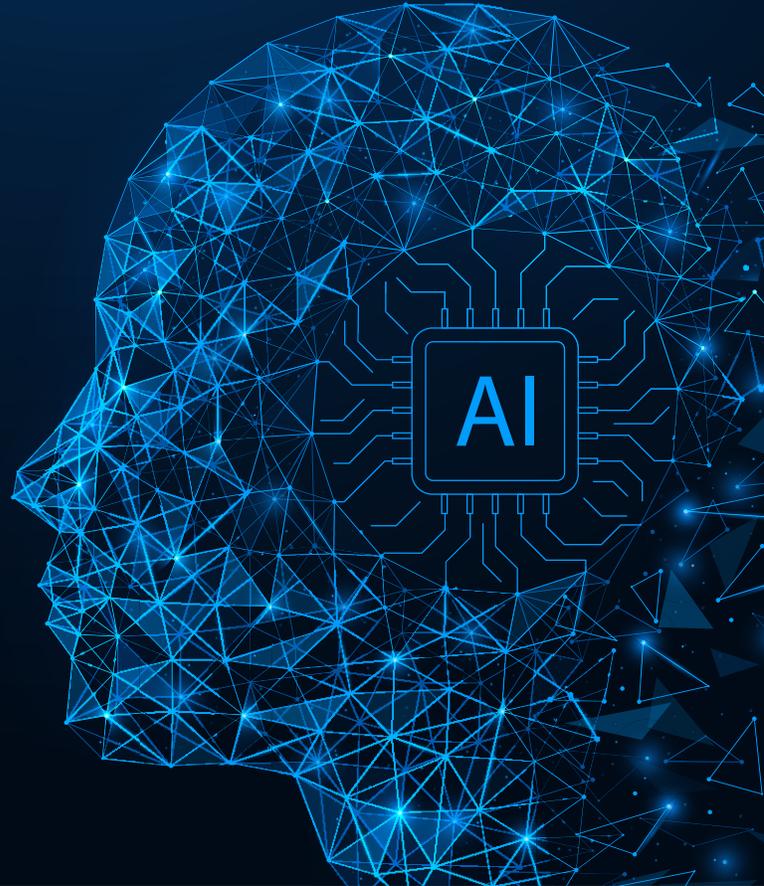# 5G Wireless

Use Cases for Consumers

April 2023

Consumer Technology Association®

"WHAT DOES 5G WIRELESS MEAN TO ME?"

Bandwidth for Fast, Immersive, 4K Video
- Next-gen streaming media
- Fixed wireless & ubiquitous hotspots

Ultra Real-time Experiences
- Millisecond latency for sports, gaming, gambling & interactivity
- Drones, robots, cars, infrastructure

*AI Enablement / Machine Learning
- Enhanced information for consumer decision making and customer support
- Improved inventory availability and personalized shopping experiences

National Networks Bridging Wi-Fi Gaps
- New spectrum → new seamless on-demand services
- Private, enhanced network security

Enhanced Applications for a "Better Life"
- High-capacity real-time video for calling, gaming, entertainment, betting
- Support for metaverse virtual reality
- Enhanced communication privacy and security

*Artificial Intelligence

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STAKEHOLDER IMPACTS

Consumers

Simplified Living
- Personalized, contextualized online interaction
- Improved real-time customer sales and support
- More efficient energy management, transportation

Engagement and Collaboration
- Sellers, doctors, home services
- Real-time interactive gaming, entertainment with friends
- Powers ubiquitous metaverse access

Experiential and Immersive
- Real-time telepresence
- Ultra high-capacity wireless connectivity at home & roaming
- Enhanced multi-sensory applications
- Ubiquitous yet imperceptible connectivity

Business

Efficient Supply Chains
- Enhanced manufacturing quality
- Improved logistics planning / execution
- Seamless IT systems integration

Improved Marketing
- Immersive & proactive
- Personalized, localized, contextualized
- Harmonized in-store & online

Heightened Competitiveness
- Productivity improvement
- Greater value creation

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CONSUMER 5G USE CASES

Safety | Security | Privacy

- HD video monitoring
- Drones
- Personal data protection
- Financial technology
- Access control
- Telemedicine & remote patient monitoring
- Food safety

Next Generation Healthcare

- Enhanced virtual patient care and doctor visits
- Rich, encompassing wellness and fitness applications
- High-involvement, always-present senior and child care
- Enhanced prescription management and delivery
- Remote specialist engagement for surgery and emergencies
- High-empathy, immediate mental health support
- Coordinated incident, emergency response

Marketing | Customer Service

- Retail digital transformation
- Virtual/cashier-less shopping
- In-home repair / installation
- Anywhere video collaboration
- Virtual/augmented reality
- Digital learning/education/training
- Engaged e-commerce

Smart Living
Homes | Transportation | Cities | Entertainment

- Home security/automation
- Transportation & parking
- Power, utilities, infrastructure
- Autonomous vehicles
- Mobile media and gaming
- Immersive sports/gambling
- High-speed home wireless internet

USE CASES BY INDUSTRY

Retail/Consumer

- Shrink control
- Merchandizing
- No cashier checkout
- Virtual shopping
- Warehousing
- Inventory management
- Multi-channel sales
- Worker safety
- Facility management
- Customer service
- Home services
- Personal marketing
- Media / TV / music
- Gaming
- Video conferences
- Mobile gambling
- Buy here, pay here
- Smart homes
- Data privacy
- Financial technology

Logistics

- Just-in-Time inventory management
- Container port management
- Airport safety & operations
- Warehouse management
- Activity-based costing
- Quality control
- Material ordering
- Scheduling
- Dock management
- Geofencing management
- Hazardous material management
- Fuel distribution
- Visual analytics
- Pallet building
- Blockchain
- Product meta-data
- Reverse logistics
- Railway management
- Automated picking

Manufacturing/Agriculture

- Digital Twin
- Workplace safety
- VR/AR training, design
- Work-in-progress
- Production planning
- Warranty management
- Integrated supply chain
- Customer satisfaction
- Customer support
- Warehouse management
- Failure prediction
- AGV / conveyors
- Crop management
- Grain elevators
- Food safety & cold chain
- Water management
- Weather monitoring
- Mining
- Worker safety
- AR/VR engineering & Design

Transportation

- Dynamic transit scheduling
- Shipment tracking
- Chain of custody
- Real-time routing
- Drone delivery
- Inspections
- Dock operations
- High-value goods
- Rail operations
- Ride sharing
- Vehicle diagnostics
- Autonomous vehicles
- Smart vehicles
- Rich media delivery
- Connected cars
- Traffic planning & control
- Smart city integration with vehicles

Infrastructure/Public Sector

- Maintenance scheduling
- Disaster recovery
- Drone operations
- Video inspection
- Failure prediction
- Fleet management
- First responder coordination
- Power grid management
- Incident response
- Geofencing safety
- Military & customs
- Remote digital learning
- Airport safety
- Pipelines
- Smart city integration

Healthcare

- Remote patient monitoring
- Clinical trials
- Medical supplies
- Home health
- Mobile health
- Mobile imaging
- Pharmacy operations
- Hospital equipment tracking
- Remote surgery
- Managed care facility support
- EMT live support
- Scheduled drugs
- Pet / livestock tracking
- Organ transplant management

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THANK YOU TO THE 5G USE CASES WORKING GROUP PARTICIPANTS

- BDS Marketing
- Best Buy
- Celluphone
- DISH
- dTOOR & The Cyrcle Phone
- Hechtman Venture Development
- Helo Perspective LLC

- Ice Mobility
- Microsoft
- Qualcomm
- Rexi, Inc.
- Samsung
- Verizon Wireless

THANK YOU TO OUR CONTRIBUTING PARTNER

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