

# The 5G for Business Imperatives

5G offers a vast range of possibilities to businesses, from new applications to new ways of engaging their customers. However, much of the initial focus and development has been centered on consumer devices such as phones and hotspots. Businesses that want to harness the power of 5G while maintaining enterprise standards for security, reliability, and manageability don't want to rely on consumer-grade technology. They need solutions built with business in mind. Five key imperatives must be met in order for 5G edge solutions to fulfill business' expectations.

**An enterprise-class wireless WAN platform that meets the diverse needs of 5G must have:**

## IMPERATIVE ONE:

### A Full Range of Cellular Technologies

1

From 4G LTE to Gigabit-Class LTE to 5G — with the ability to gracefully transition tens of thousands of sites between generations as technology becomes available in individual locations.

## IMPERATIVE TWO:

### Support for the Entire 5G Spectrum

2

From the low bands of sub-1GHz to the high bands of mmWave — all the while providing unique data plan management and forecasting for each location in a contemporary point-and-click platform.

## IMPERATIVE THREE:

### Complete Lifecycle Management

3

That includes a mobile installation application, “captive modem” capability, 5G analytics and tools, and Out-of-Band Management for optimized operation and management efficiency.

## IMPERATIVE FOUR:

### Carrier-Class Connectivity

4

That provides customized software-defined modem versions for each operator's requirements and capabilities, pre-programmed endpoints, and multi-level integrity tests to predict vulnerable connections.

## IMPERATIVE FIVE:

### Intelligent Hybrid WAN Connectivity

5

That delivers effortless wireless endpoint management in a wired-first SD-WAN environment and all-in-one capabilities (routing, embedded wireless, and foundational SD-WAN) in a wireless-first SD-WAN deployment.

# Why You Should Care

## IMPERATIVE 1:

### A Full Range of Cellular Technologies 1

Because the 5G rollout is occurring in stages, 4G LTE, Gigabit-Class LTE, and 5G will all be used simultaneously for some time. While network operators seek to monetize their 5G investment as quickly as possible, enterprises must manage multiple technologies in different sites without complexity.

#### Example

A retailer may have thousands of existing sites running 4G LTE because Gigabit-Class LTE and 5G are currently unavailable. Then, it may have thousands of other locations that have just upgraded to Gigabit-Class LTE to supplement bandwidth. Additionally, it may have tens of sites that have deployed 5G that are entirely wireless.

## IMPERATIVE 2:

### Support for the Entire 5G Spectrum 2

As a matter of strategy, network operators are deploying 5G services across multiple spectrum bands, including high band (mmWave), mid band (Sub-6), and low band (Sub-2). While network operators are relying on edge networking vendors to deploy their services in any spectrum band, enterprises with numerous locations need the flexibility to deploy the latest wireless technologies on a by-site basis.

#### Example

A financial institution may want to go all wireless by deploying a mmWave 5G service in its larger metropolitan branches and a Sub-6 5G service in its suburban branches. And in the near term, it may run a failover application on low band 4G or 5G in rural locations.

## IMPERATIVE 3:

### Complete Lifecycle Management 3

Unlike prior generations, 5G is a collection of new technologies, spectrum, and deployment models. Network operators need edge networking vendors to understand the performance nuances of 5G while enterprises must minimize complexity from installation to troubleshooting.

#### Example

An IT pro installing a 5G solution, particularly mmWave, knows that the positioning of a 5G adapter during installation will affect signal acquisition and, therefore, network performance. They understand that the more endpoints under management, the higher the complexity. Further, they believe having the right analytical tools is critical for predicting problematic connections and network issues.

## IMPERATIVE 4:

### Carrier-Class Connectivity 4

Although each operator conforms to 3GPP standards, they implement those standards differently to gain optimal efficiency and performance from their network. Additionally, software from modem manufacturers is designed to serve multiple operators within broad markets. Enterprises depend upon edge networking vendors to get the most out of operators' networks.

#### Example

An operator may invent a network technology that accelerates mobile tower connections and requires end-point synchronization. If the edge network vendor does not customize its solution for this feature, the enterprise will experience sub-optimal performance.

## IMPERATIVE 5:

### Intelligent Hybrid WAN Connectivity 5

Although many IT pros may view wired and wireless edge platforms as distinctly different systems, the success of SD-WAN is changing that mindset. With 5G rivaling the fastest wired connections, enterprises are eager to expand their wireless WAN connections.

#### Example

An enterprise may choose to add wireless to its existing SD-WAN platform. This "wired-first" SD-WAN solution would have minimal control over potentially thousands of wireless adapters. Or, an enterprise may choose to implement a "wireless-first" SD-WAN solution with robust wireless capabilities but with little or no wired SD-WAN capabilities.