The upcoming future technologies will require a very wide frequency bandwidth to transfer high definition data for various users at a time. Wireless engineers and business planners commonly raise the question on where, when, and how millimeter-wave (mmWave) will be used in 5G and beyond. Since the next generation network is not just a new radio access standard, but instead an integration of networks for vertical markets with diverse applications.

The propagation issues related with mmWaves can be avoided by selecting a suitable type of antenna for 5G systems. Therefore, the main idea of this work is to give an expanded overview of current broadband antenna design and technology issues regarding 5G compatibility. The focus of this research should lie on the applicability considering antenna parameters like bandwidth, gain, efficiency, polarization diversity and adaptive beam steering.