



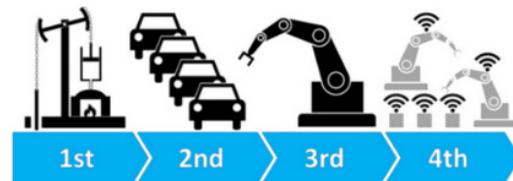
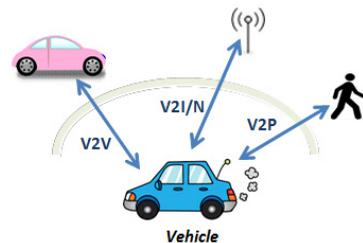
# *LGE's View on SA1 6G Study*

Source: LG Electronics  
Agenda item: 8. 6G Study (Stage 1)  
Document for: Discussion

# Critical Roles of 3GPP – Review



- 📶 designed to support “things” (R10/11/12)
- 📶 R14~: to support “smart things” or “smartly support” things
  - LTEV2X, NR V2X (eV2X), device with aerial mobility (UAV)
  - TSN (Industrial/Medical Robots, Audio/Video Service (non-conventional))
  - Asset Tracking (much longer lifespan)
  - Support of Smart Grid



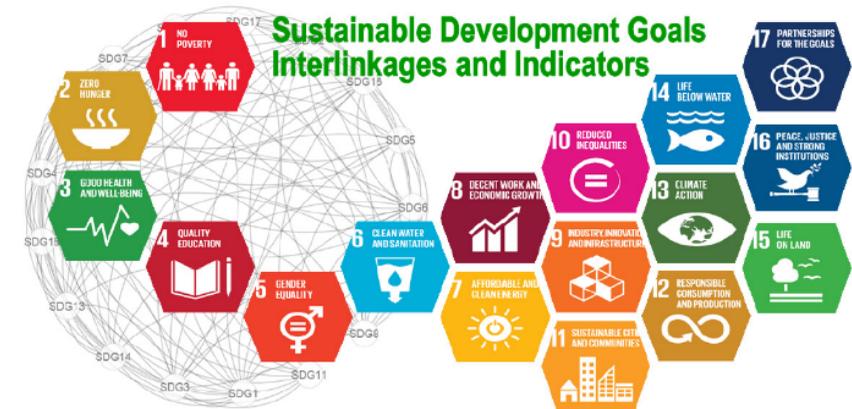
# Critical Roles of 3GPP – Vision



- 📶 Innovate how we live, work and interact
  - Emergency preparedness/response, disaster relief,
  - Quality of Living (QoL) improvement,
  - Resiliency (also, related to security, e.g., in post-quantum era)
  - Sustainability

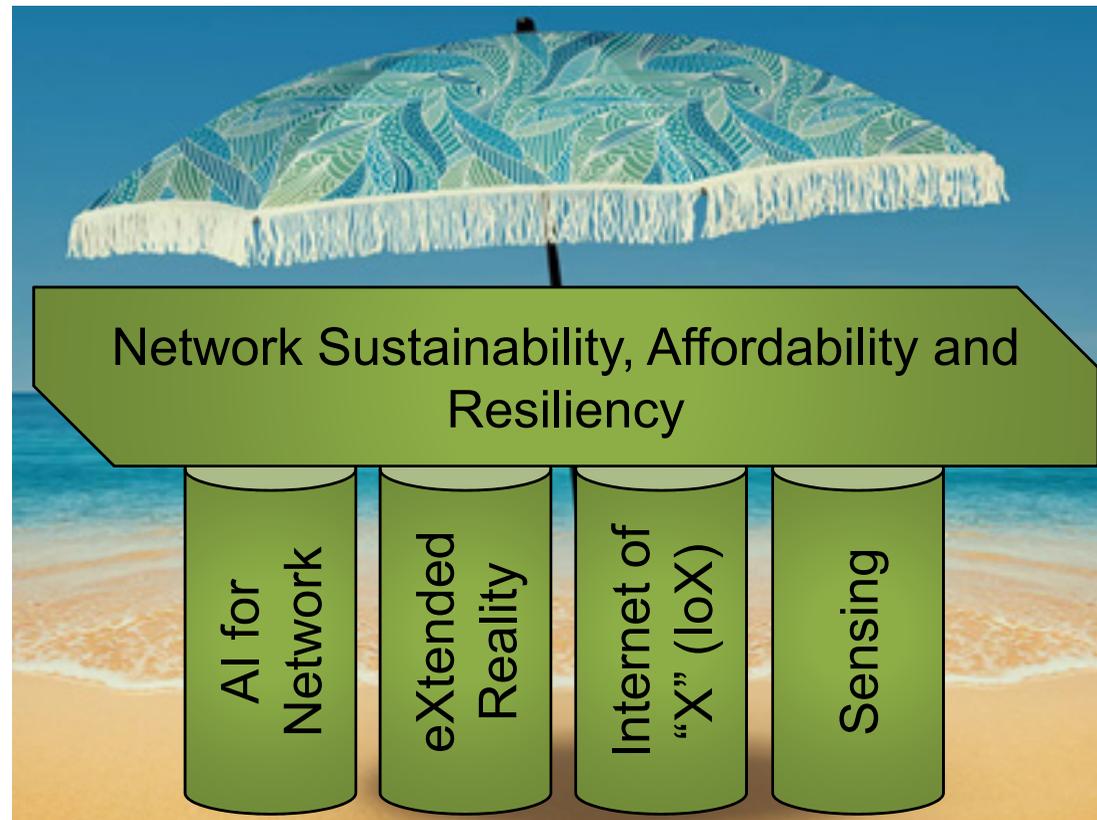
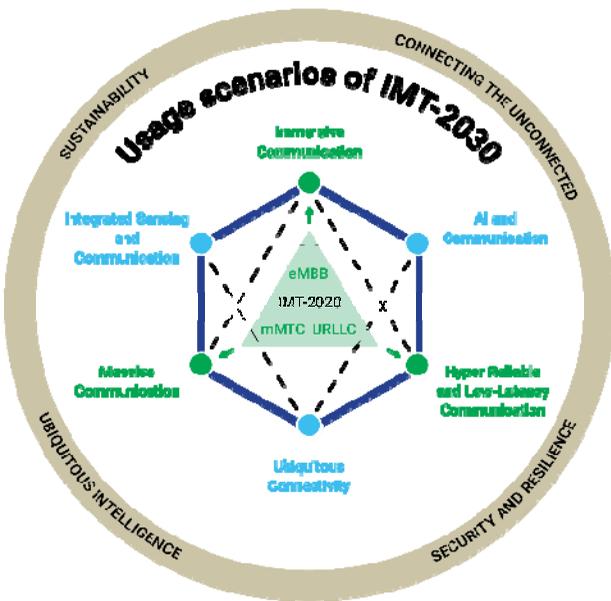


Sustainable  
Resilient  
Human-centric

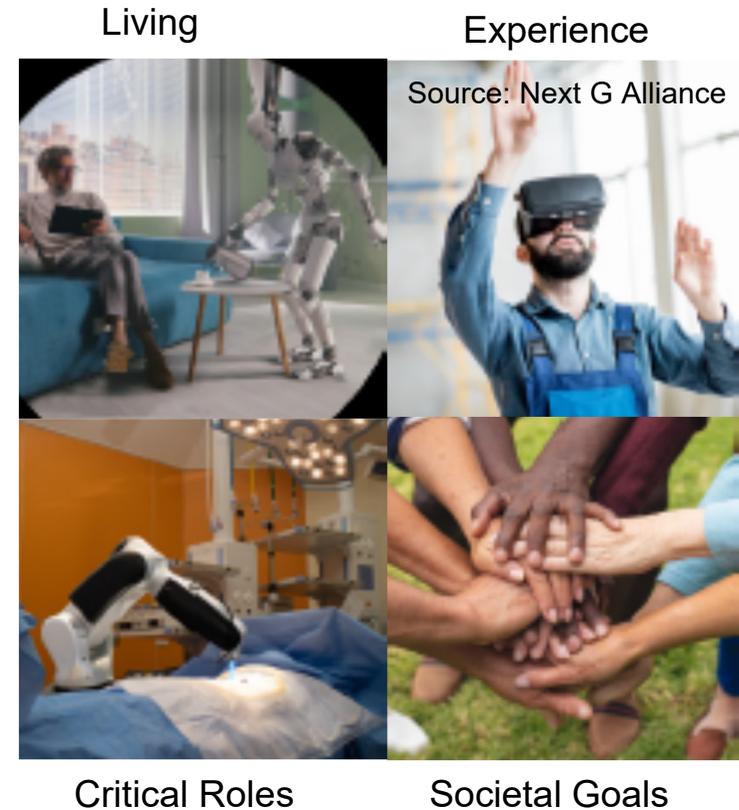


# Candidate Themes of Study

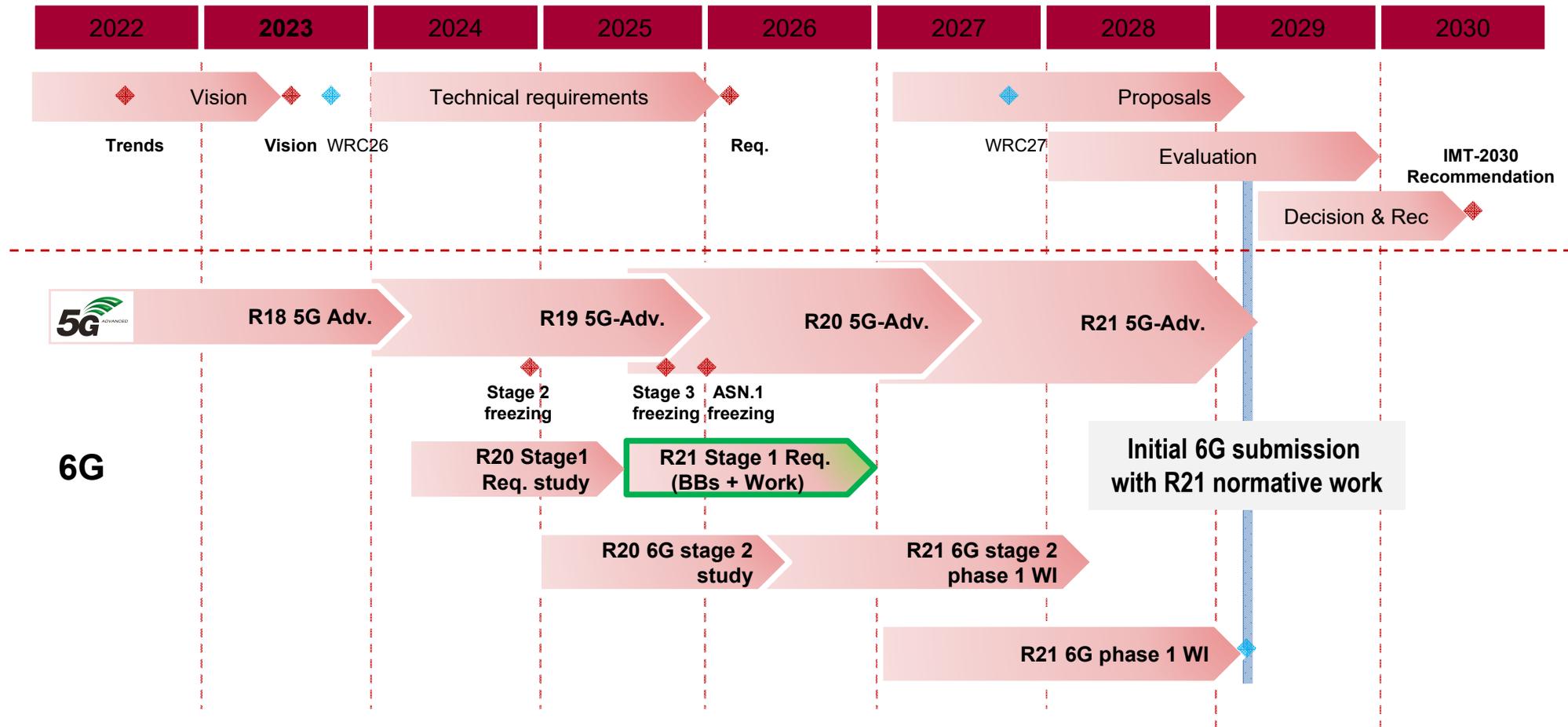
- To reflect regional perspectives (such as economic needs)
  - Identify economic needs and Connect them to the uncovered set of features/capabilities
  - Process: to start with one umbrella study item



"X": Smart / Collaborative Physical Systems [including Air/Ground Mobility]



# View on Timeline – R20 Umbrella Study; R21 Breakout and Normative Work



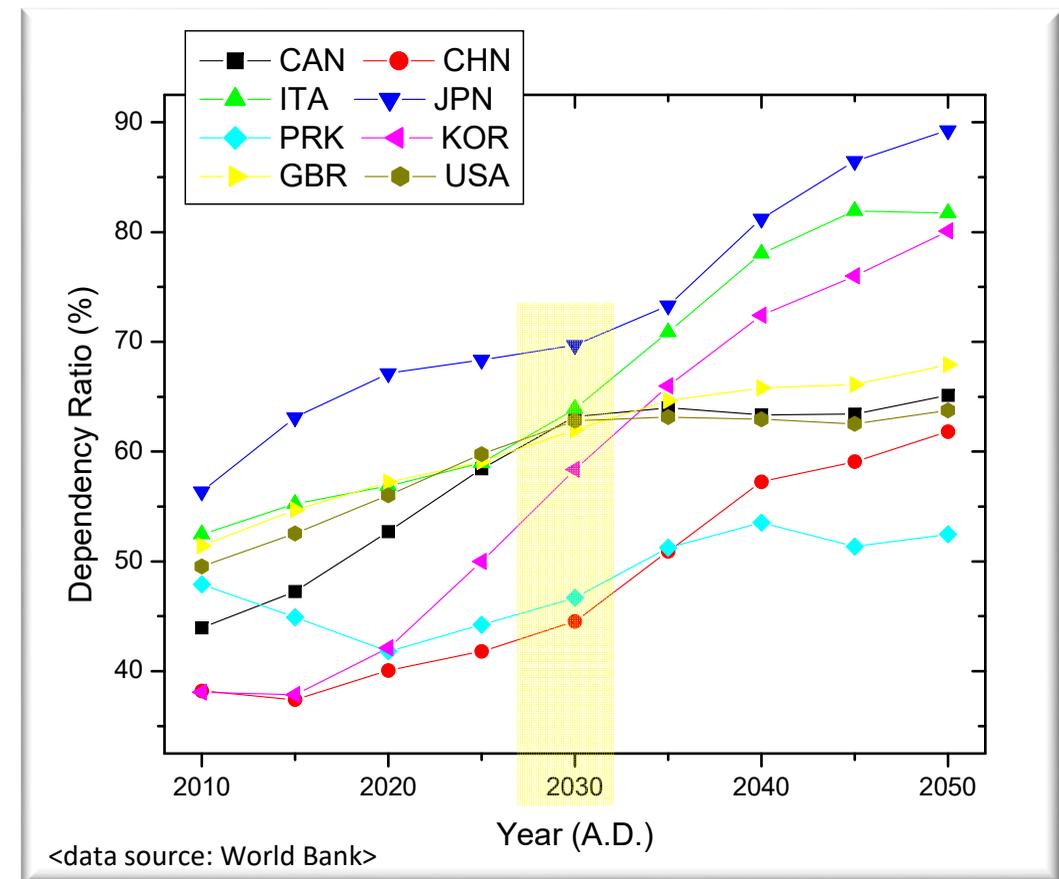
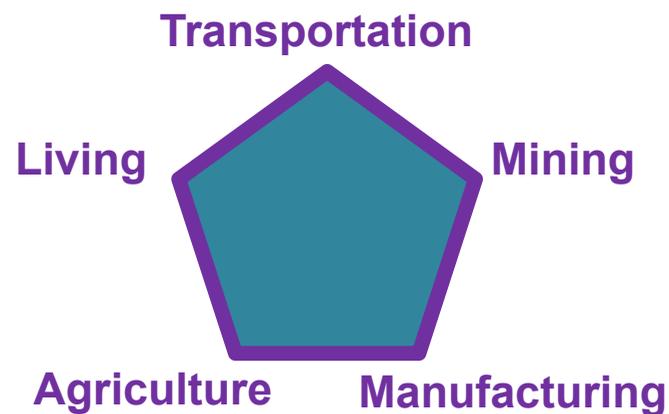
# Implications of Population Aging for “QoL” in the 6G Era



## Population Aging\*

- Growing “Dependency Ratio (DR)” of Society
- Young/Old Age Dependency (~15/65~)

## Implications in areas (“QoL”):



\*: Sources: United Nations Report, Next G Alliance Reports, IEEE Communications Magazine

# Living

## >> Services via End-to-End AI-enabled 6G Systems <<

### Assisted-Living Applications

- Innovate the way to create a personalized experience
- Example features for requirements: Autonomous maneuvering, situation awareness, privacy and security (on all kinds of signals: acoustic, audio, video, ultrasound and others)

### Wellbeing and Therapeutic Applications

### Healthcare Applications

- Innovate the way to create a better and personalized experience
- Example features for requirements: a network of smaller networks, multiple routes management, energy /resource efficiency support, privacy and security

### Massive Cleaning / Disinfection Applications

- Enterprise buildings, hotels, train stations, airports, and vertiport platforms



Hotel, Classroom, Restaurant, Office, etc



# Intelligent Transportation System

>> Services via End-to-End AI-enabled 6G Systems <<

## Advanced Mobility Service



Urban Air Mobility (UAM)\*

- UAM mission-specific network resource selection
- Management of communication routes among communications nodes in 3D networks

## Advanced Logistics/Delivery Service



ITS Robots\*\*



LGE Logistics Robot – CLOi CarryBot

- Situation awareness
- Network-enabled SLAM
- Ensuring authenticity of intent and maneuver sharing among collaborative physical systems

\*: UAM Image sources: [Airbus](#), [Hyundai](#);

\*\* : 5GAA RobotITS, Next G Alliance Report