

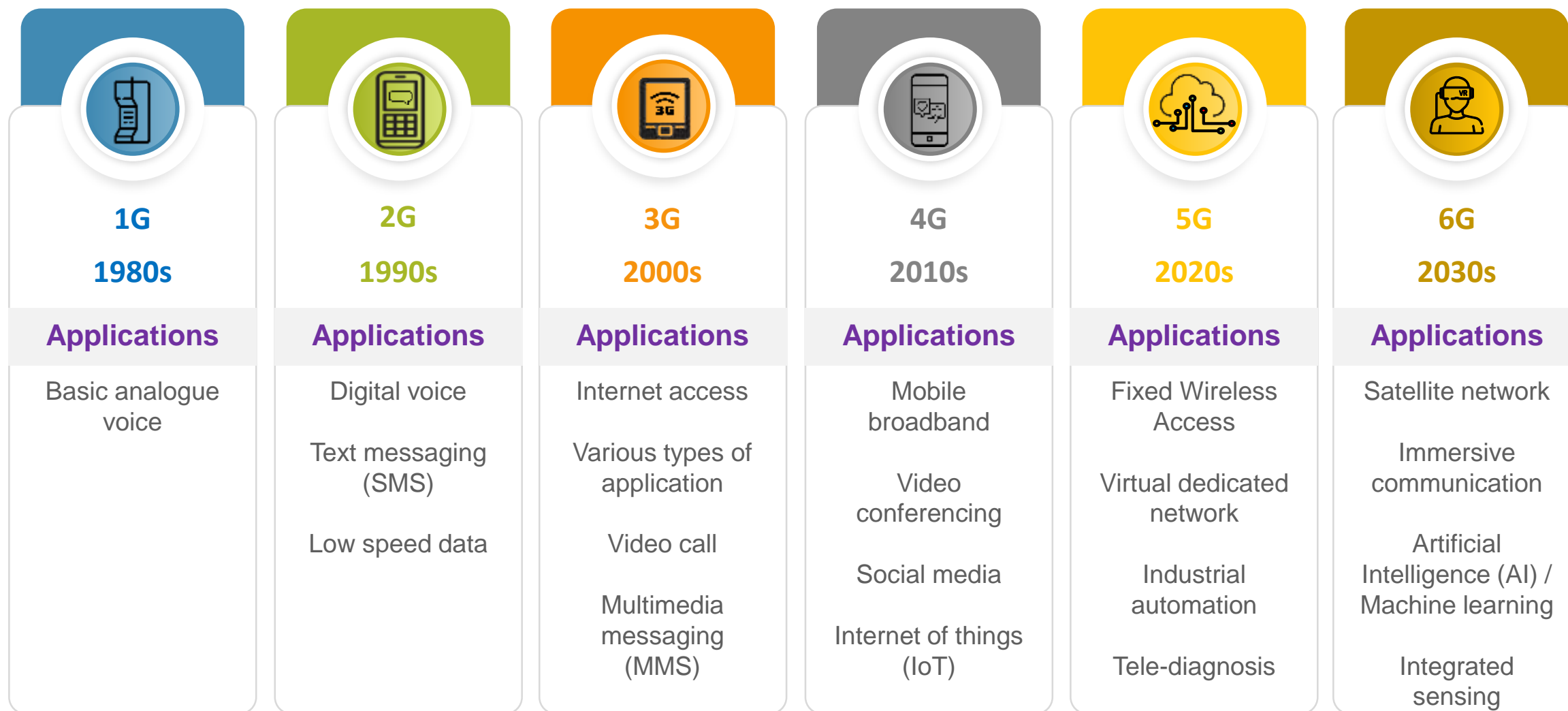
# 6G Vision and Development

Telecommunications Users and Consumers  
Advisory Committee

14 August 2025



# Evolution of Mobile Communication Network



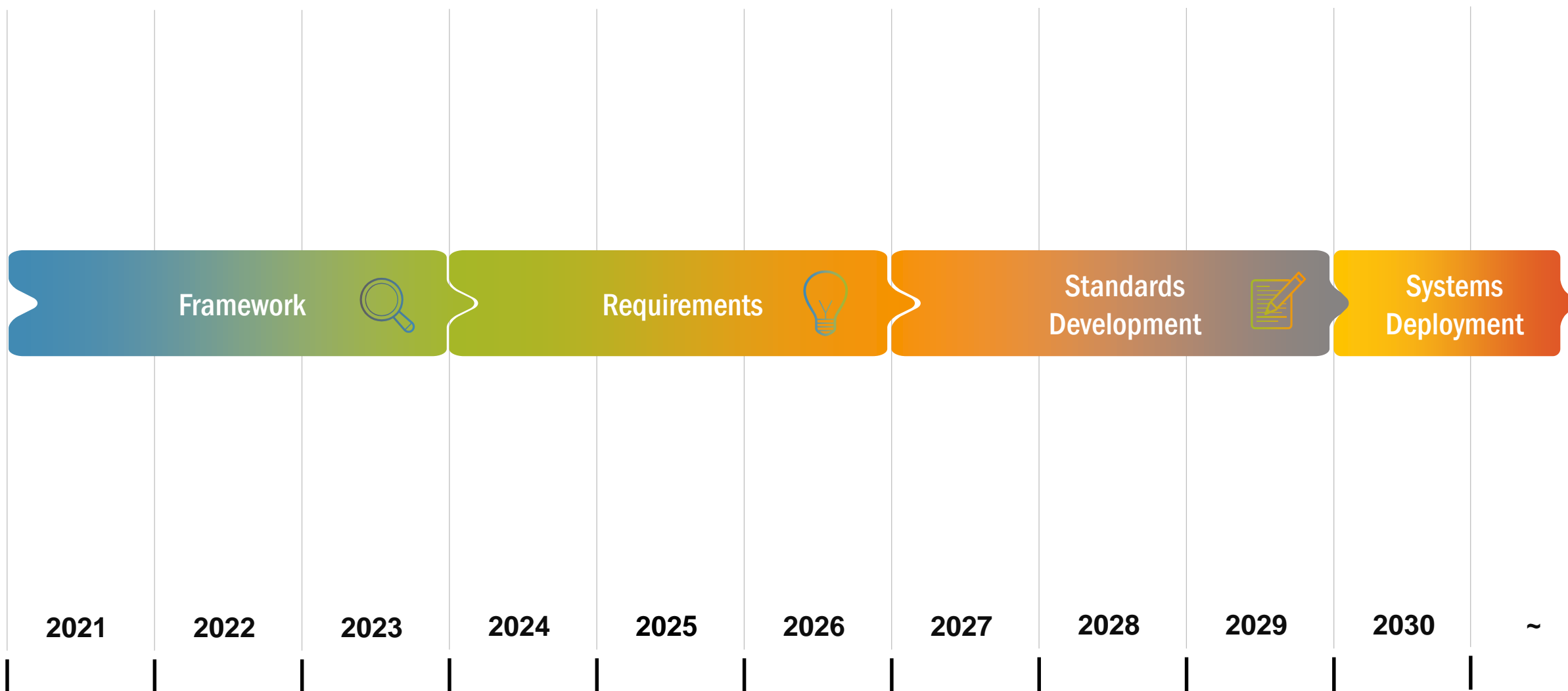


# 6G Development



- The International Telecommunication Union (ITU) is the United Nations specialised agency for digital technologies
- ITU develops the standards for International Mobile Telecommunications (IMT)
- ITU has outlined the framework of **IMT-2030**, commonly referred as “**6G**”
- 6G framework covers **new usage scenarios** and **enhanced capabilities** that extend the boundaries of the current 5G technology
- 6G is expected to be available around 2030

# ITU Timeline for 6G



# Vision for 6G development

## Sustainability

- High energy efficiency
- Reduce greenhouse gas emission



## Connecting the unconnected

- Affordable connectivity
- Extended coverage to sparsely populated areas



## Ubiquitous Intelligence

- AI-enabling infrastructure
- Autonomous network management, self-optimization

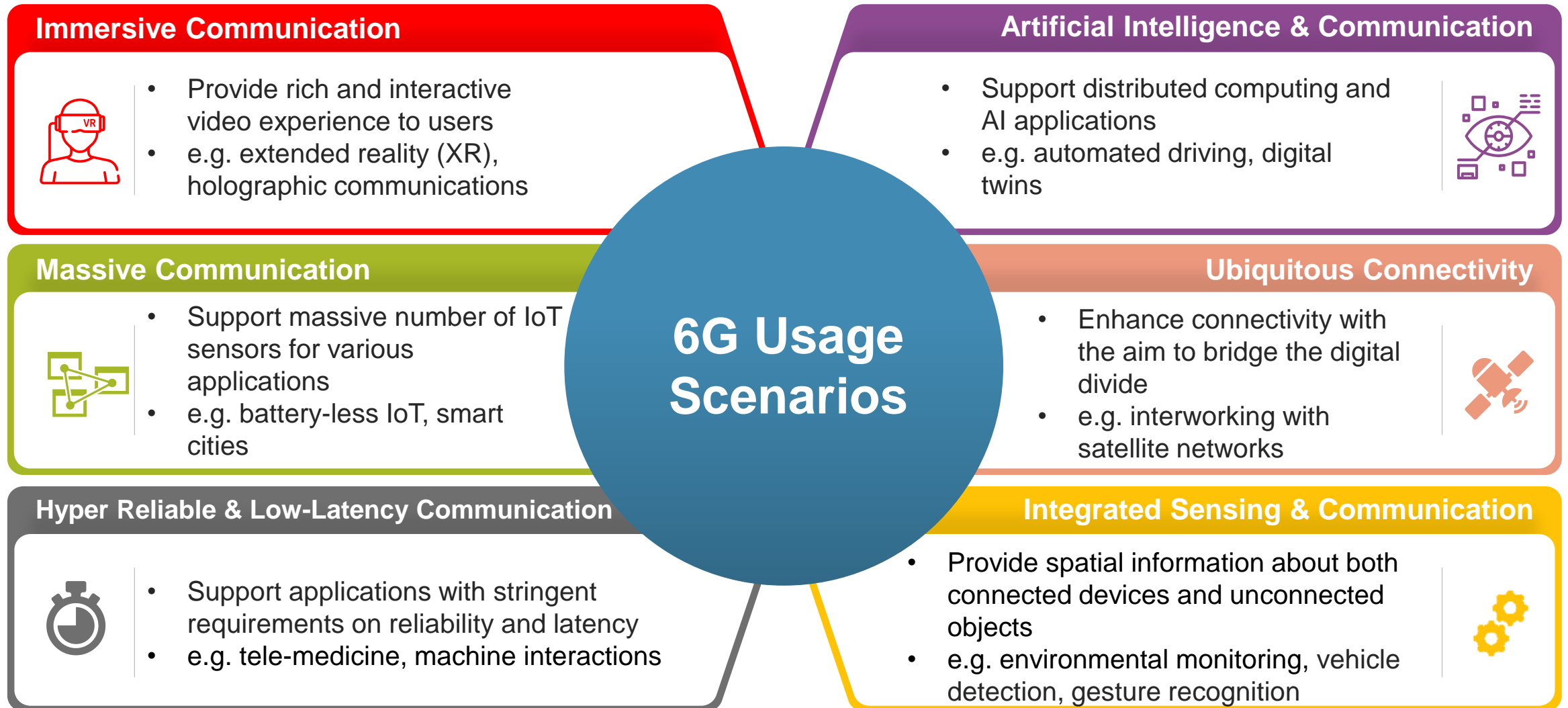


## Security and Resilience

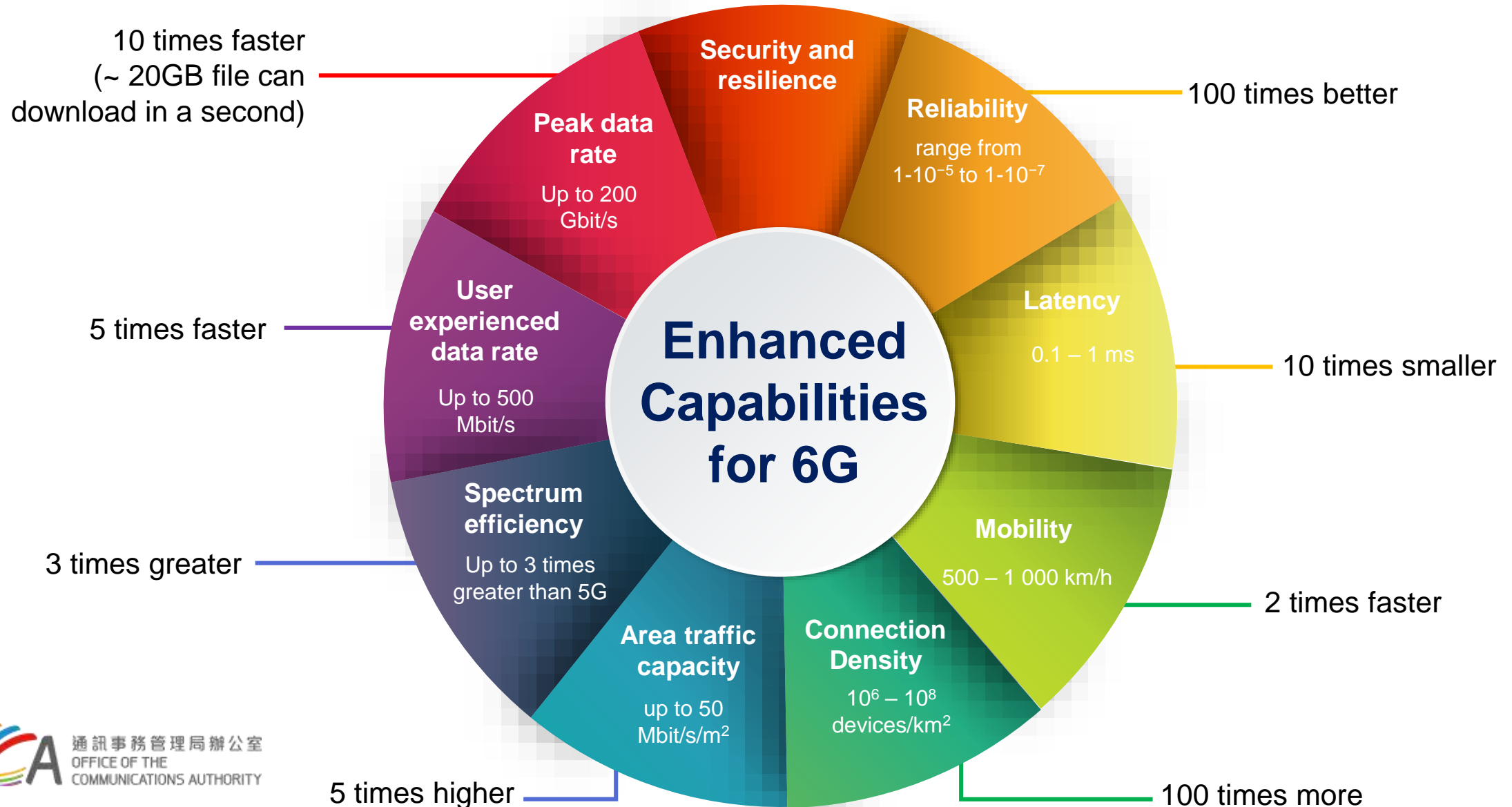
- Secure by design
- Continue operating during a disruptive event



# Usage Scenarios of 6G

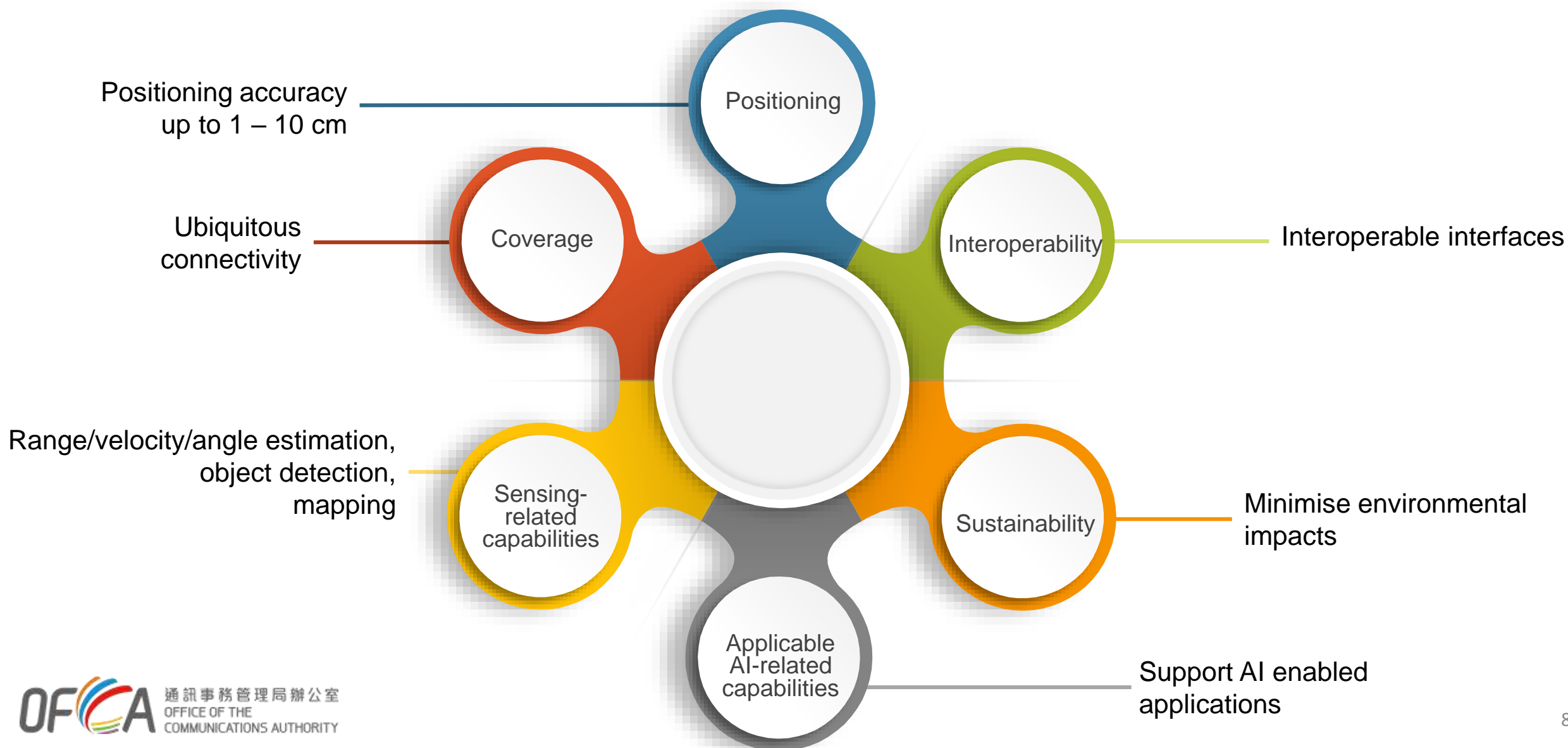


# Enhanced Capabilities for 6G (comparing to 5G)





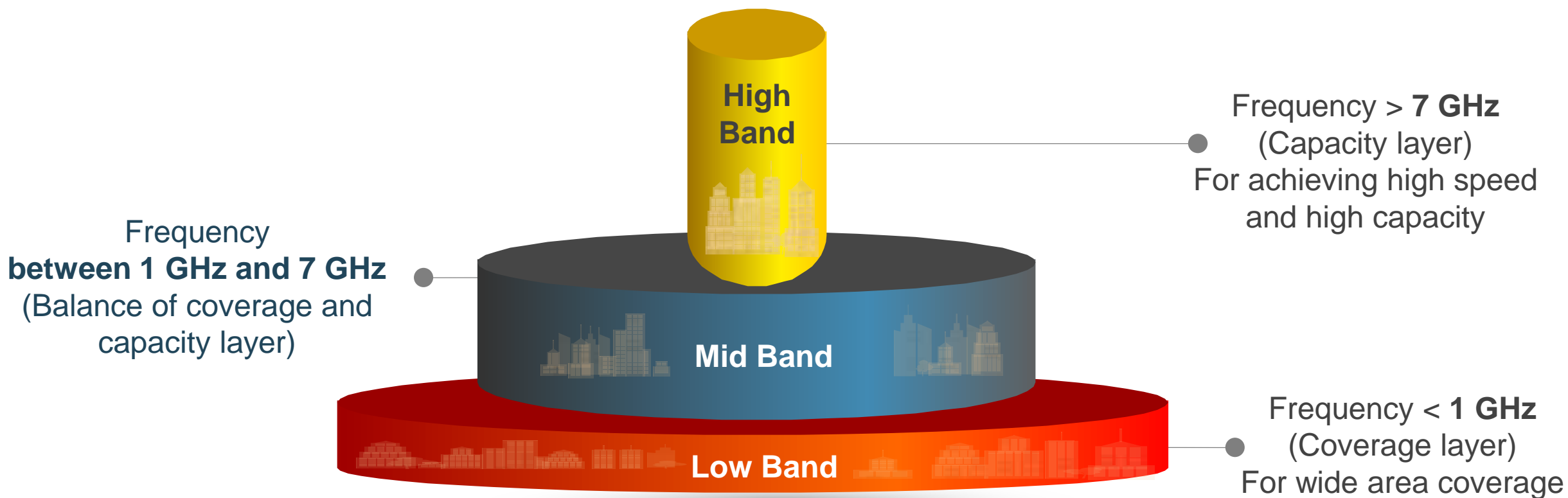
# New Capabilities for 6G





# Key for 6G Deployment – Spectrum Supply

- To realise the full experience of 6G, spectrum in **low, mid** and **high bands** are required to facilitate **coverage enhancement** as well as **capacity enhancement**



# Way Forward

- OFCA will continue to monitor **international development of 6G standard, telecommunications equipment availability** and the **local market demand** to ensure **timely supply of radio spectrum to the industry** for facilitating the development of 6G services in Hong Kong

