

## Comprehensive LTE and 5G Applications Market Sizing and Analysis released by Mind Commerce

Sees Substantial Opportunities in Private Wireless for Enterprise, Industrial, and Government Sectors. Edge Computing a Key Component of 5G Business Solutions.

SEATTLE, WASHINGTON, UNITED STATES, May 24, 2019 /EINPresswire.com/ -- The business case for transitioning from 3G to 4G/LTE was easy compared to migration from LTE to 5G.

Migrating from 3G to LTE was all about simply doing more of the same, only faster. It meant that video via mobile would expand dramatically (which it did) and most smartphone apps conceived would operate in an acceptable manner, which they do, as evidenced by the number and type of OTT based apps continues to rapidly grow.

However, LTE is about more than just consumer apps as Mind Commerce sees global revenue of \$5.5 billion for LTE based SMB mobility apps and service by 2024.

LTE also continues to evolve with LTE Advanced and LTE Advanced Pro. Accordingly, many existing applications and



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services will remain reliant upon 4G technology. For example, Mind Commerce sees 1.1 billion application users globally that rely upon LTE Advanced Pro by 2024. Core LTE Advanced Pro applications include VoLTE, real-time communications, Web browsing, video, connected vehicles, and various SMB apps and services.



Business Case for Transitioning from 3G to 4G/LTE was Easy compared to Migration from LTE to 5G" *Mind Commerce*  In return for substantial capital spending on both radio access network equipment and core network infrastructure, global wireless carriers anticipate that the fifth Generation (5G) of cellular communications will be a viable alternative to fixed network broadband and also act as the catalyst for many new and enhanced applications and services.

In the near term, the 5G applications market is not anticipated to consist of a substantial amount of consumer apps and services as compared to LTE. Instead, there will be mainly extensions to existing services such as much faster portable hotspots, improved browsing, and video viewing.

There will also be some cannibalization of fixed network offerings due to 5G fixed wireless access for business, and to a lesser extent, the retail market as a consumer ISP alternative. Longer term, Mind Commerce sees 5G acting as a launch pad for enhanced consumer wireless services such as augmented reality, virtual reality, and cloud gaming.

Many enterprise and industrial solutions will emerge that depend upon 5G that were previously impractical due to limitations of other wireless technologies. For example, WiFi is not reliable enough for certain IoT related applications such as a sensor that wakes-up to send a message about critical measurements for industrial equipment.

Mind Commerce sees a \$29.4 billion global 5G applications market for enterprise and industrial segments by 2024. Key applications and services will be:

- IoT Connectivity
- SMB Mobility Apps and Service
- Enterprise Mobility Apps and Services
- Fixed Wireless Enterprise Connectivity
- Fixed Wireless Industrial Connectivity

The 5G applications market is going to have much more reliance upon enterprise, industrial, and government customers than LTE. Many of these deployments will be private networks. Some of those private networks are going to



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be in competition with the carriers as the likes of Nokia are actually competing with their own customer (e.g. carriers) by providing them.

Mind Commerce sees a global <u>5GNR market for private wireless</u> in industrial automation reaching \$3.1 billion by 2024. Key applications will be robotics (in general) as well as enabling smart factories (tele-robotics, teleoperation, connected equipment/machines).

Enterprise, industrial, and government segments that have private LTE and 5G deployed will be supported by Mobile Edge Computing (MEC) platforms. Some of private wireless operations will be carrier owned/managed and some owned by the business customer and either managed by the carrier or most likely some other third party that provides orchestration and/or application management.

Mind Commerce sees an emerging MEC-based <u>computing as a service market for 5G private</u> <u>wireless</u> solutions business customers (particularly industrial) aggressively pursue modernization and greater flexibility over industrial Ethernet.

In general terms, 5G will enable many new advanced functions such as significantly greater capacity, dramatically lower latency, and optimized support for Internet of Things (IoT) networks. It will support enhanced mobile broadband, ultra-reliable communications, and massive IoT deployment. The 5GNR portion supports Ultra-Reliable and Low-Latency Communication (URLLC) for latency-sensitive apps and services for various consumer, enterprise, and industrial use cases.

5G applications fall into three distinct categories:

(1) Enhanced mobile broadband (eMBB): Mobile broadband based apps will use MEC for more efficient operation. Localized processing will allow apps such as cloud-based gaming to run more smoothly and efficiently due to localized data caching and access to CDNs rather than routing all data through the network core. This will improve overall throughput, reduce latency, and minimize carrier resources needed to support data-hungry apps.

(2) Ultra-reliable low-latency communications (URLLC): MEC will be particularly important in support of latency-sensitive apps and services for various consumer, enterprise, and industrial use cases. The combination of 5G and MEC is expected to reduce network latency significantly,

which will enable many previously tethered-only applications and services such as VR, UAV control, autonomous vehicles, real-time remote control, haptic or tactile communications, and more.

(3) Massive machine-type communications (mMTC): MEC will facilitate an entirely new class of low-power devices that rely upon MEC equipment for processing. Stated differently, some IoT devices will be very light-weight computationally speaking, relying upon edge computing nodes for most of their computation needs.

For more information, see the Mind Commerce report, <u>LTE and 5G Applications and Services</u> <u>Market</u> by Service Provider Type (MNO, OTT, End-user), Connection Type, Deployment Type (Public and Private Virtualized, Dedicated, and Hybrid), Use Cases, 5G Service Category (eMBB, mMTC, URLLC), Computing as a Service (Public, Private, Hybrid), Industry Verticals, Region and Country 2019 – 2024, which is the most comprehensive research available addressing the LTE and 5G application and service market. This report evaluates cellular broadband applications and services including revenue and usage (subscribers/users) by LTE, LTE Advanced, LTE Advanced Pro, and 5G. The report also assesses the LTE and 5G applications market in private wireless networks as well as market opportunities for Mobile Edge Computing (MEC) in public and private networks including the market for computing as a service.

## About Mind Commerce

Mind Commerce is an information services company that provides research and strategic analysis focused on the Information and Communications Technology (ICT) industry. Our ICT reports provide key trends, projections, and in-depth analysis for infrastructure, platforms, devices, applications, services, emerging business models and opportunities.

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