Comparing Applications of 4G, 5G, and 6G

The evolution of information and communications technology (ICT) will continue to enable increasing levels of interconnected and digitized operations within the homeland security enterprise.

Today

4G
Internet of Applications
- Advanced Antenna Arrays (Reduced Network Congestion)
- Faster Network Speeds (Increased Data Transmission)

4G Use Cases
- Video Conferencing
- Real-Time Unmanned Aerial System (UAS) Video
- Advanced Biometric Trackers
- Smart Watches

5G
Massive Broadband and Internet of Things
- Decreased Latency (Faster Data Transfer Rates)
- Improved Data Reliability (Low Data Transfer Failure Rate)
- Expanded Capacity (More Connected Devices Supported)

5G Use Cases
- First Responder Priority Networks
- Indoor and Outdoor Geolocation of Responders
- Emergency Supply Delivery
- Search and Rescue UAS Fleets
- Smart Surveillance Infrastructure
- Connected Industrial Control Systems

6G
Towards a Fully Digital and Connected World
- Cloud-Hosted Networking (Dynamic Response to Network Demand)
- Network Optimization Using AI (Increased Network Efficiency)
- Powerful Edge Computing (Faster Service in Remote Environments)

6G Use Cases
- Enhanced Motion Detection
- Widely Distributed CBRNE Sensors
- Traffic Pattern Tracking for First Responders
- Smart Cities and Roads
- Border Patrol in Remote Environments
- Automated Mobile Communications

Understanding Technical Advancements of 5G
Comparing Applications of 4G, 5G, and 6G
Identifying 6G Focus Areas for DHS