immersive communication) and satisfy much stricter application requirements arising from the edgecloud continuum. These new applications will push the bounds of innovation and bring about revolutionary change throughout the architecture of future mobile networks, raising the bar for performance, ubiquity, trustworthiness, security, openness, and sustainability.

. In this paper, some emerging technologies and applications introduced and developed by the 6G communication technology are presented in section II and the main challenges facing the achievement of the 6G goals are addressed in section III.

EMERGING TECHNOLOGIES AND APPLICATION

New functions and applications are made possible by every communication system. The introduction of AI, automation, and smart cities was pioneered by 5G. But these technologies were only partly incorporated. More technologies and applications that offer faster data speeds, high dependability, low latency, and secure, efficient transmission are being introduced by 6G.

Fig. 1 depicts the importance of 6G communication.6G offered new uses, trends, and technologies. Some of these 6G technologies and applications are explored in this section.

FIG.1 6G USES,TRENDS AND TECHNOLOGIES

A.TERA HERTZ COMMUNICATION

The RF spectrum is nearly filled and cannot accommodate the steadily rising demand for wireless technology. The THz spectrum, which spans 0.1 to 10 THz, will be essential to 6G's ability to deliver ultrahigh data rates, increased capacity, bandwidth, and secure transmission. The Internet of Nano-things will be facilitated by the THz band, which will enable the development of tiny cells with nanometer to micrometre dimensions. These cells will provide extremely fast communications up to a distance of 10 metres. Since Tbps communications cannot be supported by technologies utilising frequency bands smaller than 0.1 THz, 6G will be the first wireless communication system to support Tbps for high-speed communication.

B.ARTIFICIAL INTELLIGENCE

Neither 4G nor any of the earlier versions included artificial intelligence (AI). It is partly backed by 5G, which is revolutionising the telecoms industry and creating doors for new and exciting applications such.