-term infrastructure goals, governments can help

The equipment market also evolved quickly throughout 2025. Global shipments of FWA CPE rose significantly, with more than half of all units shipped supporting 5G. Vendors introduced devices that were easier to install, smaller in size, more energy efficient, and stronger in indoor coverage. Improvements in antenna systems, local processing features, security, and home networking support helped turn CPE into more capable connectivity hubs. There was also growing discussion around lighter cost devices for simpler or large-scale deployments, creating a path for industries and smaller operations that require connectivity without long installation timelines.

As 2026 begins, nearly all market projections point to continued strong growth. Both the general FWA market and the dedicated 5G FWA segment are expected to expand quickly through the early 2030s, reaching values far higher than those recorded in 2025. The number of connections is also expected to rise sharply, with 5G replacing many older wireless options and becoming the baseline technology for most new deployments. In more advanced 5G markets, the focus will likely shift toward enhancing capacity, refining speed tiers, and improving overall service quality so that FWA competes not just on peak performance but also on reliability and consistency. In developing markets, falling equipment prices and improving mid band coverage will make FWA an increasingly practical way to extend broadband to underserved communities.

For industries, this period marks the beginning of broader adoption of FWA as a practical tool for connecting branch locations, remote industrial sites, and operations that depend on timely data. Many organizations will find value in the ability to deploy connectivity quickly, without the complexity of trenching or waiting for fiber availability. As equipment becomes smarter and more adaptable, these deployments can support a wider range of applications, from monitoring and automation to customer services and field operations.

FWA is no longer just filling gaps in fiber coverage. In fact, it is becoming a core part of how operators plan their networks, how regulators design broadband strategies, and how industries adopt digital tools. With continued improvements in network capacity, more capable devices, and more collaborative planning across the ecosystem, FWA is positioned to play a central role in meeting the connectivity needs of households, enterprises, and national programs in the years ahead.

ELITE FWA CLUB ADVOCACY

At GITEX Global 2025, SAMENA Council Positions Fixed Wireless Access (FWA) as a Key Growth Driver for Digital Innovations

Throughout 2025, the SAMENA Council highlighted the transformative potential of Fixed Wireless Access (FWA) as a central component of the region's digital future and a strong complement to fiber. As the demand for high-speed, flexible, and scalable connectivity grows across South Asia, the Middle East, and North Africa (SA-ME-NA), the SAMENA Council positioned FWA as a crucial enabler of intelligent connectivity, capable of bridging the digital divide and supporting economic growth through broadband access and creating opportunities for innovation, such as in CPE design. In a keynote, delivered during the 5th meeting of the ELITE FWA Club, which is directly supported by the SAMENA Council along with various members of the Council, including Huawei, CEO of the SAMENA Council, Bocar BA, who also serves as the honorary president of the Club, outlined how FWA has evolved from an emerging technology into a foundational infrastructure solution, which can truly leverage 5G-Advanced and AI synergy. The Council emphasized that FWA is no longer limited to providing basic broadband. Rather, it is a driver of intelligent, high-performance networks (for example, visual-data networks) that offer faster speeds, greater reliability, and broader coverage and intelligence, enabling operators to meet the increasing demands of consumers, businesses, and governments. "As we see in the markets of the UAE and Kuwait, FWA is evolving rapidly, with operators leveraging 5G-Advanced and AI to deliver faster, more efficient, and more flexible services," said BA. "FWA represents more than just a

> **"FWA represents more than just a technology; it's a key enabler of digital transformation, opening new avenues for innovation and growth. The SAMENA Council is committed to supporting the expansion of FWA by promoting collaboration among regulators, operators, technology providers, and the ELITE FWA Club members, to ensure its widespread adoption."**

technology; it's a key enabler of digital transformation, opening new avenues for innovation and growth. The SAMENA Council is committed to supporting the expansion of FWA by promoting collaboration among regulators, operators, technology providers, and the ELITE FWA Club members, to ensure its widespread adoption." The SAMENA Council emphasized that GITEX Global 2025 served as an important platform for discussing FWA's potential and its role in shaping the telecom landscape within the SA-ME-NA and, increasingly, in the Central Asia regions. By bringing together key stakeholders from across the tech ecosystem, the 5th meeting of the Club provided an opportunity to highlight latest developments in FWA, such as FWA 3.0, ubiquitous High-bandwidth Broadband, implementation of 5G Technology in Mongolia, and user experience and evolution in Bahrain, Kuwait, and the UAE. The Council also recognized the need for continued public-private collaboration to unlock FWA's full potential. It called for targeted public support to accelerate deployment, particularly in underserved regions where market returns are limited. This support could take the form of regulatory incentives, funding mechanisms such as Viability Gap Funding (VGF) for digital infrastructure, and the creation of anchor-client agreements with public institutions such as schools and health centers to strengthen commercial use cases. "Governments must play an active role in de-risking FWA investment, particularly in areas with lower commercial viability," said the SAMENA Council CEO. "In such regions, partnerships between the public and private sectors will be essential to drive deployment and ensure equitable access to high-speed connectivity for all." The SAMENA Council concluded by reaffirming its commitment to advancing the FWA agenda through its strategic initiatives, including the ELITE FWA Club, and by encouraging deeper engagement between industry players, regulators, and technology providers. The Council also recognized and presented "Excellence" shields to key stakeholders from the operator, technology, and regulatory domains that have made strong progress in enabling FWA deployment.

The Council also recognized and presented "Excellence" shields to key stakeholders from the operator, technology, and regulatory domains that have made strong progress in enabling FWA deployment.

Excellence Recognition in Enabling FWA Deployment

- **TDRA**
  Excellence in Enabling Fixed Wireless Access Deployment
- **du**
  Excellence in 5G-Advanced Enabled FWA Experience
- **Zain KSA**
  Excellence in FWA Business Provisioning
- **stc KSA**
  Excellence in High-Value FWA Connections
- **stc Kuwait**
  Excellence in Quality FWA User Experience
- **stc Bahrain**
  Excellence in FWA Experience Management
- **Omantel**
  Excellence in FWA VAS Innovation
- **mobicom**
  Excellence in FWA Leading in Central Asia
- **Huawei**
  Excellence in FWA Technology Delivery Across Regions

Abhinav Purohit
Chief Expert, Business & Strategy Consulting
Huawei Middle East & Central Asia

From Connectivity to Capability: How 5G FWA is Powering National Digital Transformation

In today's digital economy, broadband access is no longer just a utility – it's a strategic enabler of national productivity, social inclusion and economic diversification. For nations across the Middle East and Central Asia (ME&CA) region, the transition from connectivity-as-a-service to connectivity-as-a-platform is underway. Central to this transition is 5G Fixed Wireless Access (FWA) – a relatively under-publicized but powerful lever that many governments and operators are using to accelerate digital transformation.

Unlike traditional fiber roll-outs, which are capital-intensive, time-consuming and often constrained by physical infrastructure bottlenecks, 5G FWA offers a more agile path: high-speed broadband delivered over 5G radio networks, often with installation times measured in days rather than weeks / months, and with far fewer trenches and disruptions in suburban, semi-urban or even rural zones. That agility is a game-changer in markets where government digital agendas, smart city programs and SME digitalization strategies demand fast results.

In the ME&CA region, where many governments are pursuing rapid economic diversification (in part to reduce reliance on oil & gas), raise inclusion, advance e-government, education and health systems, and build new digital industries, 5G FWA has emerged as a catalyst. With FWA, household broadband speeds go up, new digital services become viable, and underserved regions gain access to connectivity that previously would have required expensive fiber infrastructure.

The Middle East and Central Asia (ME&CA) region is entering a defining decade of digital transformation – and 5G, especially 5G Fixed Wireless Access (FWA), is emerging as one of the region's most powerful catalysts.

Moreover, as the next generation of 5G-Advanced (5G-A) moves into view, the infrastructure built for 5G FWA becomes the foundation not only for fixed-home broadband but also for enterprise connectivity, private networks, IoT and cloud-native services that underpin Industry 4.0.

Key Advantages of Fired Wireless Access (FWA)

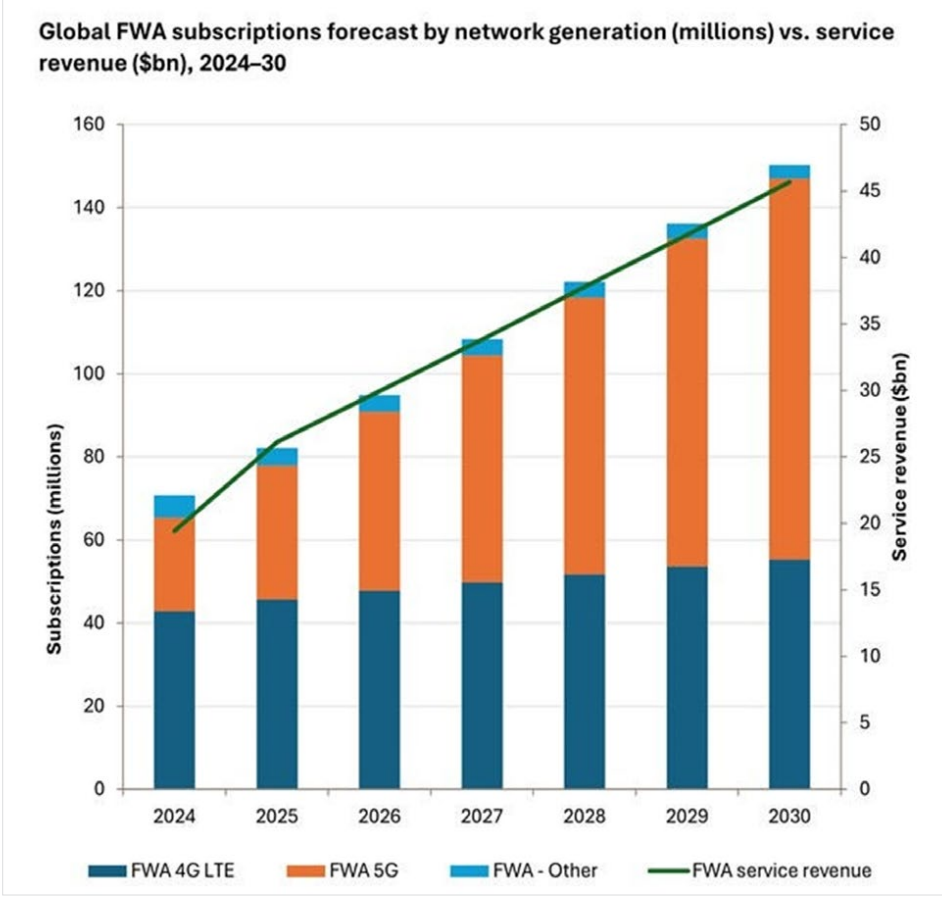
Source: Aircom

In summary: 5G FWA is not just about 'more homes connected' – it is about enabling a transformation of how citizens engage digitally, how enterprises operate, and how national economies evolve. This article explores that transformation in some of the region's leading and emerging markets: the UAE and Saudi Arabia (deep dives), plus Kuwait, Qatar, Uzbekistan, Kazakhstan and Mongolia. It highlights how telcos and ICT players are working alongside government programs, the measurable outcomes achieved so far, and the lessons for nations as they accelerate their digital journeys.

Importance of 5G FWA for National Digital Agendas
There are three key aspects by which 5G FWA drives national digital transformation.

1. **Accelerating Broadband Access and Inclusion**
   In many markets, the last-mile broadband access remains the bottleneck for inclusion of suburban, new town, rural or industrial zones. 5G FWA sidesteps much of the trenching, cabling and civil works that traditional broadband needs – by using 5G mobile & radio networks connecting directly and wirelessly to CPE (customer premise equipment). This means broadband services can go live in a very short span of time, opening up new service opportunities, such as online education, tele-health, digital enterprise services and home-working possibilities much sooner – than possible in traditional fixed line broadband connections. Industry forecasts show that FWA connections are set to exceed 460 million by 2030 and 5G FWA will have a CAGR of 54% between 2022 and 2030.

5G FWA Globally Subscriptions Forecast to More than Double by 2030



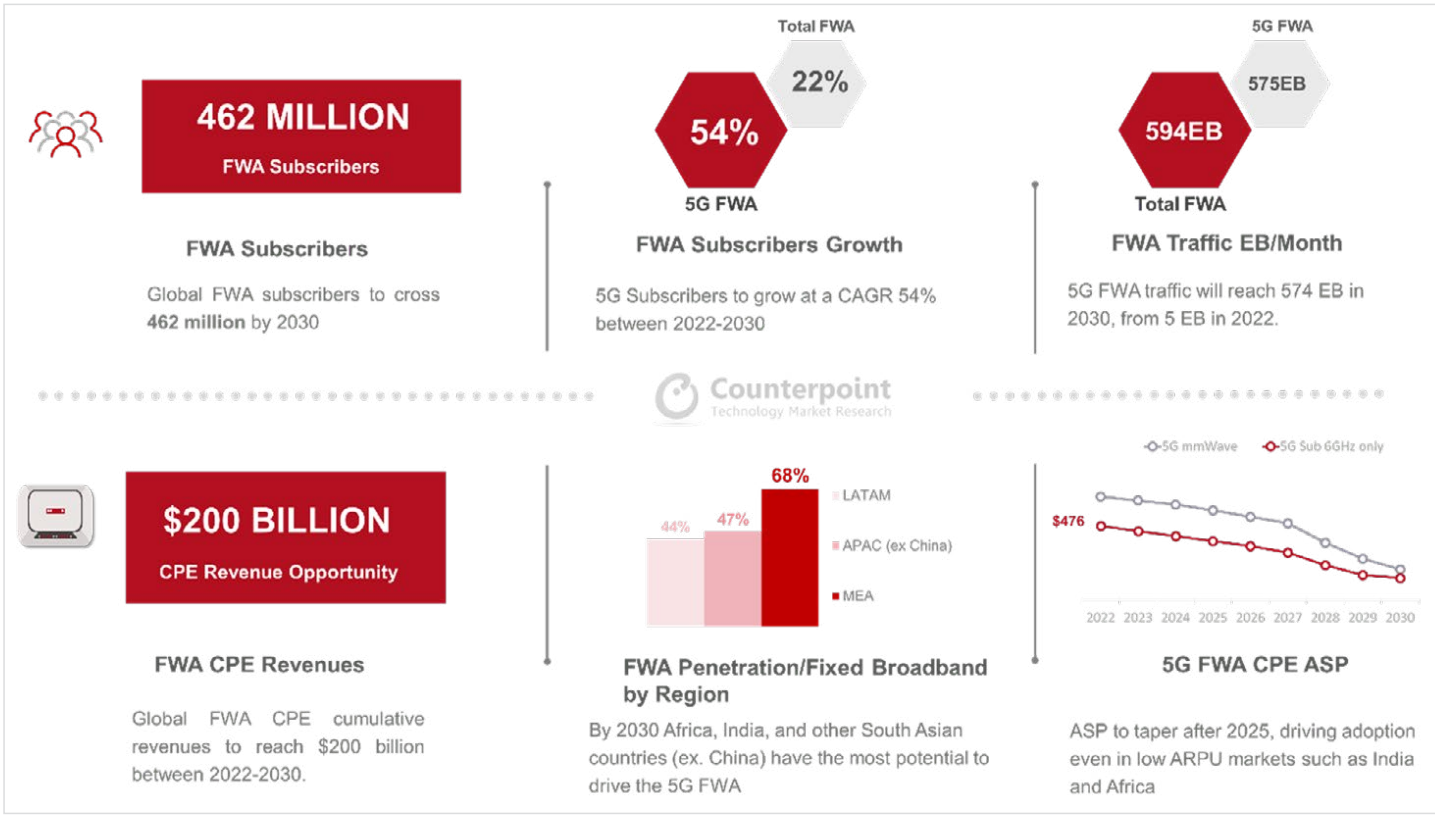
Source: Telecoms.Com

Enterprise FWA

Source: Telco.Com

2. **Providing a Platform for New Digital Services**
   Once high-speed access is delivered, the next step is monetizing digital services – bundling education platforms, cloud gaming, telemedicine, SME cloud bundles or smart-home services etc. Because 5G FWA offers reliability and high throughput (and increasingly low latency), operators can shift from 'just internet access' to 'digital experience' offers – leading to higher ARPU and higher value for end-users.

5G FWA Global Update: Connecting Next Half Billion Households



Source: Counter Point Research

For example,
research shows FWA can raise ARPU by 3-5 times for home broadband when paired with value-added services.

3. **Enabling Enterprise and industry Digitalization at Scale**
   Beyond homes, 5G FWA is a gateway to enterprise connectivity, IoT, private networks and edge-cloud services. In less fiber-dense regions, enterprises can deploy private or hybrid 5G FWA instead of waiting for fiber. This supports automation, remote monitoring, smart logistics and digital health infrastructure. In short: 5G FWA becomes infrastructure for digital industry, not just consumer connectivity. Together, this builds a virtuous cycle: faster, more affordable broadband that leads to richer digital services, a higher uptake and digital participation and this an economic and social transformation and GDP Boost.

FWA Enables 'Digital Services'

Source: Telecom TV

ME&CA FWA Landscape: Gathering Momentum, Capitalizing Opportunity
The ME&CA region is moving fast. Recent industry reports project that in the Middle East & Africa region, 5G subscriptions will rise significantly in the coming years, and FWA will play an increasingly large role. For example, one study estimates FWA subscriptions in the MEA region will grow from 19 million in 2024 to 27 million by 2029, with 5G FWA adoption rising from 11% to 38%. The same study indicates that in GCC countries, as many as 93 % of FWA connections will run on 5G by 2029.

The Middle East FWA market size is estimated at USD 6.16 billion in 2025, and is expected to reach USD 11.66 billion by 2030, at a CAGR of 13.62%

FWA Could Boost UK Economy to the Tune of GBP 4 billion by 2030

Wireless Contribution	Impact	Policy Implication
Advancement of service to rural areas	Advance gigabit services to 1.8 million homes by an average of 3 years. Benefit > **GBP 3 billion.**	Accelerated planning, noting potential to remove and redeploy infrastructure as fibre emerges.
Extending benefit to remote areas	Reduce costs to hard-to-reach premises and provide consumers with choice and savings over competitors such as satellite. Total savings **GBP 29 million** a year	Ensure technology neutrality in Project Gigabit – so that FWA is competing fairly.
Working with fibre to deliver gigabit service	Saving public purse **GBP 1 billion** in future phases of Project Gigabit.	Prioritise value for money in Project Gigabit, by using wireless deployments to build markets and de-risk investment.
Promoting competition	Giving consumers a choice will lead to better tariffs and better services, benefiting consumers by **GBP 337 million** a year.	Consider fostering a competitive environment that allows for such potential cost savings, ultimately benefiting the end-users.

Source: The Role Of Wireless Networks In Enhancing Digital Connectivity In The UK (Sep 2024)

during the forecast period (2025-2030).

These numbers show the scale of the opportunity. For governments, that means broadband inclusion and enterprise digitalization programs can be delivered faster, with lower cost per home or enterprise connected, leveraging 5G FWA as the medium.

However, the region is not uniform. The GCC states typically have high GDP per capita, compact populations and strong digital programs, making them early adopters. Central Asian markets are more varied, often with larger geographies, dispersed populations, and different investment dynamics – but here too, 5G FWA offers the possibility of leap-frogging older fixed broadband models.

du UAE Ookla Award: Demonstrating Winning Strategies in 5G FWA Globally

du Ranks Among Global 5G FWA Leaders

Posted on October 8, 2025 3 min Read

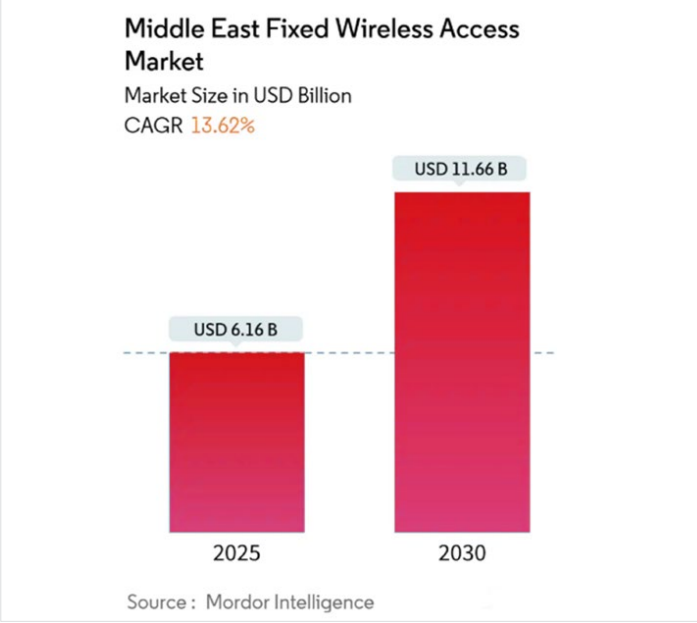
du, the leading telecom and digital services provider, has been recognized by Ookla, the global leader in network intelligence and connectivity insights, as one of three operators worldwide demonstrating winning strategies in 5G fixed wireless access (FWA).

Source: Telecom Review

1. United Arab Emirates (UAE)

The UAE is often described as one of the world's fastest growing 5G countries, and its national digital transformation agenda is ambitious. The combination of strong government policy, operator investment and ICT ecosystem makes it a lab for how 5G and 5G FWA can support broader digital ambitions.

Middle East FWA Market Size (2025-30)

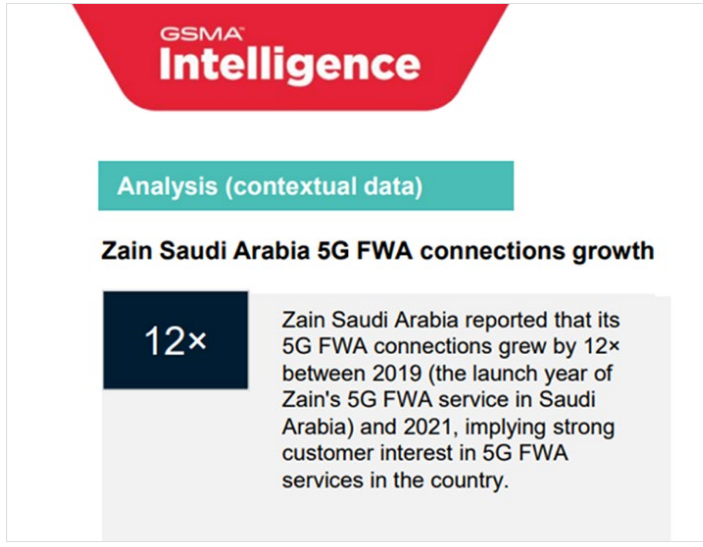


Source: Mordor Intelligence

In the UAE, both operators (Etisalat UAE by e& and du) have made 5G and FWA a key component of their home-broadband strategy. For example, du reported that its FWA segment recorded an 18% year-on-year increase in 2024 and that 70 % of its mobile & FWA traffic now runs over its 5G infrastructure. That demonstrates how consumer broadband via FWA is starting to move meaningfully onto 5G networks.

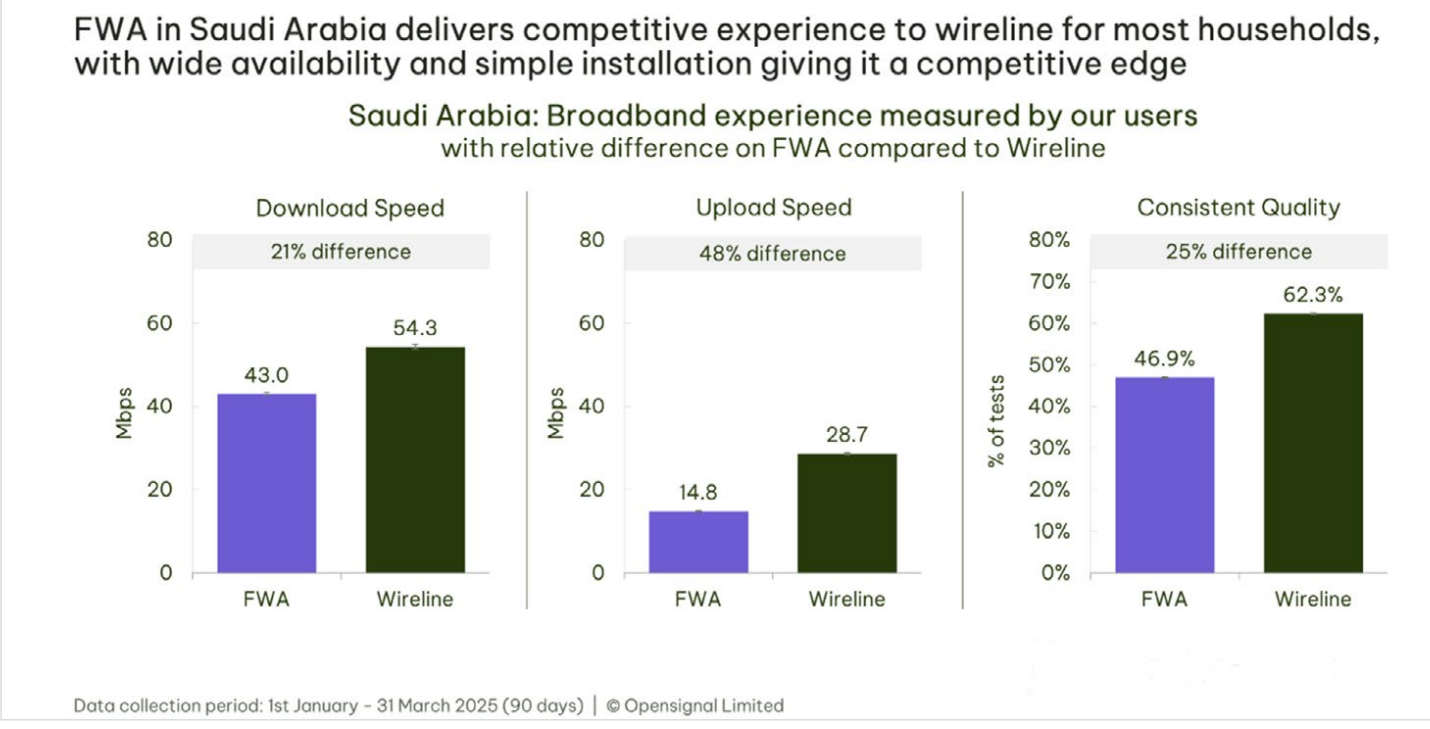
du's FWA strategy extends beyond current achievements, with the operator targeting an increase in broadband market share to 40% by 2027. This ambitious goal is supported by continued network investments, the introduction of specialized consumer and enterprise products and next-generation technologies like 5G-A. The operator's hybrid approach, combining fiber and FWA solutions, mirrors successful strategies employed by global leaders and demonstrates du's understanding of diverse customer needs and market dynamics.

Zain KSA: 5G FWA at the Centre of its 5G Business Strategy



Source: GSMA

KSA: Broadband Experience on Wireline vs FWA (March 2025)



Source: OpenSignal

The UAE case shows how a compact, digitally-minded country can use 5G FWA to raise the baseline of broadband access, support government digital-services delivery (education, health, library, remote working), create converged consumer offers and accelerate digital inclusion. From an operator perspective, the FWA business becomes a growth engine in an otherwise saturating mobile market.

2. Kingdom of Saudi Arabia (KSA)

Saudi Arabia, under its "Vision 2030" mandate, is seeking major economic diversification, enhanced digital services for citizens, increased SME productivity and industrial digitalization. In such a context, 5G FWA is not just a nice-to-have – it is a key infrastructure, underpinning enablement.

Saudi Arabia has established a robust platform for delivering mass-market next-generation fixed wireless access. FWA already accounts for around 20% of broadband connections in Saudi Arabia – one of the highest proportions globally, underlining rapid uptake. FWA users experience average download speeds of 43 Mbps, compared to 54.3 Mbps on wireline (March 2025) – reflecting a modest 21% performance gap.

A key enabler of this rapid FWA growth has been Saudi Arabia's generous spectrum policy. Following the 2024 spectrum auction, the Communications, Space and Technology Commission (CST) released a total of 1400 MHz spectrum– spanning the sub-6GHz range – the highest allocation among the G20 countries. To drive meaningful deployment, the CST imposed strict coverage and Quality of Service (QoS) obligations. This acts as an additional lever on participating networks to fully utilize their available spectrum bands and has motivated the operators to enjoy a period of rapid growth and revenue diversification.

As 5G FWA scales, it supports Saudi Arabia's digital agenda in several dimensions. It promotes higher household connectivity – that leads to higher broadband speeds, and remote-working & learning is enabled even in less dense / semi-urban areas. Further, by making broadband simpler & quicker to deploy, it is motivating SMEs / enterprises to migrate to new technologies such as to cloud, SaaS, digital workflows etc.

3. Kazakhstan

Kazakhstan was one of the first countries in the Central Asia Region to launch 5G. In 2023, Kazakhstan officially entered the 5G era, with Tele2 becoming the first operator to commercially launch 5G services, followed by Kcell.

Fixed broadband in Kazakhstan is relatively mature in urban areas, with widespread fiber-to-the-home (FTTH) availability. However, semi-urban and rural regions remain underserved, due to geographic constraints (e.g., mountainous terrain) and the high cost of fiber rollout in sparsely populated areas. This presented an ideal opportunity for 5G FWA to act as a complementary broadband solution – bridging coverage gaps and delivering high-speed internet where fiber is unavailable.

The "Digital Kazakhstan" program explicitly aims to eliminate the digital divide between urban and rural areas, with 5G FWA identified as a key technology to achieve this goal.

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It is in this context that Tele2 launched its FWA offerings. Tele2's 5G FWA initiative was aimed primarily at households in underserved areas, particularly where legacy copper networks or weak mobile coverage impacted quality of service. These users were typically price-sensitive but increasingly demanding in terms of speed and digital services, including streaming, remote work, and e-learning.

The 5G FWA initiative by Tele2 represents a collaborative success, delivering substantial achievements across market leadership, customer adoption, network expansion planning, and digital capability enablement. A major focus was placed on the user's experience of trying immersive services, particularly in high-footfall locations. Dedicated 5G demo areas were created to allow potential customers to see, touch, and experience the FWA product. Visual storytelling, interactive displays, and trained specialists helped bridge the awareness gap and boost confidence.

Digitize Kazakhstan Gives a Much-Needed Boost to the ICT & Telco Sectors

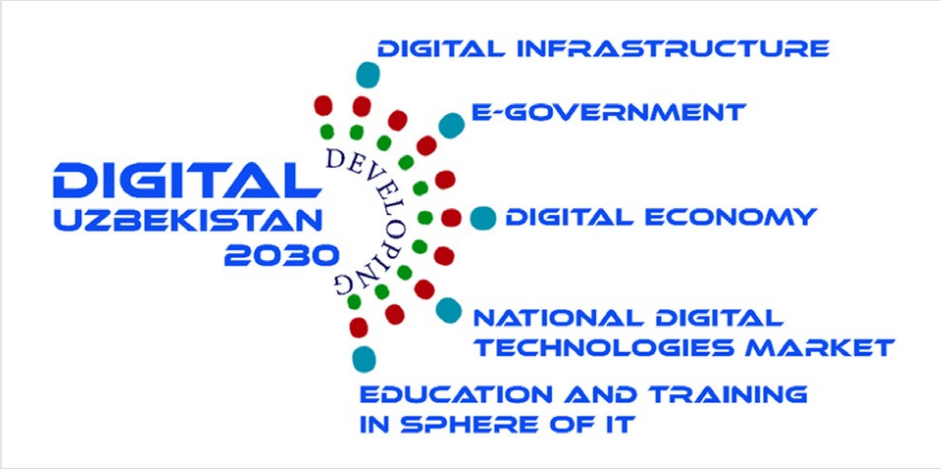
DIGITAL KAZAKHSTAN

"Digital Kazakhstan" state program

The government has launched the "Digital Kazakhstan" program aimed at improving the country's digital infrastructure.

Source: E-government Kazakhstan

The Priority Directions of "Digital Uzbekistan 2030" Strategy



Source: Digital Uzbekistan 2030

As 5G networks expand and mature, FWA is poised to become a crucial solution for extending reliable and high-speed broadband to homes across Kazakhstan, especially in regions where laying physical cables is not feasible.

4. Uzbekistan

In 2023, Uzbekistan implemented its 'Uzbekistan 2030 Strategy' – focusing on national development roadmap with a core goal of transforming the country into an upper-middle-income and economically & technologically developed nation. A key component of this is the "Digital Uzbekistan 2030" strategy, which – among other things – actively promotes the use of FWA to expand broadband internet connectivity. Towards this, telecom operators need to provide the Internet to all settlements of Uzbekistan and increase the speed of access by 10 times. The coverage of optical fiber lines and broadband access should be brought to 100%.

FWA is proving to be a great support to realize these aims. In Uzbekistan, more than half of the population lives in villages and in hard-to-reach areas. At the same time, the terrain of the country is mainly flat, which allows the signal from base stations to be freely distributed over long distances. As a result, the demand for 5G FWA services is increasing.

Key Take Away for Governments and Telcos for FWA Planning & Roll-Out

From the examples of these countries, several lessons emerge for nations and telecom operators aiming to deploy 5G FWA as part of digital transformation program:

1. Align with National Digital strategy
   Countries where FWA is aligned to national digital strategies (such as in both UAE and KSA – where 5G FWA is aligned with national digital agendas) witness rapid and sustainable take up. This is because a national alignment ensures regulatory support, spectrum provisioning, and overarching infrastructure planning support. As more and more telcos align to their respective national digital agenda's – FWA will get an even bigger boast in the region.
2. Start Implementations First within the High RoI Zones
   From an implementation perspective, to begin with, telcos must focus their FWA efforts on suburban / new area, SME clusters or green-field developments where fiber is not available and will take long to be deployed. This drives early wins and measurable improvements and motivates the telcos to continue onwards on the FWA path.
3. Plan Ahead for the Enterprise Take Up & 5G-Advanced (5G-A)
   While consumer FWA is already scaling, the next wave is enterprise, industry verticals and private networks (5G-A, network slicing, edge-cloud etc.). The infrastructure built today for consumer FWA becomes tomorrow's enterprise platform. Operators must consider up-coming needs such as slicing, automation and industry-specific solutions as part of their future roll-outs and expansion plans.

Conclusion

In the Middle East and Central Asia region, digital transformation is not a future vision – it's happening now. The interplay of government ambition (broadband goals, digital services, enterprise focus etc.), operator investment (5G network roll-out, FWA offerings, digital services' bundling etc.) and technology enablers (cloud-ecosystem, partnerships etc.) is creating a sea change in how connectivity translates into productivity, inclusion and economic value.

5G FWA has emerged as a pivotal enabler in this journey. It offers speed, deployment agility and cost-effectiveness in markets where fiber roll-out alone cannot meet the pace of demand or the need for inclusion.

Ultimately, the telcos, governments and ICT partners that succeed will be those that treat connectivity not just as pipes, but as platforms – platforms for digital inclusion, productivity, social impact and economic diversification. In a region where the pace of change is accelerating and the stakes are high, 5G FWA is proving to be one of the most effective catalysts of national digital transformation.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5G-Enabled FWA CPE Shipments Form Majority in 4 out of 7 Global Regions

The fixed wireless access (FWA) market has become one of the most interesting and potentially lucrative sectors in the mobile industry and the annual study by the Global mobile Suppliers Association (GSA) has confirmed the momentum and scale of 5G in the sector, with increased adoption and uptake of 5G FWA across all continents, enabling operators to unlock new broadband service opportunities.

The results revealed that FWA customer premises equipment (CPE) suppliers expect shipments to accelerate, growing 26% in 2025 to reach 35.3 million units. Reported 2024 total CPE shipments were 28 million, a 22% increase compared to 2023. Globally, 5G FWA is increasingly the norm with, for the first time, over half the world – four out of seven regions – reporting that over 50% of FWA CPE shipments in 2024 were 5G-enabled.

This marked a significant change since the similar survey in 2024 where only the US and India reported 5G-enabled FWA CPE shipments of over 50%. Currently, 5G is also in the majority in China and the rest of Asia-Pacific (RoAPAC), with North America and India now reporting share of 5G CPE shipments at 93% and 92% respectively. The Asia-Pacific region accounted for 35% of 5G CPE 2024 shipments, followed by the Middle East and Africa region at 30%.

5G-enabled FWA shipments are now established as the mainstream globally, reaching 16.8 million in 2024. The study predicted that growth will continue, with consolidated shipments of the representative cross-section of FWA CPE suppliers surveyed expected to grow to 20.1 million in 2025, a 19% increase – accounting for 57% of 2025 shipments and compared with 60% in 2024. On top of the continuous wider adoption of 5G FWA by operators globally, the

GSA expects several market developments will also contribute to this growth.

FWA supporting 5G standalone (SA) adoption stood at 95% of 5G CPE shipments in 2024. 5G SA-enabled CPE shipments are expected to grow 11% to 17.7 million in 2025, compared with 16 million in 2024.

In another key example, mmWave-capable 5G CPE shipments are expected to grow to over one million in the same period – representing 47% year-on-year growth – while the survey also reveals 41% of suppliers expect to introduce a 5G RedCap-capable FWA product in 2025.

The majority of FWA CPE shipments in 2024 were integrated indoor CPE (54%), followed by battery-operated hotspots (33%) and outdoor CPE (13%), while 58% of the outdoor CPE were flexible self-install indoor/outdoor CPEs.

Commenting on the study results, John Yazlle, vice-chairman of the GSA 4G-5G FWA Forum, said the trends displayed were not only encouraging news for the health of the FWA supplier ecosystem but, with more spectrum becoming available and the evolution of 5G networks to 5G-Advanced on the horizon, also clear evidence that the partnership between FWA CPE suppliers was working.

"Today, the majority of vendors believe that the main benefit of AI [artificial intelligence] capabilities for 5G FWA CPE lies in improved 5G connectivity performance and experience," he said.

"Millimetre-wave is proving its value across a range of broadband use cases, from dense residential areas, targeted enterprise deployments to closing digital divide in rural areas, and 5G RedCap is emerging as a viable complementary option for FWA in markets transitioning away from LTE. Operators can continue to drive global growth through innovation."

Data for the GSA 4G-5G Fixed Wireless Access Forum survey was collected between April and July 2025. Participants in the survey included: Asiatelco Technologies Co, Askey, AVM, BEC Technologies, Da Ta Technologies, Gemtek, GreenPacket, Huawei, Jaton Technology, MeiG Smart Technology, Nokia, Shenzhen Jointelli, SMAWave, Tozed Kangwei, Vantiva, WNC and YaoJin Technology.

5G Fixed Wireless Access to Reach 150 Million Subscriptions Globally by 2030, Omdia Forecasts

Global 5G Fixed Wireless Access (FWA) subscriptions are set to more than double by 2030, according Omdia's latest report, 5G FWA Go-to-Market Strategies – 2025. The research highlights strong momentum across key markets led by India and the United States and identifies FWA as the fastest-growing broadband access technology.

Omdia forecasts global FWA subscriptions to grow from 71 million in 2024 to 150 million by 2030, accounting for 88% of total connections. The 5G FWA segment is projected to expand at a 23% CAGR, driving total FWA service revenues to $46 billion by 2030, as premium 5G offerings capture a larger share of the market.

"Tier 1 operators must evolve beyond legacy deployment models and embrace segmentation, bundling, and AI-driven personalization to monetize 5G FWA effectively," said Nicole McCormick, Chief Analyst at Omdia.

Regional Growth Highlights

India is set to become the largest 5G FWA market by 2030, reaching 37 million subscriptions, representing 40% of global share and fueled by Reliance Jio's aggressive rollout, supported by AI and digital twin technologies.

The United States will remain a key market, reaching 20 million subscriptions, as operators expand their broadband footprint through diversified FWA offerings.

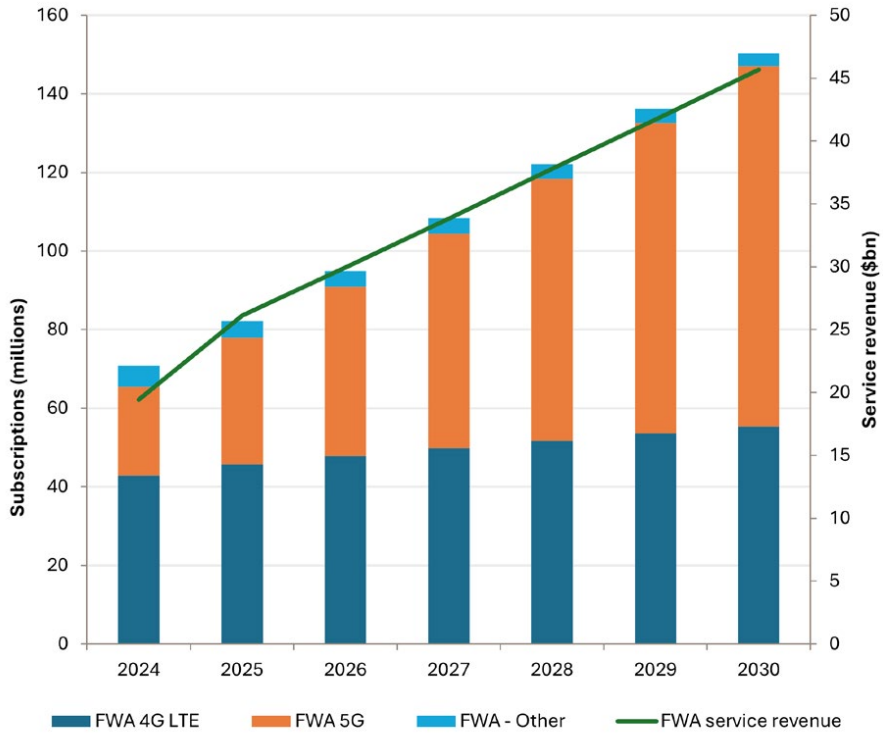
Nigeria, Italy, and Japan are expected to join India and the US as the top five 5G FWA markets by 2030.

Central & Southern Asia, Africa, and Latin America are emerging as high-growth regions, supported by falling CPE prices and innovative bundling strategies.

The report also notes Quality of Experience (QoE) is becoming a critical differentiator in 5G FWA offerings. Tier 1 operators are increasingly upselling based on service reliability, latency, and user-specific performance - particularly for gamers, remote workers, and video streamers - rather than relying solely on speed.

Omdia's report finds 5G FWA will surpass 4G FWA by 2027 and is on track to overtake DSL as the world's third-largest broadband technology. With cable modem subscriptions expected to decline, FWA is positioned to become the second most common broadband access technology post-2030.

Global FWA subscriptions forecast by network generation (millions) vs. service revenue ($bn), 2024–30



Note: FWA - Other includes proprietary FWA and WiMax
Source: Omdia

Aviat Networks, Intracom Telecom Expand 5G Use Cases with Fixed Wireless Access

Aviat Networks, the expert in wireless transport and access solutions, announced a partnership with Intracom Telecom, a global technology systems and solutions provider, to deliver Fixed Wireless Access (FWA) technology that leverages the high-capacity 28 and 39 GHz millimeter wave (mmWave) bands, conforming to FCC requirements for mmWave bands intended for 5G use.

Aviat will initially focus on select North American service providers to address the growing need for multi-Gigabit consumer and enterprise 5G use cases as an alternative to the high cost, delays and complexity of using fiber, but with fiber-like performance.

In addition, Aviat will offer software solutions along with a comprehensive set of design, planning, deployment and support services thanks to its extensive presence in North America.

Intracom Telecom's WiBAS G5 platform is the only commercially available point-to-multipoint FWA solution operating in the 28 and 39 GHz mmWave bands that can address the growing demand for high-capacity Fixed Wireless Access, cost effectively delivering over 22Gbps from the same base station site, using Multi-User MIMO and Hybrid Massive Beamforming, over distances of up to 5 miles and more.

Pete Smith, CEO of Aviat Networks
We are very excited at this significant opportunity to extend our wireless expertise to provide advanced mmWave FWA solutions. Wireless can be deployed rapidly and cost effectively, and is perfectly suited to support high speed connectivity combined with excellent reliability
Kartlos Edilashvili, CEO of Intracom Telecom
I am very proud of Intracom Telecom's R&D team for creating a solution that sets a new benchmark for FWA. Through this strategic partnership with Aviat Networks, we're excited to help U.S. operators accelerate broadband expansion and deliver a true multi-gigabit experience, and more, over wireless.

Inseego Redefines Enterprise 5G Fixed Wireless Access (FWA) with the FX4200 Cellular Router and Inseego Connect SaaS

Inseego Corp. (Nasdaq: INSG), a global leader in 5G mobile broadband and 5G fixed wireless access (FWA) solutions, introduced a new approach to enterprise FWA with a completely new 5G hardware platform, the Inseego® Wavemaker FX4200, and updated software suite, Inseego Connect. Designed to bridge the gap between performance and ease-of-use for enterprise wireless networks, this innovative approach to FWA pairs the power and functionality of enterprise network solutions with the simplicity and ease-of-management of small- and medium-sized (SMB)-oriented solutions.

"In order to take advantage of the power of 5G for business, organizations have been forced to choose between feature-heavy solutions that can be complicated and expensive to deploy, and simplistic products that can't scale or meet business needs," said Juho Sarvikas, CEO of Inseego. "With the FX4200, X700 mesh Wi-Fi, and the innovative Inseego Connect software, we're eliminating that tradeoff. We've built the solution that the market has been asking for, and it will propel growth in FWA and 5G use in business."

Bridging a Market Gap
IT leaders face a clear gap between advanced, overbuilt solutions that are difficult to deploy and manage, and low-end consumer products that lack manageability and security. Inseego bridges this divide with a full-stack wireless platform combining carrier-grade performance, enterprise security, and zero-touch setup that any business can deploy.

Ideal for locations without dedicated IT resources, the new Inseego solution provides an enterprise-class performance for small- and medium-sized enterprises (SMEs), retail locations, restaurants, branch offices, temporary locations such as pop-ups and kiosks, as well as government offices.

FX4200: Enterprise Power, Simplified
Built on the Qualcomm Dragonwing™ FWA Gen 3 platform, the Inseego Wavemaker FX4200 combines multi-gigabit 5G performance with built-in intelligence and manageability.

Key capabilities include:
- 5G SA and NSA support with dual-SIM and network slicing
- Wi-Fi 7 connectivity for up to 256 clients, with optional X700 Mesh nodes
- Automatic failover/failback across cellular and wired WAN for uninterrupted service
- Integrated battery makes it easy to locate the optimal 5G signal and provides power resilience
- Enterprise security with FIPS 140-3 compliance, VPN, zero-touch setup, built-in speed test, and on-device display
- Certified by major US carriers and supported with single image firmware
- Integrated antennas and SMA ports for external antennas
- Advanced routing stack with policy control for enterprise and MSP environments
- Full cloud visibility and control via Inseego Connect, with APIs and remote management

Inseego Connect: Tailored for simplicity and manageability
Alongside the FX4200, Inseego has updated their management suite to meet the diverse needs of carriers, MSPs, VARs, and small businesses. For example, the cloud management platform is able to handle multi-tenant networks for MSPs and larger enterprises, while the mobile app has been redesigned to walk non-technical users through deployment, making it easy to scale to large numbers of small deployments.

- Centralized cloud management for configuration, monitoring, and mass device control
- Network topology view to visualize connected clients, mesh nodes, and signal quality
- Zero-touch provisioning for rapid, consistent deployments
- Flexible APIs for integration with SSP and MSP systems
- Remote CLI access and speed test with historical results
- Configuration summary dashboard for unified visibility
- Redesigned mobile app for guided installation and on-the-go management

Together, the FX4200 and Inseego Connect deliver a full-stack wireless solution that scales from a single site to enterprise-wide networks, without the friction of managing complicated subscriptions or the cost

of unnecessary functionality.

Built for Partners, Built for Growth
Inseego will make the FX4200 available through a variety of channels, helping them expand their addressable market with a business-ready solution. Paired with Inseego Connect, Inseego provides service provider and reseller partners with cloud-based management and mobile app support which allows them to manage the end-to-end deployment of thousands of wireless devices across a diverse set of use cases.
For Carriers, the FX4200 expands portfolio coverage with a managed SMB-ready FWA solution that fills the gap between consumer devices and enterprise routers allowing them to expand business activations
For VARs and MSPs, the FX4200 creates new service opportunities with a right-sized feature set, extensible Wi-Fi, clean management interface, APIs, and remote visibility that protects margin and simplifies lifecycle management

"The FX4200 hits the sweet spot for enterprises and our partners," said Sarvikas. "It's powerful for business, simple for anyone to deploy, and priced for real-world growth."

A**vailability**
The Inseego FX4200, X700, and Inseego Connect are available now through Inseego's channel partners. Learn more at www.inseego.com/products/5g-indoor-routers/fx4200/

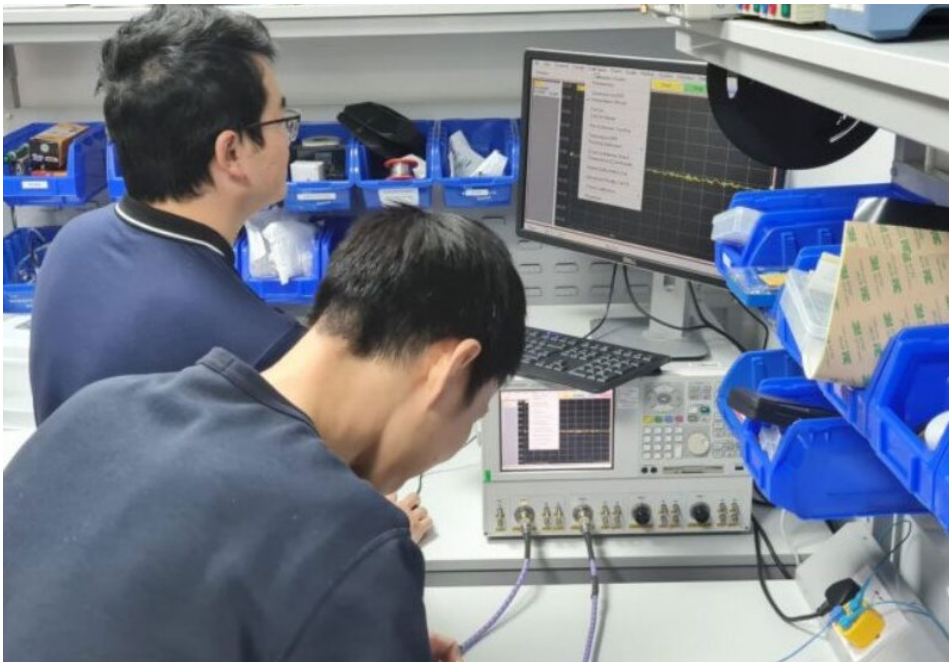
Novocomms 5G mmWave FWA Solution Expands Connectivity

UK-based antenna specialist Novocomms has developed a new 5G mmWave fixed wireless access (FWA) solution designed to deliver fibre-like data rates to rural, maritime, and underserved areas. Backed by the UK government's Small Business Research Initiative (SBRI), the company's customer premises equipment (CPE) device aims to combine higher performance with a significant reduction in production cost.

For eeNews Europe readers, this development may be of interest for designs targeting next-generation FWA deployments where cost, power consumption, and flexible antenna performance are critical to bridging connectivity gaps.

Antenna technology for wider coverage
The new FWA solution is based on Novocomms' patented Metarray multi-beam, multi-polarisation technology. By enabling precise modulation of electromagnetic waves, the antenna system allows for a flexible beam configuration and a wide coverage area of 120° in azimuth and 100° in elevation.

Dr. Sampson Hu commented: "The global market for mmWave CPE devices is expected to reach £12.5 billion by 2028, so this is certainly a high-value segment that is growing rapidly right now. This new product that we have developed with the backing of the SBRI represents a real step forward in performance for the sector, but crucially at a significantly lower cost of production."



According to Novocomms, combining antenna design expertise, component optimisation, and material innovation, such as silicon allows the solution to address limitations in existing products, which are often expensive, power-hungry, or technically constrained.

Performance gains with reduced cost and power
Tests on the Novocomms FR2 CPE indicate support for a frequency range of 24 GHz to 71 GHz, dual linear polarisation, and beam scanning of ±60° in azimuth and ±50° in elevation. Compared with current industry solutions, the device potentially delivers up to 60% lower power consumption and 30% lower cost.

The company positions this balance of performance and efficiency as particularly relevant for operators deploying FWA in rural and hard-to-reach areas where the economics of fibre rollout are challenging. The Novocomms 5G mmWave FWA solution is now moving into pilot deployment, with commercial launch expected in early 2026.

Orex SAI and Surge Start Deploying Open RAN 5G FWA in Indonesia

Orex SAI – the Open RAN joint venture between NTT DoCoMo and NEC – announced its new Indonesian subsidiary has started deploying Open RAN-based 5G fixed wireless access (FWA) 1.4-GHz services across parts of the country with local network service provider Solusi Sinergi Digital (Surge).

Orex SAI and Surge said they have completed joint preparations for commercial deployment – including technology demonstrations and lab trials – that have been underway since they signed a comprehensive agreement in March.

Orex SAI established local subsidiary Orex SAI Indonesia in June to lead local operations and develop a locally type-approved 1.4-GHz radio unit for the 5G FWA project, incorporating Open RAN and 5G core technology from NEC.

Under the current plan, Surge will assign up to 4,800 base stations to Orex SAI for the initial deployment phase in 2026, including network equipment and services required to build the FWA infrastructure. Orex SAI said the resulting network will be the world's first commercial Open RAN 1.4-GHz 5G FWA system.

Indonesia's Ministry of Communication and Digital (Komdigi) auctioned off 1.4-GHz spectrum in October for FWA services in hopes of boosting home broadband takeup, which in Indonesia is among the lowest in ASEAN due to high deployment costs.

Surge acquired spectrum in that auction for Region 1, which includes Jakarta, Papua and Maluku. Eka Mas Republik (which owns MyRepublic) won FWA spectrum for all other regions in the country.

Surge plans to offer flat-rate 5G FWA services priced at around IDR100,000 (US$6.00) a month, providing speeds of up to 100 Mbps with no data cap and free installation.

"Our goal is to deliver affordable and high-speed Internet that enables ubiquitous connectivity across Indonesia," said Yune Marketatmo, president director of Surge, in a statement.

Meanwhile, Pratama has already signed agreements with 26 local distributors as part of the initial go-to-market plan for areas within Region I, which Pratama president director Shannedy Ong said "ensures that broadband connectivity reaches households quickly and efficiently."

Surge and Orex SAI said they have leveraged programmes from Japan's Ministry of Internal Affairs and Communications and Ministry of Economy, Trade and Industry to help fund preparations for the rollout. A report from Asia Nikkei earlier this month valued the Surge/Orex SAI deal at US$200 million.

Verizon Accelerates Fixed Wireless Broadband Expansion with Acquisition of Starry

Verizon Communications Inc. (NYSE, Nasdaq: VZ) announced a definitive agreement to acquire Starry, a leading provider of next-generation fixed wireless broadband services. This strategic acquisition advances Verizon's differentiated ability to deliver high-speed internet to multi-dwelling units (MDUs) and urban communities, leveraging Starry's innovative millimeter wave technology.

"As the #1 mobility provider, Verizon's acquisition of Starry is another step to extend our leadership in mobility and broadband," said Joe Russo, EVP and President, Global Networks and Technology, Verizon. "Starry has demonstrated a unique and efficient approach to delivering high-speed internet in complex MDU environments. By integrating their technology and expertise, we will accelerate our fixed wireless access capabilities, giving millions of new customers a powerful and affordable broadband option. This architecture is less expensive to build, quicker to deploy, and uniquely addresses the complexities of urban settings where we can leverage our existing fiber and mmWave assets." This strategic acquisition advances Verizon's differentiated ability to deliver high-speed internet to multi-dwelling units (MDUs) and urban communities, leveraging Starry's innovative millimeter wave technology and established market presence. Verizon is uniquely positioned to accelerate this expansion because of its significant fiber backbone and extensive holdings of mmWave spectrum, which are essential for providing the high capacity and ultra-fast speeds required to serve dense urban environments and apartment complexes. Starry currently serves nearly 100k MDU customers in five markets: Boston, New York, Los Angeles, Denver, and Washington, D.C., and its MDU network provides a significant opportunity to expand Verizon's FWA footprint. Starry has a Net Promoter Score (NPS) that is nearly double the industry average.

The acquisition is expected to close by first-quarter 2026, subject to FCC approval and other customary closing conditions.

Nokia Partners with Surge to bring Affordable High-Speed Internet Services to Indonesia

Nokia announced a multi-year partnership with leading Indonesian digital and telecommunications solutions provider, Surge, to enhance the country's internet connectivity through an extensive 5G FWA network deployment in provinces including Java, Papua, and Maluku. The project will support the Indonesian government's digital transformation goals and its 'Affordable Broadband' initiative to bridge the digital divide by bringing connectivity to more citizens. Deployment will start in December 2025.

Nokia will support Surge's efforts to build a large-scale 5G FWA network based on the n50 spectrum band to deliver high-speed, low-latency broadband access to its customers, leveraging Nokia's existing FTTx, IP and Optics infrastructure for backhaul and transport. Nokia has developed a customized, RAN and CPE solution for Surge, specifically for FWA use cases, delivering high-speed, low-latency broadband access, particularly in areas with limited fiber connectivity.

Nokia will also supply equipment from its industry-leading, energy-efficient AirScale Radio Access Network (RAN) portfolio, its latest generation of Nokia AirScale Baseband combined with RRH (Remote Radio Head), and zero-footprint site solutions for unmatched coverage across multiple deployment scenarios. These solutions are powered by Nokia's energy-efficient ReefShark System-on-Chip technology, boosting Surge's network for maximum performance, efficiency, and reliability.

Surge will also benefit from Nokia's intelligent network management system, MantaRay NM, which provides a consolidated network view for optimal monitoring and management. The deal also includes deployment, maintenance, and support services that leverage AI for enhancing performance, efficiency, and safety.
Shannedy Ong, Director at Surge Indonesia commented: "This deal with Nokia gives us a platform to build a unique and best-in-class 5G network ready for the digital world that will bridge the digital divide and bring affordable connectivity to even more people. Digitalization will give our customers the best possible user experience."

Mark Atkinson, Head of Radio Access Networks at Nokia, said: "This significant new partnership will see us work collaboratively to deliver premium connectivity experiences and accelerate the digitalization of society in Indonesia. We have created a unique solution combining our best-in-class technology that directly solves the specific demands of Surge as they deploy 5G connectivity across the country."

Tarana sees more Opportunities Ahead for Urban FWA

Tarana originally made a name for itself deploying fixed wireless access (FWA) in the rural U.S. Now, the company sees potential for the technology to reach new heights in more urban environments.

The company recently launched G2, the next iteration of its FWA platform that offers 6.4 Gbps per sector (that is, the coverage area served by a base station). The increased capacity allows operators to deliver fixed wireless to approximately 2,000 customers per tower, a ratio Tarana CEO Basil Alwan said is ideal for larger ISPs.

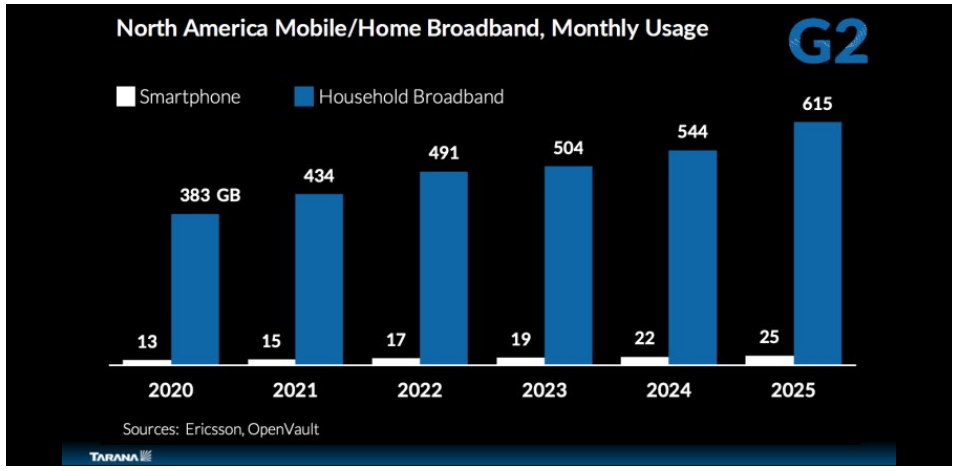
Tarana currently has around 300 operator customers, ranging from regional providers such as Nextlink and Watch Communications to the big names like Cox and USCellular.

"But there's much bigger companies that are coming along and G2 is what they want," Alwan told Fierce. "They want to go after it in the middle of towns, they want to go after Phoenix… we have one company building in San Jose."

FWA usage in metro areas has been steadily climbing in the last few years. An Opensignal report from June 2024 said FWA providers so far have claimed around 6% of urban market share, and a study from WIA estimated FWA has an addressable urban market of 14.6 million households.

But according to Alwan, traditional 5G and Wi-Fi based FWA networks each have their issues when it comes to expanding to denser markets.

"If you talk to the WISPs that have done the rural wireless with Wi-Fi stuff, they'll tell you they never really went into town because they could never get enough density to justify it," he said. "If you put up an access point and you have 10 homes on it, those access points start to self-interfere at 10, 15, 20 points."



5G FWA providers, namely the big 3 mobile network operators (MNOs), have gotten further along in urban penetration by deploying technologies like millimeter wave and standalone (SA) 5G. But the problem is carriers are running out of spectrum that they can allocate specifically to FWA, Alwan noted.

"It's 30 times more bandwidth intensive to serve a home than it is to serve a mobile [device]," he said, citing data on North American monthly usage trends from Ericsson and OpenVault. "If you build a mobile network and start putting homes on it, it quickly consumes all your spectrum and bandwidth."

Tarana's spectrum specs

Tarana's FWA technology uses a combination of unlicensed 5GHz and 6GHz spectrum as well as the licensed Citizen Broadband Radio Services (CBRS) band. Alwan said another key upgrade in G2 is that it supports four-carrier integration across both licensed and unlicensed spectrum, giving operators access to 160MHz across multiple bands in a single radio.

He explained Tarana can do that with its dual-resonant antennas, which are designed to work at two different operating frequencies at the same time. "This gives customers the ability to have a couple of carriers in CBRS, a couple of carriers in 6GHz" to deliver 1.6 Gbps per link, which Alwan noted was a step up from G1's 800 Mbps threshold.

In short, Tarana is aiming to give operators more options to carry traffic since they won't always have access to the same spectrum across their footprints.

"One way to think about it is you're trying to get from one city to the next, you got four highways to do it," Alwan said. "Four routes, four different frequencies and how fast you can go in each route."

The wireless landscape has become even more complicated now that EchoStar is selling off huge chunks of its spectrum to AT&T and SpaceX. The carve-out has left the industry wondering who could grab the rest of EchoStar's leftovers.

In Alwan's view, EchoStar's remaining Priority Access Licenses (PALs) within the CBRS band "are extremely good for our product." Owners of PALs have higher priority than General Authorized Access (GAA) users, who can only tap into CBRS when it's not being used by incumbents and PAL users.

"It's a great opportunity for anyone in fixed wireless," Alwan noted. "Those things being up for grabs, or whether Dish decides to do something with them, it's amazing."

Broadband Forum: 5G FWA offers Broadband Fix for Multi-Dwelling Units

The Broadband Forum has published a technical report outlining how to address the internet challenges people living in multi-dwelling units (MDUs) still face despite rapidly increased broadband access to premises over the past few years.

The report defined fixed wireless access (FWA) as establishing a connection over a radio link for communications between a base station and user equipment, such as 5G modems, that are typically installed in the apartment.

The Broadband Forum added that for radio frequencies below 6 GHz, a 5G network is suitable to provide broadband services with a high level of coverage. But for gigabit-level or multi-gigabit speeds, broadband service providers want to make use of high-band "frequency range 2" 5G mmWave spectrum at 24-40 GHz. This spectrum range has additional signal attenuation when travelling through walls or building materials, so architectures that employ outdoor CPE devices are favoured to maximise performance.

The research project on which the report was based began in 2023. It fundamentally focused on outlining how multiple tenants and apartments can receive gigabit broadband connectivity through a single 5G FWA connection by reusing a building's existing infrastructure, defining an architecture and requirements for serving multiple tenants in an MDU via FWA through converged and pure 5G network approaches.

The topline finding was that multiple tenants and apartments can share high capacity 5G mmWave links through using existing in-building infrastructure so that delivering 5G broadband to apartment buildings gets simpler, through to a new specification that allows a single 5G Fixed Wireless Access (FWA) modem to deliver high speed connectivity to multiple tenants.

The specification is said to solve challenges prevalent in MDUs, such as the limited availability of service options for subscribers beyond 1Gbps in buildings that lack fibre-based access, and performance or coverage limitations of FWA for individual tenants in large buildings. Technical solutions based on the new standard also allow apartments to be reached using the existing property infrastructure, including twisted pair, telephone wiring, or coaxial cabling, from the attic or basement of the building.

"This publication is a gamechanger for broadband service providers and will ensure that customers, regardless of what type of property they reside in, are served equally when it comes to broadband connectivity," said Mike Talbert, Broadband Forum multi-tenant FWA project stream lead and Wistron NeWeb Corporation senior director of technology.

"By reusing the existing in-building infrastructure, multiple tenants can be served with one 5G FWA connection, and this specification promises more efficient use of 5G resources, simplified and unified management, and reduced operating costs for operators."

Christele Bouchat, Broadband Forum network architecture work area co-director and Nokia strategy and standardisation manager, added: "In the past, restrictions set by property owners or the design of existing MDU buildings have limited the possibilities for making high-capacity broadband services available to these subscribers.

"The latest specification addresses these limitations by allowing the installation of a high-performance 5G outdoor FWA system that can be shared by potentially dozens of tenants and connected through existing cabling already in the building."

Hong Kong FWA Services Market Set for 9.6% Growth

Analysis from GlobalData is forecasting that fixed wireless access (FWA) service revenue in Hong Kong is expected to increase at a "healthy" compound annual growth rate (CAGR) of 9.6% between 2025 and 2030.

The latest Hong Kong Total Fixed Communications Forecast set out to quantify current and future demand and spending on mobile services for the special administrative region of China. It noted that growth was being driven by Hong Kong's extensive 5G network coverage and could also be attributed to local operators' efforts to expand FWA services and position it as an alternative to traditional fibre broadband services for both residential and commercial sectors, meeting growing demand for high-speed connectivity in areas where extending fibre lines is challenging.

"High-density urban and suburban centres of Hong Kong create a strong business case for FWA services due to their cost-effective and rapid deployments without the complex infrastructure and civil work required for extending fibre-optic lines to such locations," said Neha Misra, senior analyst at GlobalData.

"Competitive, feature-rich plans from the operators will also help drive its adoption over the forecast period. For instance, HKBN's 5G Home Broadband Plan provides unlimited 5G broadband data (subject to a 300GB with a fair-usage policy) for HKD118 per month on a 24-month contract, along with a seven-day trial guarantee. The plan also includes a waiver of the HKD28 monthly administration fee and complimentary access to the basic HomeShield security plan."

In addition to HKBN, the study noted that operators such as 3 Hong Kong and HKT are also using their extensive 5G networks to offer home broadband services, particularly in areas with limited fibre infrastructure. It cited HKT as recently having successfully deployed mmWave-based FWA to deliver ultra-high-speed internet to rural areas and outlying islands.

"Growing demand for FWA provides operators a strong revenue opportunity by expanding home and SME broadband without the high capital intensity of fibre roll-out," Misra added. "By leveraging nationwide 5G coverage, introducing competitively priced service plans and bundling digital home services, operators can unlock higher ARPU [average revenue per user], accelerate market penetration in underserved areas and diversify beyond traditional revenues."

GlobalData believes the Hong Kong government's smart city initiatives will also open new opportunities for FWA, especially 5G FWA, which can deliver high-speed internet to power applications such as the digital economy, digital governance and e-health services, while supporting the city's dense urban environment and digital transformation goals under the Smart City Blueprint 2.0.

The original blueprint was set out in December 2017, outlining 76 initiatives under six smart areas, namely Smart Mobility, Smart Living, Smart Environment, Smart People, Smart Government and Smart Economy. Blueprint 2.0 puts forth more than 130 initiatives that continue to enhance and expand existing city management measures and services. The new initiatives aim to bring benefits and convenience to the public so that residents can better perceive the benefits of smart city innovation and technology.

Indonesia's Surge brings Open RAN into its FWA fold

With a spectrum licence now secured for Indonesia's most populated islands, fibre network operator PT Solusi Sinergi Digital Tbk, better known as Surge, is ready to roll out a major 5G fixed wireless access (FWA) network, with Open RAN-focused joint venture Orex SAI now signed up as a major supplier of technology and associated deployment services.

Surge already operates a 6,900km fibre backbone network across Java that connects 58 edge cloud datacentres. It has also rolled out fibre-to-the-premises (FTTP) infrastructure that reaches more than 1.5 million homes, of which 831,000 (55% take-up rate) have signed up for the commercial service. It expects to reach 2.5 million premises by the end of this year and have 1.5 million FTTP customers (which would equate to a 60% take-up rate).

But only a small part of Indonesia is suitable for fixed-line infrastructure due to its terrain: It has a population of more than 280 million people spread across about 6,000 inhabited islands (the country has a total of more than 17,000 islands), many of which have a topography that makes fibre deployment uneconomic.

So Surge, with the support of the Indonesian and Japanese governments, has developed an Affordable Broadband Project plan, the foundation of which is a major 5G FWA network rollout. Surge has been working with multiple vendor partners for tests and trials and now, finally, it has the spectrum licence it needed to be able to push ahead with its plan.

In late October, Indonesia's Ministry of Communication and Digital Affairs (Komdigi) announced the results of its 2025 broadband wireless access (BWA) 1.4 GHz spectrum auction. Surge won the prized Region 1 licence – covering Java, Papua and Maluku, collectively representing more than 60% of Indonesia's total population – with a bid of 403.76bn Indonesian rupiahs ($24m). (Java alone is home to 56.1% of Indonesia's population.)

Region 1 is home to 45 million households, 61% of Indonesia's total 73.9 million homes, according to Surge (other estimates put the total higher).

Region 1 is "Indonesia's most strategic market potential for digital infrastructure… From a household and broadband adoption standpoint, this region represents over 60% of the national broadband potential, making it the most attractive area for the deployment of 1.4 GHz BWA services," according to Surge.

Currently, Indonesia's fixed broadband penetration is very low (about 21%), but it is expected to grow significantly over the next five years, with the national fixed broadband sector forecast to be as large as 40 million homes by 2030.

Surge director Shannedy Ong stated: "Fixed broadband penetration in Indonesia is among the lowest in Southeast Asia. Looking ahead, we expect significant growth over the next five years. The trigger point will be FWA, with a 57% growth rate (2025-30), while FTTH [fibre-to-the-home] will grow around 10%. Our target market, Region 1 (covering Java, Papua and Maluku), is a 'golden zone' with huge potential."

Surge has been preparing for its FWA rollout for about two years, collaborating with the likes of Orex SAI, Huawei, Nokia, Baicells and Fiberhome for the required radio access network (RAN) technology and with Qualcomm and Shanghai, China-based ASR Microelectronics for the customer premises equipment (CPE) wireless chipsets that will receive the broadband signal from the 5G FWA antennas.

Surge is now ready to begin its commercial FWA deployment – using space on more than 50,000 existing cell towers from neutral host operators, such as PT Tower Bersama Infrastructure Tbk (TBIG) and PT Centratama Telekomunikasi Indonesia Tbk (Centratama) – in areas not set to be reached by FTTP coverage. It also plans to launch commercial 5G FWA services in early 2026 with a 100 Mbit/s service for 100,000 Indonesian rupiahs ($5.97) per month for unlimited data usage and free installation and CPE rental.

The operator recently announced a strategic partnership with Huawei for the joint development of the core, RAN and CPE technology needed to reach 5 million premises with FWA services, as well as a multi-year agreement with Qualcomm Technologies for the supply of the Qualcomm Dragonwing FWA platform solutions (comprising modem, RF front-end and Wi-Fi technologies) that will be used in the

CPE products developed for a total addressable FWA services market of up to 25 million households over the next five years.

Open RAN in the mix

Now Surge has also signed a deal with Orex SAI for the provision of 5G Open RAN FWA network equipment (including RAN and 5G core platform technology from NEC) to be deployed at up to 4,800 base stations in the initial deployment phase. Orex SAI will also provide systems integration and network deployment support services. TelecomTV is awaiting further details, including how many premises will be reached with this initial base station deployment.

A contract value was not shared by the parties but a recent report from Asia Nikkei (subscription required) suggests the value of this initial contract is about $200m but that Orex SAI is currently in line for deals worth $1bn over nine years, about one-third of Surge's planned $3bn 5G FWA investment budget. Orex SAI's CTO, Sadayuki Abeta, declined to comment on that reported contract value when asked about the Asia Nikkei report by TelecomTV.

The two parties initially signed a memorandum of understanding late last year and struck an initial agreement in March this year to develop a field trial of 5G Open RAN technology. Orex SAI subsequently established a local subsidiary, PT Orex SAI Indonesia, which developed the world's first type-approved radio unit (RU) for the n50 (1.4 GHz) frequency band in Indonesia.
Now a commercial contract has been signed and Indonesia is to witness a major rollout of Open RAN technology to support 5G FWA services and it'll be interesting to see if Surge deploys third-party Open RAN radio units as part of this particular deployment over time or whether it will stick with a single vendor.

Notably, Nokia was namechecked in the initial deal in March as a potential provider of 5G FWA CPE units and fixed network (optical, router) technology, but it has not been mentioned in the contract announcement.

Orex SAI CEO Hiroshi Kobayashi stated: "Together with Surge, we have developed a scalable 5G FWA 1.4GHz solution that has progressed to the commercial stage. We are honoured to launch this world-first Open RAN FWA 1.4GHz initiative in Indonesia and remain committed to delivering technologies that empower communities and accelerate digital growth."

GeoLinks Partners with Intracom Telecom to Advance Secure, High-Speed Fixed Wireless

Move over fiber, fixed wireless access wants to become the speed king of the internet.

A global telecommunications solutions provider says it will showcase at an upcoming broadband event a fixed wireless solution that can reach "fiber-like" speeds.

Intracom Telecom offers wireless access, transmission, software, smart city, surveillance, and energy solutions. Together with service provider GeoLinks, they announced the first U.S. live demonstration of GeoLinks' multi-gig fixed wireless access (FWA) speeds via 29/31GigaHertz licensed spectrum.

Installed atop the Rio Hotel in Las Vegas, Intracom Telecom's WiBAS G5 Point-to-Multipoint Smart Base Station will showcase "fiber-like, interference-free performance," a milestone in fixed wireless connectivity, according to a press release.

The companies said the demonstration will give attendees a firsthand look at licensed spectrum's secure, high-capacity capabilities across diverse environments. Both companies said the project highlights their commitment to expanding broadband access and closing the digital divide.

"[This] marks a turning point for GeoLinks and for the U.S. fixed wireless industry," said GeoLinks CEO Kevin Hetrick. "Our Las Vegas demonstration with Intracom Telecom showcases the next evolution of fixed wireless: multi-gigabit, interference-free broadband with carrier-grade performance."

Intracom Telecom USA CEO Kyriakos Vergos said the collaboration "lays the foundation for Wireless Internet Service Providers to serve enterprise, wholesale, and multi-tenant markets with fiber-like performance at a fraction of the cost."

By combining GeoLinks' licensed spectrum and hybrid fiber-wireless infrastructure with Intracom Telecom's WiBAS G5 technology, the companies said they aim to redefine fixed wireless performance.

Intracom Telecom advocated for their use of licensed spectrum, and said it provides built-in security and reliability by using exclusive, FCC-protected frequencies that block interference and unauthorized access, creating a secure, interference-free foundation for next-generation broadband networks.

Deep Integration of 5G-A and AI Driving FWA Business Growth

During GITEX GLOBAL 2025, the SAMENA Council and Huawei co-hosted the Global FWA Evolution Roundtable and the 5th ELITE FWA Club Gathering. Previously, SAMENA emphasized that "FWA is no longer limited to providing basic broadband. Rather, it is a driver of intelligent, high-performance networks that offer faster speeds, greater reliability, and broader coverage and intelligence, enabling operators to meet the increasing demands of consumers, businesses, and governments." This roundtable, themed "Innovating the Future of FWA Through 5G-A and AI," served as an in-depth practical exploration of these directions, and brought together representatives from more than 20 global operators and regulatory agencies to discuss practices and opportunities. At the event, Lu Weidong, Vice President of Huawei's Wireless 5G & LTE TDD Product Line, delivered a keynote speech titled "FWA 3.0: A New Era of All-Domain Home Broadband with Intelligence." During this speech, he unveiled the core architecture and value of the FWA 3.0 solution, analyzed the evolution of home connections, and highlighted the challenges and opportunities for FWA services. Huawei's FWA 3.0 solution emphasizes device-pipe synergy and introduces "FWA Wise" (intelligent experience) and "FWA Wide" (broad coverage)—designs that align seamlessly with SAMENA's core directions in its FWA innovation framework, such as "unleashing FWA potential through 5G-A and AI" and "digital inclusion," effectively addressing operators' pain points regarding coverage boundaries and user retention.

1. FWA Wise: AI is deeply integrated throughout the "terminal-network-service" process to enhance the experience value. Specifically, the terminal side deploys an AI O&M engine for automatic fault diagnosis and remote rectification, reducing O&M costs. On the network side, dynamic QoS scheduling assigns dedicated channels to HD video and cloud gaming. The service side then interworks with the smart home ecosystem to deliver integrated connection and application services, transforming home broadband from a simple pipe into an intelligent service carrier.
2. FWA Wide: The innovative "super CPE + 5G SA networking" combination achieves contiguous ultra-long-distance coverage, enabling it to serve a greater number of remote households than traditional methods. Additionally, multi-frequency-coordinated elastic networks dynamically expand capacity in densely populated areas, addressing peak-hour congestion issues and guaranteeing stable, high-speed connections for every household.

Three Business Model Innovations:

From Traffic Monetization to Intelligent Customization

During the roundtable, attendees discussed the ways in which FWA 3.0 can expand business opportunities, and identified monetization paths for operators. Above all, the focus was on unlocking potential in existing markets and exploring new ones. Beyond technological upgrades, the roundtable closely aligned with SAMENA's insight "FWA represents more than just a technology; it's a key enabler of digital transformation, opening new avenues for innovation and growth." Huawei's FWA 3.0 introduces three business model innovations, providing actionable monetization paths to help operators overcome growth challenges:
New frequency bands and tariff plans for a new monetization model
Elastic networks, leveraging advanced spectrum allocation and multi-frequency coordination, offer VIP users an experience twice as good as that of common users. Additionally, QoS-based and other assurance mechanisms are employed to tailor VIP user experience.

Service innovation unlocking new opportunities

Huawei's brand-new end-to-end FWA solution, launched at MWC Barcelona 2025, has been successfully deployed in several regions. This solution uses AI to help operators accelerate FWA user growth and enhance end-to-end user services.

Ecosystem and solution innovation usher in the future of intelligent business

Regulators, operators, and ecosystem partners have formed an alliance to break the closed loop from technology to scenarios and ultimately to business. Additionally, FWA is deeply integrated with AI and URLLC, supporting AI-powered solutions that help operators accelerate user growth and enhance service quality.

Driven by Two Engines, FWA 3.0 Boosts the Smart Home Ecosystem
Lu Weidong concluded the meeting by further clarifying the industry positioning of FWA: "5G-A and AI are the two engines driving FWA's business success. 5G-A ensures wide and fast connections, while AI ensures tailored experiences and business effectiveness. Through these technologies, FWA can help operators rapidly achieve a closed loop, from user growth and experience improvement, all the way to increased revenue. Additionally, FWA contributes to the smart home broadband domain in two key ways: First, it promotes the large-scale deployment of AI applications in home scenarios, making smart homes a reality. Second, it supports new scenarios, like remote office and home healthcare, with high-reliability connections, thus fully unlocking the potential value of networks." With the release and implementation of the FWA 3.0 solution, Huawei will continue to collaborate with SAMENA and global industry partners to practice the industry consensus of "5G-A and AI as dual driving engines" through technological implementation and jointly fulfill the industry vision of "digital inclusion and ecosystem prosperity" — enabling more households to enjoy "smarter, more convenient, and more valuable" connectivity services, helping operators find new growth curves, driving the FWA industry in the Middle East, Central Asia and even globally toward a new stage of high-quality development, and injecting sustained momentum into the "last mile" of the global digital economy.

Brisanet Brazil is Redefining Internet Access in Brazilian Homes with 5G FWA

In Brazil's vast interior, especially in the relatively backward northeast, millions of households have long time been on the edge of the digital world. The complex geography—including mountains and rainforests—raises the difficulty and cost of fiber optic construction. Additionally, the scattered population with low density results in low return on investment and long cycles for traditional fiber optic deployment, making it hard to attract large-scale investment from operators. However, Brisanet has managed to rewrite the script with fixed wireless access (FWA), redefining the way homes in these areas access the Internet, staged a brilliant "tech revolution".

While other operators fought fiercely in the fiber-optic "Red Sea" market in major cities, Brisanet made a strategic opposite choice: focusing on the forgotten areas.

Precise market insights: Brisanet realizes that urban residents with a population of less than 30,000 need for high-quality Internet as urgent. The popularity of distance education, online healthcare, home entertainment and e-commerce have made broadband a necessity.

Agile technology advantage: FWA builds wireless base stations to cover a patch of areas. Users only need to install an outdoor receiver and an indoor modem to access the Internet. This model allows Brisanet to scale its network faster than ever before, with extremely fast deployment, lower initial investment, and better network experience.
Channel & O&M Streamlining Service "Last Mile":
Channel side: For small and medium-sized cities and rural scenarios, the three-dimensional mode of "ground push + offline counter + online service" is launched. Ground push personnel carry equipment on door-to-door consultation, test and installation. Set up package counters in business halls and local supermarkets to assist in confirming addresses and booking door-to-door visits. The official website opens online customer service, one-on-one evaluation;

O&M side: Brisanet and Huawei jointly introduced the first E2E Easy FWAi solution in Latin America. The WTTx Suite platform generates a grid-level number allocation map. Users can enter addresses to query service packages and CPE types, reducing the number allocation process complexity by 50%. Implement "manual-free and minute-level number allocation". Moreover, The LTM is used to monitor

the CPE status in a visualized manner, automatically identify network speed problems, and remotely rectify faults. The number of customer complaints is reduced by 80%, and the experience satisfaction is improved by 60%.

Redefining: From "no access" to "high speed and stability", from "single service" to "digital life"
Redefining "Accessibility"

Before: Many homes had only slow, high-latency satellite Internet or mobile phone networks of choice, or even no broadband option at all;

Now: FWA provides true broadband access. Broadband access is no longer the preserve of city dwellers, and families in small outback towns can enjoy smooth video calls, online learning and 4K video playback, enabling broadband access from "no" to "yes".

Redefining "Quality Expectations"
Before: users' expectations for the network were very low, and intermittent Internet access was met.

Now: Brisanet's FWA network provides fiber-like speed and stability. Enables consumers to enjoy stable, low-latency, and high-speed network experience (100 Mbit/s+), and achieves the network rate from "low-speed frame freezing" to "high-speed stable".

Redefining "Service Connotation"
Before: The Internet can be an independent, expensive service;

Now: Brisanet has successfully implemented the "three-network convergence" strategy. On the basis of FWA broadband, Brisanet provides users with TV and mobile communication services. A bill, a customer service, solves all the family's communication and entertainment needs. The Internet has become the central entry point for the digital life of the family, and the business model has changed from "single service" to "digital life".

Social impact: Differentiated regional strategies, beyond business value, and bridging the digital divide
As of now, Brisanet's wireless base stations have covered 12 million users, and its FWA service has provided connectivity to over 300 remote areas in northeastern Brazil. The differentiated business ecosystem it has built by accurately matching market gaps has become a core engine driving the company's scale expansion and value growth, helping Brisanet achieve an 18% year-on-year revenue increase in Q2 2025. However, the FWA service brings far more than just commercial profits—it also generates profound social empowerment effects:

Revitalization of Red Soil Production Areas: Unleashing the Potential of the Cashew Industry

Ceará State in northeastern Brazil is a key cashew-producing region in the country. In the past, due to weak digital infrastructure, local farmers were long constrained by information gaps, making it difficult for high-quality cashews to find efficient sales channels. After the deployment of the FWA network, farmers can directly connect with urban procurement channels through digital platforms. Some farmers have also jointly established cooperatives and introduced primary processing technologies to extend the industrial chain, significantly improving both industrial vitality and farmers' incomes.

Empowerment in Deep Rainforests: Supporting the Development of Impoverished Women

Impoverished women in villages around Manaus along the Amazon River once struggled to convert local specialty resources—such as the abundant acai berries—into income, due to poor transportation and lack of sales channels. With FWA network coverage, they now can use online platforms to showcase and sell their products, some have even formed small production teams. FWA not only enhances their employability, but also effectively improves their family's economic conditions.

Downward Penetration of Digital Dividends: Promoting Equality in Healthcare and Education

In the healthcare sector, the FWA network enables residents in remote areas to access high-quality urban medical resources through teleconsultation, effectively alleviating the hardship of long-distance travel for medical treatment. In education, rural schools use the network to access high-quality online courses, making up for the shortage of teachers and teaching resources. This has significantly improved students' learning conditions and access to knowledge, further advancing people's well-being.

Future
Brisanet 5G FWA is a model on innovation, strategy and inclusion. It didn't invent FWA technology, but with deep insight and execution, it applied the technology to the scenarios where it was needed most, truly redefining the way millions of homes access to the Internet in Brazil. It proves that business success and social progress can be perfectly combined with technology enablement. Starting with connecting "no man's land," Brisanet is using invisible airwaves to map Brazil's fairer, connected digital future.

Fixed Wireless Access Connections in Australia to Grow at 5.5% CAGR During 2025-2030: Forecast

Fixed wireless access (FWA) connections in Australia are set to register a healthy compound annual growth rate (CAGR) of 5.5% between 2025 and 2030, driven by the growing demand for high-speed internet services in regional and remote areas with limited fiber coverage and the emergence of FWA as an alternative to fiber broadband, forecasts data and analytics company. GlobalData.

GlobalData's Australia Fixed Communication Forecast (Q3 2025) reveals that the share of FWA in total fixed broadband connections in Australia will increase from 11.5% in 2025 to about 14% by the end of 2030.

Srikanth Vaidya, Telecom Analyst at GlobalData, says: "In Australia, FWA is emerging as a critical component to the National Broadband Network (NBN) and private carrier deployments, especially in areas where fiber rollouts are slower or cost prohibitive."

Earlier this year, NBN and the government successfully completed their AUD750 ($471.7) million fixed wireless and satellite upgrade program to deliver faster and future-ready broadband connectivity to 800,000 homes and businesses in regional and remote areas.

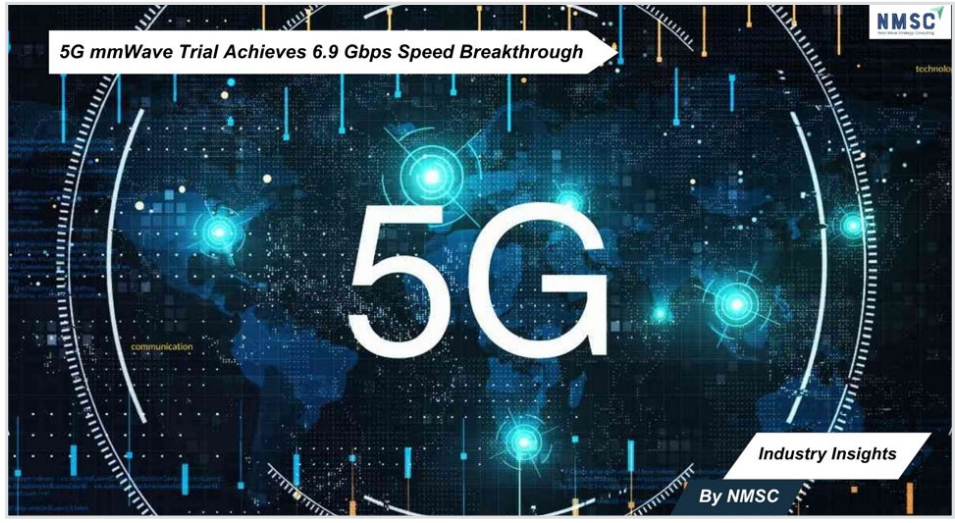
The program involved integrating advanced 4G, 5G & 5G mmWave technology to expand capacity and coverage of about 2,300 fixed wireless towers using mid-band and mmWave spectrum, enabling them to deliver faster wholesale speeds across the NBN network and introduce fastest wholesale speeds offered on NBN FWA network via participating retail service providers.

The upgrade also enabled NBN to boost the speed of its Fixed Wireless Plus wholesale plan from 75Mbps to up to 100 Mbps, introduce higher-speed plans like Fixed Wireless Home Fast (200–250 Mbps) and Superfast (400 Mbps), and expand FWA to 120,000 premises that previously relied on satellite connectivity.

The evolving use cases across residential and business segments, such as smart homes, SME connectivity, Industry 4.0, remote education, and telehealth, are expected to drive FWA adoption in the country over the forecast period. For instance, Optus is offering FWA connectivity to deliver high-capacity broadband to homes and SMEs.

Vaidya concludes: "Growing demand for reliable and high-speed connectivity across the country is creating strong business case for FWA to serve as an effective complement to established fiber broadband services. Operators that offer flexible data plans targeting both residential and SME segments and deliver value-added services through FWA will be well-positioned to capture new revenue opportunities and strengthen their competitive edge in the evolving broadband market."

5G mmWave Trial Achieves 6.9 Gbps Speed Breakthrough



As the race for faster, more resilient wireless networks accelerates, the collaboration between Salam and Huawei Technologies Co., Ltd. has delivered a defining milestone in next-generation communication systems. Through a landmark 5G mmWave trial, both companies demonstrated unprecedented throughput and coverage, paving the way for ultra-broadband connectivity across Saudi Arabia and beyond.

A Milestone in Next-Generation Network Performance

Conducted under an experimental license, the outdoor trial achieved a peak throughput of 6.9 Gbps, marking one of the most significant advances yet recorded in the region's telecom landscape. Equally impressive was its ability to sustain 4 Gbps across a distance of 10 kilometers, while maintaining consistent connectivity even at a medium range of 6 kilometers with approximately 5 Gbps throughput. These results highlight the vast potential of mmWave 5G Advanced technology to deliver exceptional performance both in dense urban environments and over extended rural distances.

The trial validated how high-frequency mmWave bands can overcome previous barriers of limited range, proving that ultra-fast wireless communication can now be achieved without compromising reach. It stands as tangible evidence that the evolution toward 5G Advance is not only theoretical but rapidly becoming operational reality.

Transforming Connectivity Beyond Traditional Limits

The successful demonstration underscores how 5G mmWave can bridge critical connectivity gaps where fibre installation remains complex, costly, or impractical. By achieving multi-gigabit fixed wireless access speeds, Salam and Huawei have shown that high-capacity broadband can be delivered without the heavy infrastructure burden of wired networks.

This achievement also holds profound implications for industrial zones, enterprise campuses, and public venues, where high-density, low-latency communication is essential. The trial's performance confirms that mmWave can efficiently support data-intensive applications such as cloud computing, AI-driven automation, and immersive media experiences. It marks a decisive step toward the seamless, high-performance digital ecosystems envisioned under the 5G Advanced framework.

Strategic Significance for the Telecom Landscape

Beyond the technological breakthrough, this trial reflects a broader strategic ambition to accelerate Saudi Arabia's digital transformation. Salam's continued investment in next-generation connectivity and Huawei's long-standing expertise in radio innovation align with the Kingdom's vision to strengthen its role as a global digital hub.

By validating long-range, high-throughput wireless delivery, Salam has demonstrated its readiness to support the next era of smart infrastructure, public services, and enterprise digitization. Huawei's involvement reinforces its global leadership in mmWave development, further solidifying the company's commitment to driving accessible, scalable, and sustainable network technologies.

Next Move Strategy Consulting's View

From a strategic market perspective, this breakthrough trial represents a defining moment for the 5G mmWave ecosystem. It proves that the technology is maturing beyond laboratory tests and selective deployments, entering a stage where it can transform real-world connectivity.

The ability to achieve near-fibre performance through wireless means marks a paradigm shift for both operators and enterprises. For telecom providers, it opens new opportunities to deliver gigabit-class internet without relying solely on costly fibre rollouts. This agility could redefine competitive dynamics in markets seeking to balance rapid deployment with performance excellence.

Equally important is mmWave's

newfound ability to maintain stable connections across long distances. Historically viewed as a high-speed, short-range option, mmWave's extended reach in this trial demonstrates that it can now serve suburban and rural communities previously underserved by fibre infrastructure. This advancement positions mmWave as a cornerstone for bridging the digital divide and enabling inclusive digital access.

From an enterprise standpoint, the technology's potential extends far beyond connectivity. Industries dependent on automation, real-time analytics, and AI-powered operations will benefit immensely from the ultra-low-latency and massive data capacity that mmWave supports. It enables environments such as smart factories, logistics hubs, healthcare facilities, and energy sectors to operate with unprecedented precision and responsiveness.

Furthermore, as 5G Advance evolves, the strategic importance of spectrum efficiency and network orchestration becomes critical. Governments and regulators are likely to prioritize frameworks that encourage mmWave deployment while maintaining fair access and interoperability across vendors. This collaboration between Salam and Huawei demonstrates that with the right partnerships and regulatory vision, mmWave can scale commercially, ensuring both performance and sustainability.

Ultimately, the 5G mmWave market is on the cusp of transformation. Its integration into mainstream telecom operations will catalyze a new wave of digital infrastructure investments, enabling next-level connectivity that blends speed, reliability, and reach.

Redefining Wireless Possibilities

The Salam-Huawei mmWave trial stands as a compelling demonstration of how far wireless technology has progressed — from incremental bandwidth gains to genuine fibre-class performance. As telecom providers embrace this evolution, industries, enterprises, and communities can look forward to a new standard of digital experience.

By combining technological excellence with strategic foresight, Salam and Huawei have not only redefined the boundaries of wireless performance but also laid the groundwork for the next generation of intelligent connectivity — where speed, scale, and accessibility converge to shape the future of communication.

Nokia to Build Surge's 5G Fixed-Wireless Network in Indonesia

Indonesian telecom provider Surge (Solusi Sinergi Digital) and Nokia have entered a multi-year agreement to roll out a 5G Fixed Wireless Access (FWA) network across Java, Papua, and Maluku.

Nokia will leverage its existing FTTx, IP and optical infrastructure for backhaul, and deploy a new RAN and customer premises equipment (CPE) tailored for FWA. The deployment will utilise Nokia's AirScale RAN portfolio, comprising baseband, remote radio heads, and zero-footprint sites, all enabled by its energy-efficient ReefShark chip technology.

To help manage the network, Surge will utilise Nokia's MantaRay NM network management system, which provides a unified view of operations. The agreement also includes deployment, maintenance and support services, with AI-based performance, efficiency and safety enhancements.

This project supports broader aims of digital inclusion in Indonesia: Surge plans to offer flat-rate 5G FWA services at around IDR 100,000 (~US$6) per month, with speeds of up to 100 Mb/s and no data cap.

From a policy and infrastructure standpoint, the deal is noteworthy. It shows how 5G FWA can be used to address connectivity gaps in regions where fibre rollout is challenging, and how advanced RAN technologies, combined with AI-led operations, can make large-scale broadband deployment more feasible.

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