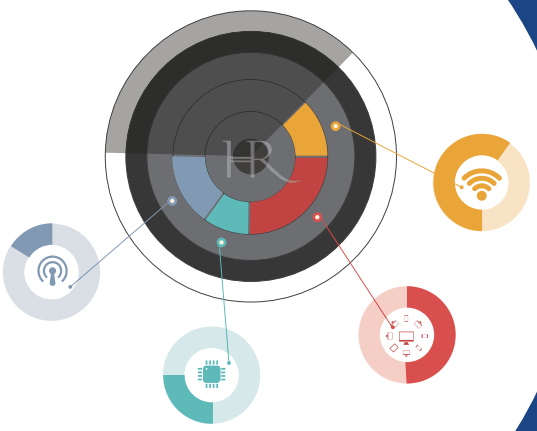
MulteFire in The Enterprise: Driving Innovation and Value Creation



Wireless networking in Enterprise domains faces significant challenges in terms of coverage, capacity and scalability. Relatively homogeneous wireless network environments, largely dominated by enterprise Wi-Fi solutions, are becoming overwhelmed as mobile and enterprise functions strain available resources. These forces are culminating in an evolution of network technology, where emerging Private and Neutral Host LTE technologies provide the necessary capabilities for the Enterprise to maintain pace with an increasingly interconnected global economy.

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Enterprise networking has long faced a homogeneous competitive environment largely defined by Wi-Fi solutions. With the introduction of MulteFire, a new wireless solution will bring seamless connectivity to users with enhanced coverage and capacity. MulteFire for the Enterprise, deployed in unlicensed or shared spectrum, will allow venue owners to easily deploy fewer access points than traditional competitive solutions, ultimately reducing CapEx. Furthermore, with a neutral host MulteFire network, venue owners and operators alike will benefit from improved Quality of Service (QoS) for their users. This network model will reduce costly distributed antenna systems and licensed carrier small cells, while ensuring coverage and capacity for users, regardless of their carrier.

As mobile devices continue to penetrate Consumer and Enterprise environments, this flexible networking scenario will provide the means to effectively and efficiently offload data from macro networks. While this capability exists with Wi-Fi Passpoint, the ensured performance of an LTE network will be a critical value proposition for venue owners and operators. This user-centric networking model will enable new forms of revenue generation and services delivery for every participant in the Enterprise network supply chain, reflecting a critical evolutionary step in wireless network technology. The following paper seeks to quantify the Enterprise opportunity while expanding upon the transformation of revenue models that will impact the Enterprise networking ecosystem.

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EXHIBITS

Private and Neutral Host Networks

Private and Neutral Host networks are carrier agnostic network technologies in which the enterprise can deploy the network itself and support seamless quality of experience and mobility as the user moves from the macro to site network

THE TRANSFORMATION OF ENTERPRISE WIRELESS NETWORKING

Wireless technology convergence and the new world of Smart Systems are ushering in an era where people, machines, devices, sensors, and businesses are all connected and able to interact with one another. Soon, any device that is not networked will rapidly decrease in value for OEMs, service providers and end users alike, creating even greater pressure to be online. Connectivity and smart devices will blend into every market, and vast opportunities will arise for companies delivering, managing and responding to the rich media and data being generated. For Enterprise segments, this means the interactions between critical business processes and the people engaging with those processes will apply greater pressures on network infrastructure.

Robust connectivity supporting smart devices for Private and Neutral Host LTE in Enterprise environments will enhance existing services such as realtime video conferencing, digital advertising and voice over IP. However, the new services opportunities for the digital Enterprise enabled by a single, user-centric network will drive new modes of interaction such as on-site seamless macro data offloading and virtualized consumer interactions. In addition to enhancing and augmenting existing Enterprise applications, Private and Neutral Host LTE will transform traditional Enterprise network business models by placing network management in the hands of the venue operator, ultimately driving cost savings and ecosystem control points.

Private LTE Network

A local LTE network that is utilizing dedicated radio equipment to service a premise with specific IoT applications and services. The use of dedicated equipment allows it to be independent of traffic fluctuation in the wide-area macro network. By focusing on specific IoT applications and services, the private LTE network can be tailored for more optimized performance such as low latency. A Private LTE network can be deployed in shared and unlicensed spectrum, as well as locally dedicated licsensed spectrum, e.g. CBRS Priority Access License (PAL).

The total addressable revenue for Enterprise markets deploying Private and Neutral Host LTE with MulteFire will reach nearly $5.7 Billion in 2025 growing at a 61.2% CAGR, according to Harbor Research's Smart Systems Market Forecast. This revenue forecast includes MulteFire small cells, related network infrastructure , and services. It does not include end user devices. This paper seeks to breakdown the scale of this Private and Neutral Host LTE opportunity for Enterprise markets and highlight the shifting ecosystem dynamics and business model transformation that results. In addition to the Enterprise market, Harbor Research partnered with the MulteFire Alliance to highlight the opportunity for MulteFire and CBRS in IoT or operational environments (see The Private LTE Opportunity for Industrial and Commercial IoT). The total global Smart Systems revenue for the private LTE addressable market in industrial and commercial IoT will reach $118.5 billion in 2023.

DEVICE DENSITY, USER MOBILITY and COST ARE CHALLENGES SOLVED BY PRIVATE and NEUTRAL HOST LTE

A whole new generation of wireless networks for hyper-dense, mobile device intensive environments are emerging that will drive significant monetary and functional benefits for Enterprise environments. Emerging wireless technologies, such as Private and Neutral Host LTE, will enable carriers, operators and venue owners to internalize these benefits while also addressing the challenges of the current Enterprise networking landscape. Understanding the ways in which these benefits and challenges interact with

segment specific trends creates a narrative for various deployment scenarios that drives a holistic offering for Private and Neutral Host LTE networks.

Before diving into the size of the market opportunity, it's important to frame the context in which the opportunity is quantified. Enterprise markets in this analysis are characterized as indoor and outdoor environments with network requirements to support data-intensive, hyper-dense mobile and traditional Enterprise applications. This includes the following Enterprise environments:

Exhibit 1: Target Enterprise Markets for Private and Neutral Host LTE

Enterprise Markets

Buildings	Health Delivery	Retail
• Commercial Office Buildings (Financial, Corporate, etc.)	• Hospitals / Labs • Clinics	• Big Box / Malls • Specialty / Boutique

Hospitality	Residential	Public Venues
• Hotels • Restaurants	• Multi Tenant • Single Tenant	• Airports • Military Bases • Stadiums

Supply Chain & Distribution	
• Warehouses	• Retail Distribution

*This analysis excludes all IoT, industrial or operational technology applications for Private and Neutral Host LTE

These Enterprise segments will face intensifying challenges as bring-you-own-device (BYOD) trends create hyper-dense mobile networks, overwhelming traditional Enterprise WLAN and macro WWAN. At times, indoor environments at times will serve thousands of mobile users, creating overwhelming congestion in macro networks. While current wireless solutions extend mobile support, significant pain points exist around seamless mobility and sufficient bandwidth, as well as intensive costs for carriers to build out distributed antenna systems and small cell networks. The convergence of user practices and integrated mobile device functionality in the Enterprise is setting the stage for traditional network technology disruption, creating an opportunity for Private and Neutral Host LTE.

Providing an alternative LTE deployment in these environments (replacing and augmenting traditional carrier solutions based in licensed spectrum and dominant Wi-Fi solutions) will introduce enhanced coverage and capacity with cost-effective, flexible and simple deployment.

Neutral Host Network

A network designed to create seamless user experience leveraging a carrier agnostic services model in which customers of major network operators have continous access to carrier-grade connectivity within a given environment. Carriers gain access to the network through service level agreements (SLAs) in which the carrier does not need to deploy its own infrastructure to extend coverage and capacity for its customers.

MulteFire Enterprise Forecast: Methodology and Assumptions

The scope of the 2020-2025 forecast for MulteFire Enterprise Networking includes:

» *Enterprise and MulteFire specific equipment including Small Cells, switches and controllers;*

» *Smart Systems revenues (see expanded definitions on pgs. 10 and 11) related to device Enablement, Network Services, Systems Applications (Middleware) and Value-Added Applications.*

» *Operational and "IoT" are not inclued in the MulteFire Enterprise forecast*

Enterprise Opportunity for Private and Neutral Host LTE

Market Opportunity Overview, 2025

Total Enterprise MulteFire Smart System Revenue Opportunity: $5.7 billion

Total Enterprise MulteFire Shipments: 5.3 million units

The benefits of Private and Neutral Host LTE directly address the horizontal swath of networking (both wired and wireless) challenges across these markets such as device density, user mobility, infrastructure and ongoing management costs, and network security.

Wireless Networking Challenges

» Variable throughput in instances of high network traffic. LTE remains comparatively more robust than carrier-grade and managed Wi-Fi networks

» BYOD movement is creating significant macro network congestion and driving increased costs for expensive DAS or carrier-based small cell deployment

» Unreliable connectivity during network handoff

» Access points with smaller footprints lead to increased infrastructure and recurring network management costs

» Wireless networks are inherently less secure given airborne transmission

Wired Networking Challenges

» Difficult to scale or reconfigure with increasing device densities or dynamic Enterprise floor

» Coverage limitations for indoor and outdoor network extension

» Do not support mobility

» Difficult and time consuming to implement with high cost of setup; Small Cell deployment with a fully functioning network can be achieved within days

These challenges are contributing to a necessary evolution of network technology where robust connectivity allows for an ecosystem of shared operational data across human and device networks. As such, Private and Neutral Host LTE is a wireless solution offering enhanced network performance, with cost effective, scalable and secure network capabilities, ultimately improving coverage and capacity of existing Enterprise networks.

THE FUTURE OF PRIVATE and NEUTRAL HOST LTE: MULTEFIRE DRIVES ENHANCED COVERAGE and CAPACITY FOR THE ENTERPRISE

Private and Neutral Host LTE via MulteFire represents a critical and unprecedented

step in solving the key challenges that Enterprises face today by providing reliable, secure, high-performing and cost-effective wireless technology. As the interactions among devices, systems and people become more complex, MulteFire will generate significant value by ensuring those interactions can occur with a level of service continuity that a digital Enterprise requires.

MulteFire is an extension of existing LTE standards building on elements from 3GPP's Release 13 and 14 and Licensed Assisted Access (LAA) and Enhanced Licensed Assisted Access (eLAA). Encompassing current industry-leading wireless capabilities, MulteFire augments LTE to operate in unlicensed and shared spectrum under neutral host and private network environments. Dedicated licensed spectrum can also be used for Private LTE networks, e.g., by partnering with a mobile network operator.

MulteFire has several key features that translate into direct benefits for the digital Enterprise including:

» Seamless mobility to support service continuity between small cells and other networks

» Efficient co-existence with other spectrum users such as Wi-Fi

» LTE performance in terms of capacity and throughput reaching between 2-4 times that of 802.11ac, yielding superior payloads than Wi-Fi

» Low cost of deployment and integration (as it doesn't require spectrum license or operator contracts)

» Fewer required nodes while supporting enhanced interference management capabilities, thereby reducing costs with a greater network footprint per access point

» The simplicity of deployment, analogous to Wi-Fi, in unlicensed spectrum allows MulteFire to support any device without an operator or SIM card

Given these characteristics, Enterprises using MulteFire will be able to support critical voice and data applications such as high speed mobile broadband for messaging, videos and images.

Facilitating a seamless user experience while extending value across the ecosystem is the "holy grail" of Enterprise networking. As such, Private and Neutral Host LTE with MulteFire should be viewed as a mechanism by which carriers, operators and venue owners connect end users and Enterprise applications more efficiently.

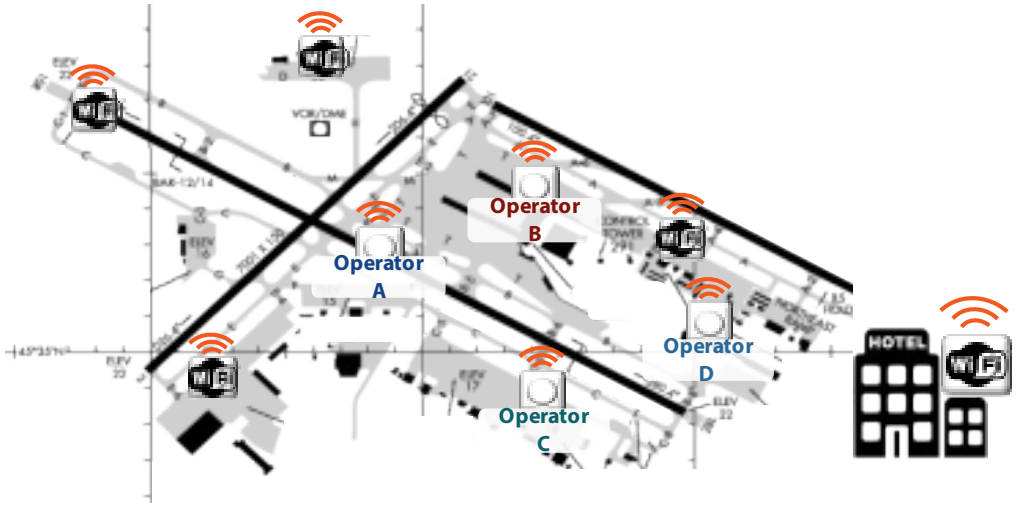
Private LTE Impact on Network Performance

Private LTE can improve critical network capabilities including well-characterized performance measures such as low latency, high reliability, consistent performance in the presence of well-known interference sources, high security, longer range, high capacity, interoperability between suppliers, high throughput and high mobility.

The MulteFire Alliance has created a collaborative ecosystem that synthesizes innovation, strong capital resources and extensive market reach into a shared vision of what will be the first step towards market-ready Private and Neutral Host LTE. MulteFire technology enables enhanced network performance via secure private or flexible neutral host network deployments. For segments supporting significant mobile device densities, a neutral host network is particularly attractive to both the mobile network operator and venue owner because the economics of network support increases with improved quality of services under a shared network infrastructure.

MulteFire enables value-rich Enterprise applications such as mobile data offloading and streaming data services for video and audio, while ensuring no disruption to Quality of Experience for the user via neutral host network access. Across the identified Enterprise environments, MulteFire will ensure enhanced coverage and capacity as shown in the following case study:

Exhibit 2: Multi-carrier Private and Neutral Host LTE Airport Case Study, Phase I



Carriers Deploy DAS and Small Cell Networks with Operator Managed Switch

- Carrier has its own small cell and controller, deploying network over licensed spectrum
- Given the significant allocation of CapEx to build a robust DAS or Small Cell network, carriers face a challenging cost-benefit analysis to identify strategic deployment
- Venue owners have little control and visibility into network services
- Distinct Wi-Fi and carrier-managed networks create fragmented quality of service and little user mobility

This case study illustrates the Heterogeneous Network (HetNet) architecture that can leverage various small cells to address diverse network requirements across the airport. Across all zones of the airport, picocells are deployed to provide the bulk of the coverage and capacity to users, with Femtocells addressing dead zones in instances caused by physical interference. Microcells play the role of enhancing capacity when network traffic intensifies as well as extended coverage for outdoor wireless applications.

As more devices come online, MulteFire will provide a scalable solution with the ability to support hyper-dense device environments in unlicensed and shared spectrum. Furthermore, the ability to co-exist with Wi-Fi and support multiple carrier networks will provide a flexible and seamless user experience. These functional aspects of scalability, low cost, simple deployments, and co-existence will place MulteFire as a key enabling technology to drive the evolution of Enterprise networking and the Neutral Host ecosystem.

Exhibit 3 illustrates the evolution of the networking environment given neutral host deployment, where carrier and managed services are consolidated into a single neutral host solution. In this instance, someone like a Boingo would manage the

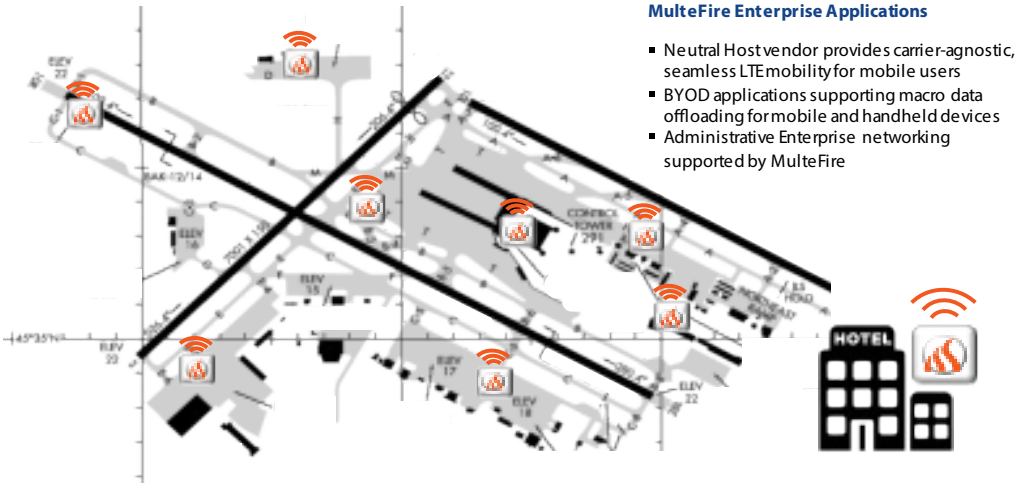
MulteFire Alliance

The MulteFire Alliance was founded to develop a network technology that brings LTE performance and Wi-Fi simplicity into a single solution on a global scale. MulteFire technology is based on 3GPP Licensed Assisted Access (LAA) and eLAA, which combines licensed and unlicensed spectrum while sharing spectrum fairly with Wi-Fi. Using the same listen-before-talk method as LAA and Wi-Fi, MulteFire co-exists with LAA, Wi-Fi and other technologies.

MulteFire Performance Against Wi-Fi Competition

» *Claims greater than 2X capacity with MulteFire only depoyments*
» *Greater coverage*
» *Increased multi-user capacity*

Exhibit 3: Multi-carrier Private and Neutral Host LTE Airport Case Study, Phase II



Note: Illustrative deployment locations

	Main Terminal & Administrative Main Offices	Gate Areas	Hotel & Transit Center
Floor area (sq. ft) (number of rooms)	1,500,000	4,043,000	332,170 (519)
User per Day (annual users)	1,644.2	164,424 (5,100,000)	359 (131,000)
Area per user / day	912.3	24.6	0.69
Number of MulteFire Small Cells (illustrative configuration)	132 Pico;23 Micro	410 Pico;38 Micro;54 Femto	48 Pico, 105 Femto
Supporting Neutral Host Network Equipment	▪ Switch / Router	▪ Small Cell Controller	▪ Dedicated Backhaul

network and carriers would gain access to the neutral host network as specified under an SLA. MulteFire small cells would replace individual carrier DAS and small cells and in some instance Wi-Fi access points. A combination of Femtocells, Picocells and Microcells can be deployed in various configurations to optimize the delivery of network services across varying environmental layouts.

The business model transformation and network model monetization will be discussed in greater detail in the following sections. Before we explore the implications of various ownership models and monetization strategies, we will take a look at the scale of the market opportunity around Enterprise MulteFire small cell deployments.

PERVASIVE VALUE GENERATION: THE DOLLARS and DEVICES BEHIND THE MULTEFIRE OPPORTUNITY

Private and Neutral Host LTE with MulteFire will see strong market penetration between 2020 and 2025, with initial deployments expected in 2020. Growth drivers include the benefits for the user as well as displacement of a homogeneous Wi-Fi market. The enhanced coverage and capacity that MulteFire will introduce to the Enterprise will address these increasingly hyper-dense mobile environments. The forecast takes into consideration the growth of small cells as well as adjacent Enterprise WLAN network technologies including switches, routers and controllers, given the critical role they play in the Neutral Host model. The following equipment types are forecasted for the MulteFire addressable shipped and installed base units as a portion of the total Enterprise Market:

- Small Cells
- Switches
- Controllers

Within the addressable market for Private and Neutral Host LTE we have forecasted four revenue categories associated with Enterprise networking:

- Enablement: the one time cost of connectivity associated with annual production or shipped devices (this does not include the network equipment cost, rather a representative portion of that total cost).
- Network Services: Recurring revenue associated with providing the network itself. This includes network management services such as ongoing provisioning, traffic management, configuration and general support of the network service.
- System Applications: Revenue associated with platform and middleware

Who Will Be Impacted by Revenue Generation?

Enablement: *silicon vendors and module manufacturers*

Network Services: *operators, carriers and service providers associated with creating and maintaining network*

System Applications: *middleware and platform vendors*

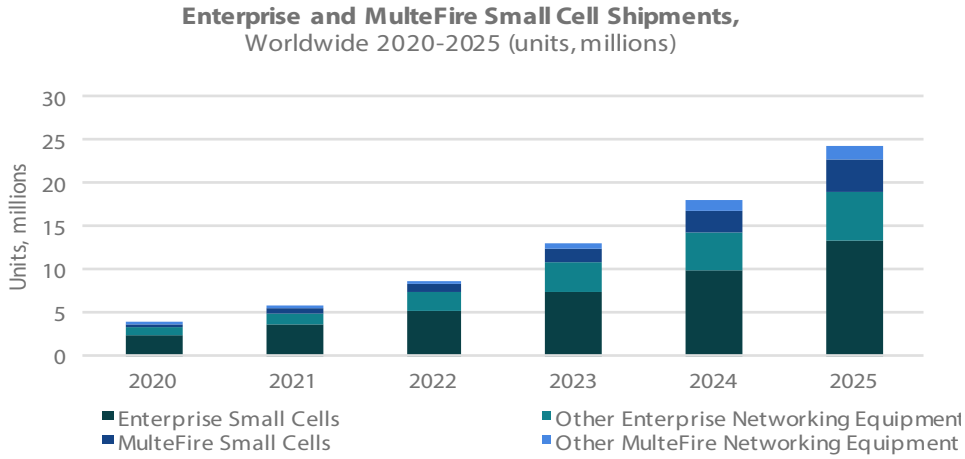
Value-Added Applications: *software and services vendors monetizing data associated with Private and Neutral Host LTE network, e.g. Enterprise IT Services vendors*

deployed on MulteFire networking equipment integrating functions around device management, diagnostics and prognostics, automation and analytics, monitoring and state, and location and tracking.

» Value Added Applications: This revenue category includes all IT and Professional services that are supported by the Private and Neutral Host network.

These revenues are forecasted from the shipped and installed base units of MulteFire small cells and related network infrastructure. Network switches, routers and controllers were included in the MulteFire forecast to illustrate the market opportunity associated with the industry collaboration that defines the MulteFire Alliance. This forecast does not include end user devices enabled with MulteFire.

Exhibit 4: Enterprise and MulteFire Networking Equipment Forecast, Shipments



Enterprise small cell and other networking equipment shipments (including MulteFire) are expected to reach 17.0 million units by 2025, up from 2.8 million in 2020. MulteFire small cells will represent roughly 22% of that Enterprise small cell market, yielding 3.7 million small cell deployments in 2023.

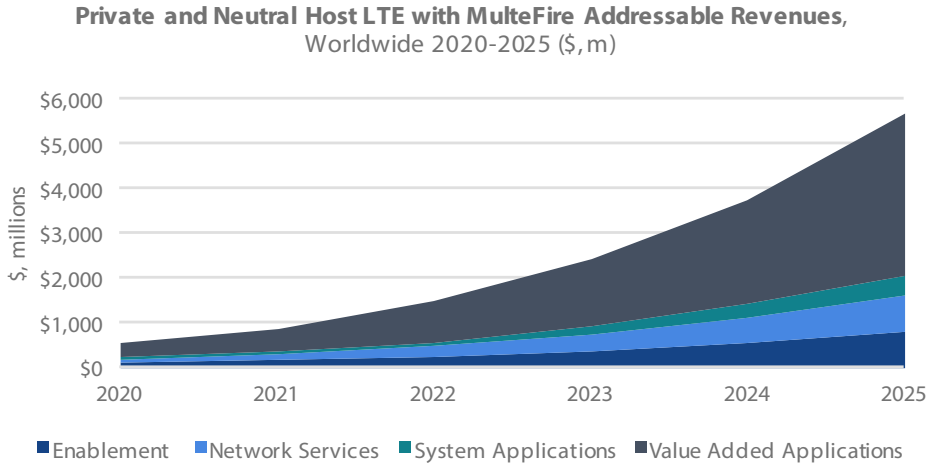
Network equipment supporting MulteFire small cell deployments, including switches, routers and controllers, will reach a combined shipped unit volume of 1.6 million units in 2025.

Exhibit 5: MulteFire Network Equipment Shipments

Enterprise Private and Neutral Host LTE with MulteFire: Shipments, Worldwide (units, millions)							
	2020	2021	2022	2023	2024	2025	2020-2025 CAGR
MulteFire Small Cells	0.38	0.62	1.01	1.67	2.50	3.70	**57.7%**
MF Related Switches	0.12	0.19	0.31	0.52	0.77	1.12	**57.5%**
MF Related Controllers	0.05	0.08	0.13	0.21	0.32	0.46	**56.7%**
MF Total	**0.54**	**0.89**	**1.46**	**2.41**	**3.59**	**5.28**	**57.6%**

Source: All forecast data drawn from the Harbor Research Smart Systems Foreacst

Exhibit 6: Associated Value Added Applications Will Drive The Most Revenue

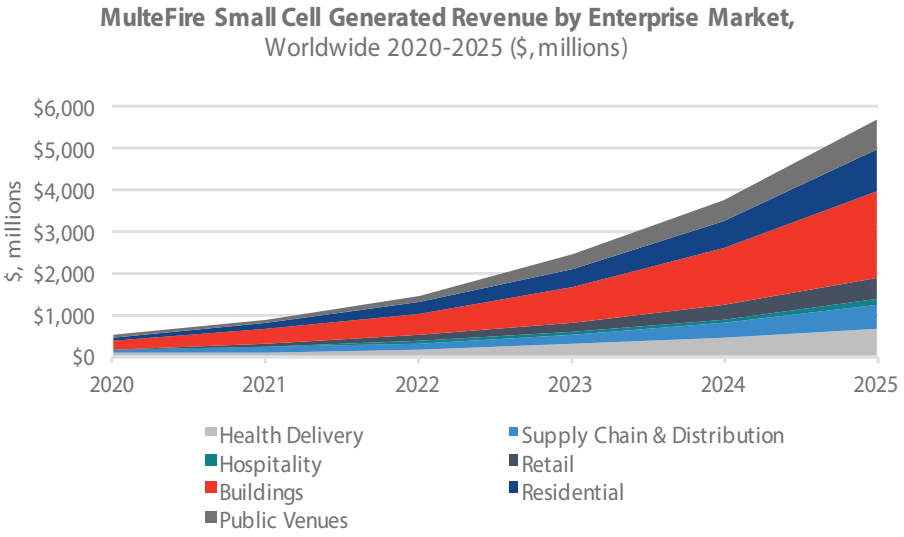


The total addressable revenue for Enterprise markets deploying Private and Neutral Host LTE with MulteFire will grow from $523.1 million in 2020 to $5.8 billion in 2025 at a 62.1% CAGR.

» Total Addressable MulteFire enablement revenues will grow from $88.5 million in 2020 to $810.5 million in 2025, representing a CAGR 55.7%. The cost of connectivity is expected to drop significantly to effectively generate a competitive small cell solution.

» Network Services revenues are projected to grow from $82.8 million in 2020 to $859.7 million in 2025. This represents a CAGR of 59.7%.

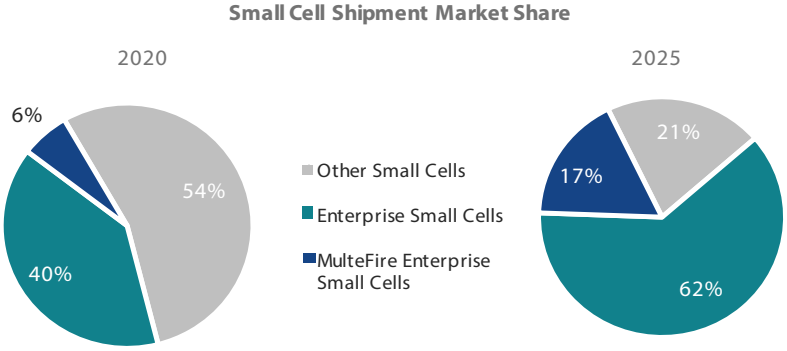
Exhibit 7: Commercial Office Buildings Pose Significant Opportunity



» System Applications revenues generated from MulteFire addressable Enterprise equipment are expected to reach $434.9 million in 2025, up from $40.9 million in 2020, representing a 60.5% CAGR.

» Total MulteFire addressable value-added service revenues are expected to grow to $3.7 billion in 2025 at a 64.5% CAGR, up from $310.9 million in 2020.

Exhibit 8: Enterprise Small Cells Expected To Be A Dominant Market



By enhancing coverage and capacity, while also shifting network control towards the venue owner, Private and Neutral Host LTE with MulteFire will introduce new means of revenue generation and cost savings across the Neutral Host ecosystem. The forecast for the target Enterprise segments will show strong value generation in commercial Enterprise, financial services and corporate office environments, representing roughly 37% of the forecasted Enterprise MulteFire small cell market.

Exhibit 9: MulteFire Small Cells Will See Significant Growth From 2020-2025

Enterprise Private and Neutral Host LTE with MulteFire: Small Cell Shipments, Worldwide (units, thousands)

Venue	Market	2020	2021	2022	2023	2024	2025	2020-2025 CAGR
Health Delivery	Clinics	16.0	26.4	43.6	68.4	103.4	154.3	57.3%
	Hospitals / Labs	25.2	41.6	68.5	116.3	171.4	249.2	58.1%
Supply Chain & Distribution	Retail Distribution	30.3	49.3	81.1	133.7	200.0	295.2	57.7%
	Warehouses	10.8	17.6	28.8	46.0	69.6	104.0	57.3%
Hospitality	Hotels	0.8	1.3	2.1	4.5	7.2	11.4	70.2%
	Restaurants	5.6	9.1	14.9	23.2	35.4	53.4	57.0%
Retail	Big Box	27.1	44.1	71.7	116.6	175.9	261.8	57.4%
	Specialty	9.0	14.7	23.9	38.9	58.6	87.1	57.5%
Buildings	Commercial & Institutional	142.1	231.5	377.3	614.9	926.0	1,375.6	57.5%
Residential	Multi Tenant	53.8	87.5	142.5	231.9	349.7	520.1	57.4%
	Single Tenant	11.6	18.8	30.6	49.9	75.3	112.1	57.4%
Public Venues	Transport Venues	4.6	7.5	12.3	20.2	30.3	44.7	57.6%
	Military Bases	14.4	23.8	39.4	65.3	82.7	103.3	48.3%
	Stadiums	28.0	46.4	78.1	144.7	219.2	323.7	63.2%
Total		379.3	620.0	1,014.8	1,674.5	2,504.7	3,696.0	57.7%

PRIVATE and NEUTRAL HOST LTE: ENABLING NEW BUSINESS MODELS

Data intensive or hyper-dense venues that require a network to support thousands of mobile devices are key targets to drive the integration of neutral host models. The current state of wireless network technology is positioning technologies such as MulteFire as catalytic solutions to drive the transformation of business models for Enterprise networking. Various flavors of the neutral host deployments, entailing different ownership models, will enable new forms of revenue generation for carriers, operators and venue owners alike.

Each of these business models creates unique revenue generation opportunities that can have horizontal benefits across the Enterprise networking ecosystem. The monetization of neutral host networks occurs in several ways.

Exhibit 10: Neutral Host Business Models and Moneitzation

Neutral Host Ownership Model	Neutral Host Monetization
Carrier Ownership Carrier deploys and operates DAS or small cell network supporting a single or multi-carrier network, as part of a partnership with DAS or small cell vendor.	• Revenue opportunities revolve around Carrier deployment of the neutral host network, extending service to other MNOs.
Venue Ownership Enterprise itself invests in multi-carrier DAS and small cell deployments in partnership with DAS or small cell vendor, generating revenue from leasing space and MNO service contracts.	• Carriers benefit from reduced investment in costly infrastructure deployments. • Neutral host vendors are contracted out by venue to build distributed neutral host network. • The venue benefits in this scenario by controlling the infrastructure and services associated with the neutral host networkd. The venue will generate revenues from charging the carrier for extended multi-carrier services within the enterprise.
Neutral Host Ownership Neutral Host vendor controls and manages the carrier agnostic network, creating contracts by which carriers will pay for access to the neutral host network. Venue owner has little control over or insight into network services.	• Carriers benefit from reduced investment in costly infrastructure deployments. • Neutral host monetizes network via SLA's in which the carrier pays a membership fee, recurring subscription or by usage ($/Gb). • Venue owners can generate additional revenue from leasing space for the network as well as charging MNO for the cost of utilities to support the network. Furthermore, the venue owner will drive new forms of revenue generation with improved Quality of Experience for end users.

MulteFire, with its neutral host capabilities, will benefit operators by supporting data offloading and enhanced performance, without requiring expensive DAS and small cell deployments. In this sense, an Enterprise can achieve enhanced coverage and

capacity with a single network rather than multiple carrier network deployments—without disrupting the user experience whatsoever. This will also benefit carriers by taking the cost-benefit analysis out of venue by venue deployments, where the carrier engages in a Neutral Host Agreement in which it pays a fee to join the network and support ongoing costs to the Neutral Host.

Beyond the points of network ownership, MulteFire will also introduce a competitive solution into an arena largely dominated by Wi-Fi, in which Enterprise owners will no longer be limited to a single networking solution. This will drive healthy competition across the entire ecosystem, resulting in technological innovation, network augmentation and competitive pricing models.

THE FUTURE OF PRIVATE and NEUTRAL HOST LTE IN THE ENTERPRISE

Current wireless networking solutions fail to address issues around device densities, user mobility, cost, security, interference and scalability, ultimately limiting the extent to which Enterprises can drive a digital strategy. Limitations to the network will translate into the destruction of value as the interactions between people, processes and things remain disjointed and subjected to legacy technologies and practices. MulteFire seeks to drive the evolution towards cohesive network infrastructure to support data-intensive needs of the digital Enterprise.

The MulteFire Alliance is bringing together an increasing number of diverse networking ecosystem players to refine an agile, neutral host networking solution that will drive the evolution of the Enterprise networking technology landscape. Private and Neutral Host LTE with MulteFire will provide a competitive wireless solution that will augment traditional carrier services and Enterprise Wi-Fi into a single, seamless solution. The resulting transformation and adaptation of Enterprise network deployment models will be critical for new revenue opportunities for the entire ecosystem, with incentives such as infrastructure cost savings and improved quality of service.

MulteFire represents the initial step into a new age of wireless networking, in which many challenges still lie ahead. As such, the network fabric by which carriers, operators and venue owners support Enterprise applications will need insightful and strategic collaboration that reconciles deployment cost and risk, network performance and extended revenue opportunities; at which point, Private and Neutral Host LTE with MulteFire will transform and improve the way Enterprise networking is deployed, managed and monetized.

ABOUT HARBOR RESEARCH

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