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# ITU-R activities on 5G



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# ITU Overview

Helping the World Communicate

**193** Member States  
**673** Sector Members  
**168** Associates  
**108** Academia

## ITU-T

Telecommunication  
standardization  
- network and service  
aspects



## ITU-D

Promote and assist the  
extension of ICTs to all the  
world's inhabitants - narrowing  
the digital divide

## ITU-R

Global radio spectrum  
management and  
radiocommunication  
standardization

# IMT standardization

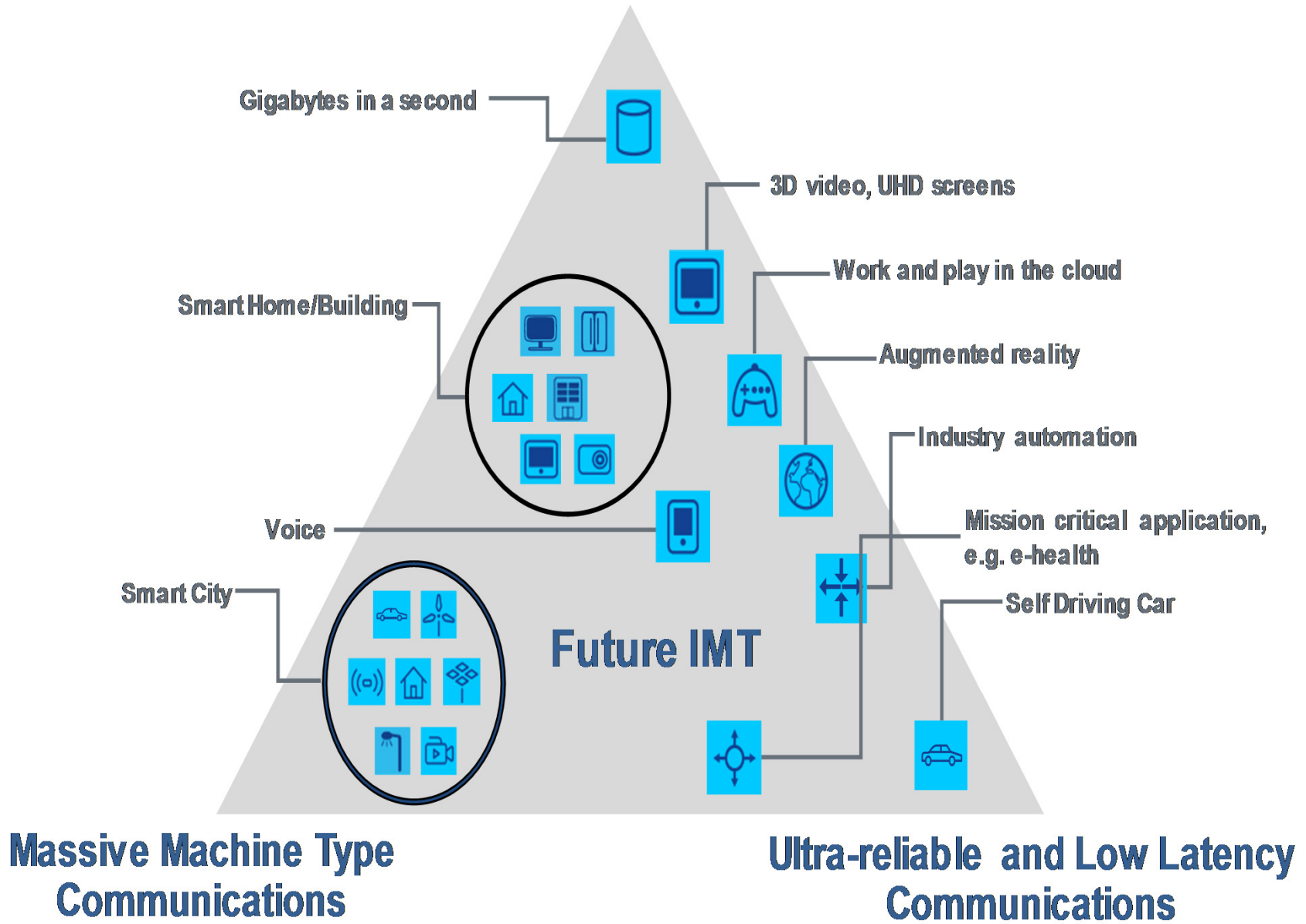


- High-speed, affordable broadband connectivity to the Internet is a foundation stone of modern society, offering widely recognized economic and social benefits.
- High-speed broadband is no longer just cutting-edge technology for an elite few; instead, the steady march of connectivity among the broader population is rapidly transforming our society with new ways of accessing services and information.
- The International Mobile Telecommunications (IMT) framework encompasses both IMT-2000 and IMT-Advanced systems. All of today's 3G and 4G mobile broadband systems are based on the ITU's IMT standards.
- IMT provides the global platform on which to build the next generations of mobile broadband connectivity

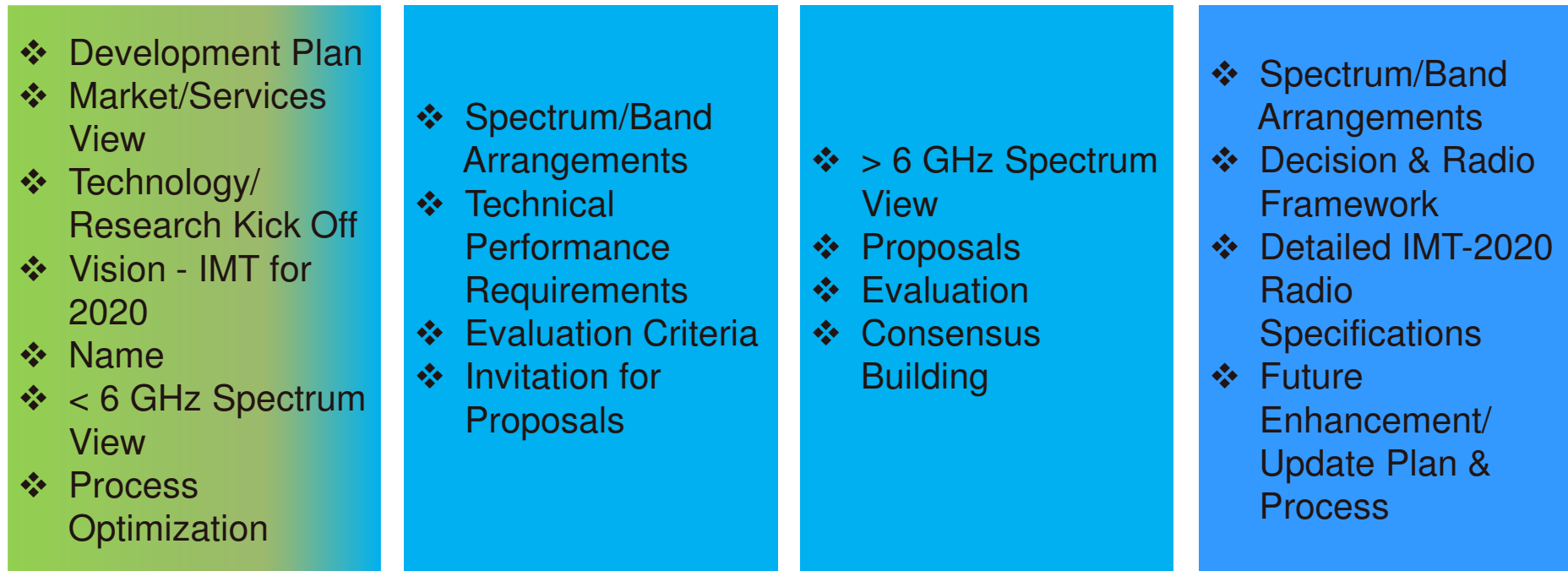
# IMT-2000, IMT-Advanced, IMT-2020

- ITU established the detailed specifications for **IMT-2000** and the first “3G” deployments commenced around the year 2000.
- In January 2012, ITU defined the next big leap forward in wireless cellular technology – **IMT-Advanced** – and this is now being progressively deployed worldwide.
- The detailed investigation of the key elements of **IMT-2020** is already well underway, once again using the highly successful partnership ITU-R has with the mobile broadband industry and the wide range of stakeholders in the 5G community.
- ITU-R WP 5D is working together with these partners in the same open process to establish the criteria for IMT-2020
- The workplan and timeline for the future development of IMT have been defined and all interested parties are warmly invited to participate in this activity.

# Enhanced Mobile Broadband



# IMT-2020 Standardization Process



2012-2015

2016-2017

2018-2019

2019-2020

Setting the stage for the future:  
vision, spectrum, and  
technology views

Defining the  
technology

# Future bands to be studied by 2019

Existing mobile allocation	No global mobile allocation
24.25 GHz – 27.5 GHz	31.8 – 33.4 GHz
37 – 40.5 GHz	40.5 – 42.5 GHz
42.5 – 43.5 GHz	
45.5 – 47 GHz	47 - 47.2 GHz
47.2 -50.2 GHz	
50.4 – 52.6 GHz	
66 – 76 GHz	
81 – 86 GHz	

## Related ITU studies

### **ITU-R – radio standards and spectrum**

- **SG1** - spectrum management, licensing, short range devices, cognitive radio
- **SG3** – propagation studies – incl. studies > 6 GHz
- **SG4** – satellite systems
- **SG5** – intelligent transport systems, sensor networks, **IMT**

### **ITU-T – fixed network aspects**

- **SG13** - Future networks (& cloud)
- **SG20** - IoT and applications, smart cities
- Focus Group on IMT-2020 (FG IMT-2020)



**Thank you!**