Impact of mmWave 5G

South and South East Asia and the Pacific Islands

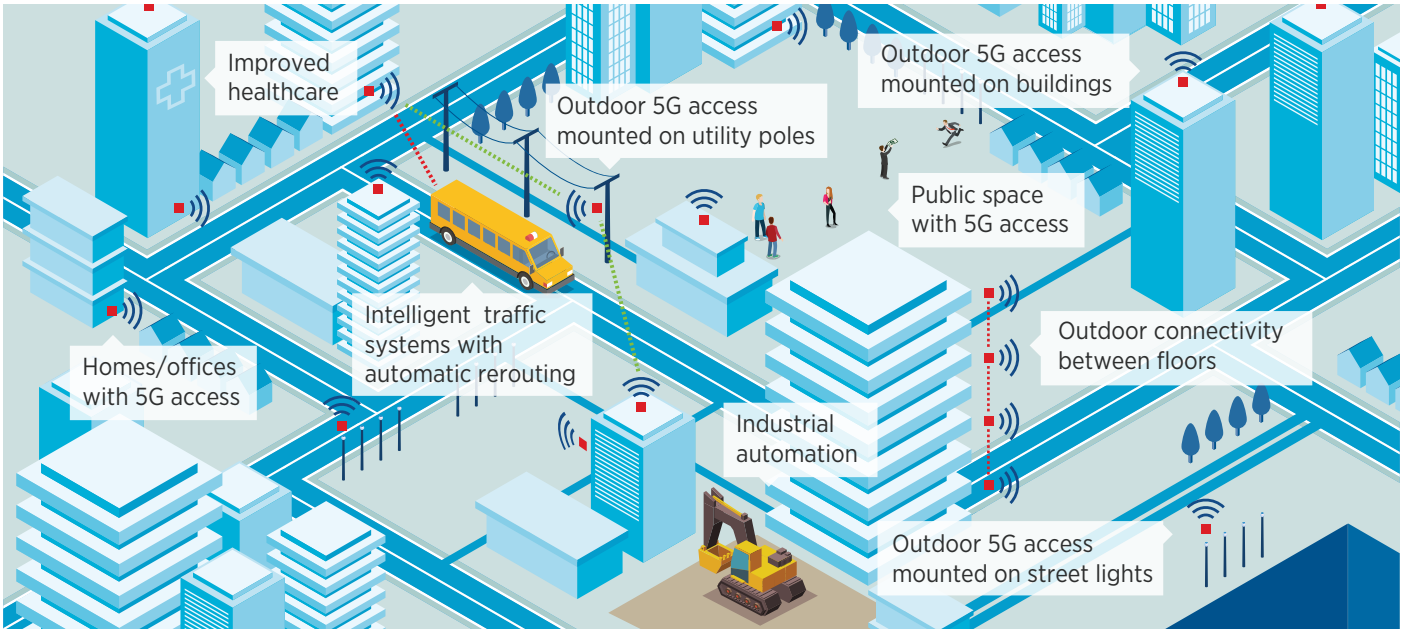
The unique performance benefits of mmWaves, including ultra-high speeds and low latencies, will drive the revolutionary impact of the most advanced 5G services.

In the South and South East Asia and the Pacific Islands regions, mmWave 5G offers a wealth of opportunities to innovate in areas such as high-capacity, low-latency connectivity and disaster communications.

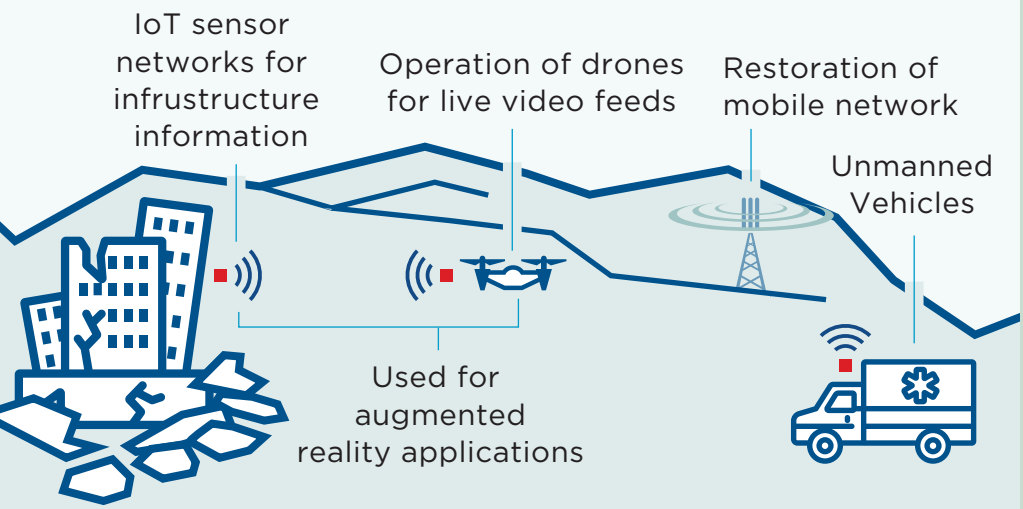
Case Study #1: Connectivity

Expanded broadband access

This case study examines how mmWave 5G can improve the region's connectivity, allowing policymakers to help improve quality of life for citizens. mmWave 5G provides fibre-like speeds without the high deployment costs of fixed infrastructure, allowing everyone and everything to connect to data-intensive 5G applications.



Case Study #2: Disaster Communications

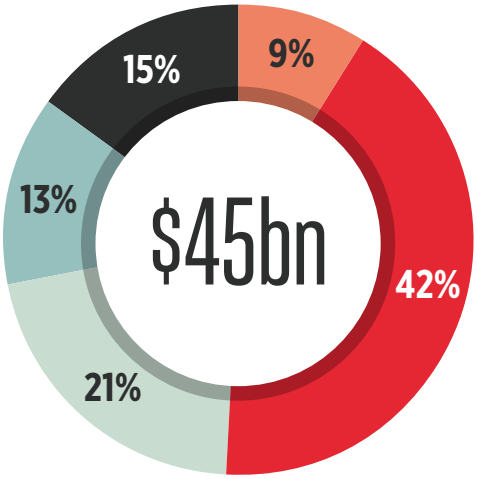


Source: TMG

Faster, more efficient emergency response

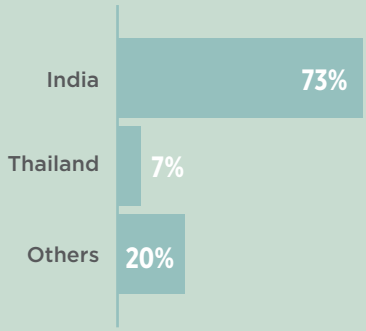
This case study considers the different ways in which mmWave 5G applications may impact the region's ability to handle natural disasters. Several mmWave use cases are relevant, such as automated vehicles and connected infrastructure, virtual reality applications, and quick deployment to maintain connectivity.

WHAT INDUSTRIES WILL BE MAKING THE BIGGEST CONTRIBUTIONS BY 2034?



- Agriculture, mining, quarrying
- Manufacturing, utilities, construction
- Professional and financial
- Government, public security, education and health
- ICT and trade

From what countries will contributions come from?



USE CASES OVERVIEW – WHY MILLIMETRE WAVES MATTER

Behind these numbers, 5G will be deployed across several new areas. Many 5G use cases will depend on mmWave spectrum to reach their full potential.

High-speed broadband in home and office

High-speed mobile broadband to homes, offices and public spaces is one of the first 5G use cases being implemented. Fibre-like ultra-high speeds will need the capacity of mmWave 5G.

Quick deployment/temporary connectivity

The transmission of live events and disaster response efforts require ultra-high speeds and low latency to deliver a high-quality experience to all kinds of users.

Industrial automation

Large-scale industrial automation relies on mmWaves. That's because next-generation manufacturing will produce large amounts of data. Low-latency communication is also crucial.

Remote object manipulation

Low latency and data rate requirements mean mmWave connectivity is expected to play an important role here including advanced healthcare applications.

Virtual reality and meeting

Thanks to latency and peak data rate requirements, mmWaves will benefit virtual and augmented reality. For example, educational applications are likely to produce high volumes of data that will rely on mmWave 5G.

Next-generation transport connectivity

High data volumes and high-density real-time communications must be addressed by a combination of mmWave and lower bands to enhance services, especially in cities with dense traffic.

A LONG-TERM PROCESS

The mobile industry has a history of maximising the socio-economic impact of its spectrum resources. There are almost **9 billion** mobile connections and over **5 billion** unique subscribers. This has not happened overnight. It is the result of a harmonised effort across the whole mobile ecosystem. Mobile operators, device makers, system vendors and chipset manufacturers are making mmWave 5G happen. To make the most of this opportunity, spectrum needs to be agreed at WRC and assigned to mobile operators.

Read the full report at:
https://www.gsma.com/spectrum/5G-mmwave-benefits

Read more about what we can accomplish at WRC-19 here:
https://www.gsma.com/spectrum/wrc-series/

July 2019