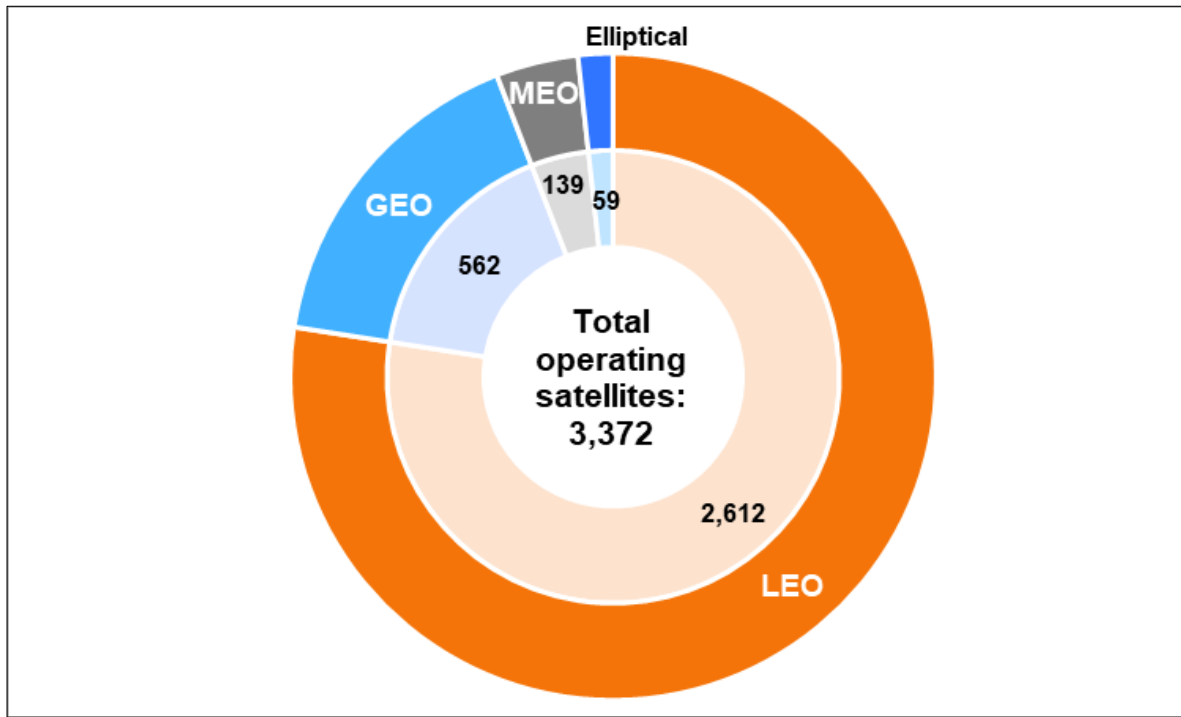


Figure 1: Total active satellites, by orbit type – 2020



Source: Union of Concerned Scientists Satellite Database; MTN Consulting

With the advancement in satellite development in recent years, new opportunities along with challenges are also evolving. Higher bandwidth brings the possibility to provide multi-media services, such as high-definition video streaming, online gaming, and virtual reality via satellite communication networks; the lower altitude of LEO networks ensures lower latency for better network performance. Large fleets of satellites in a constellation network also offer higher network capacity and extra redundancy for network stability.

As LEO constellations are designed to provide high-quality network service comparable to terrestrial networks, there will be an unprecedented push for these satellites through the end of this decade. By 2030, more than 50,000 LEO satellites are expected to girdle the planet aided by large-scale manufacturing and launch of satellites by new era space-tech operators. That's 20x today's number of active satellites orbiting Earth – see figure below. Out of this, China alone has more than 14,000 LEO satellites in the pipeline.