

ITU World Radiocommunication Seminar

ITU-R Basics and Facts

2-6 December 2024, Geneva, Switzerland

International Telecommunication Union

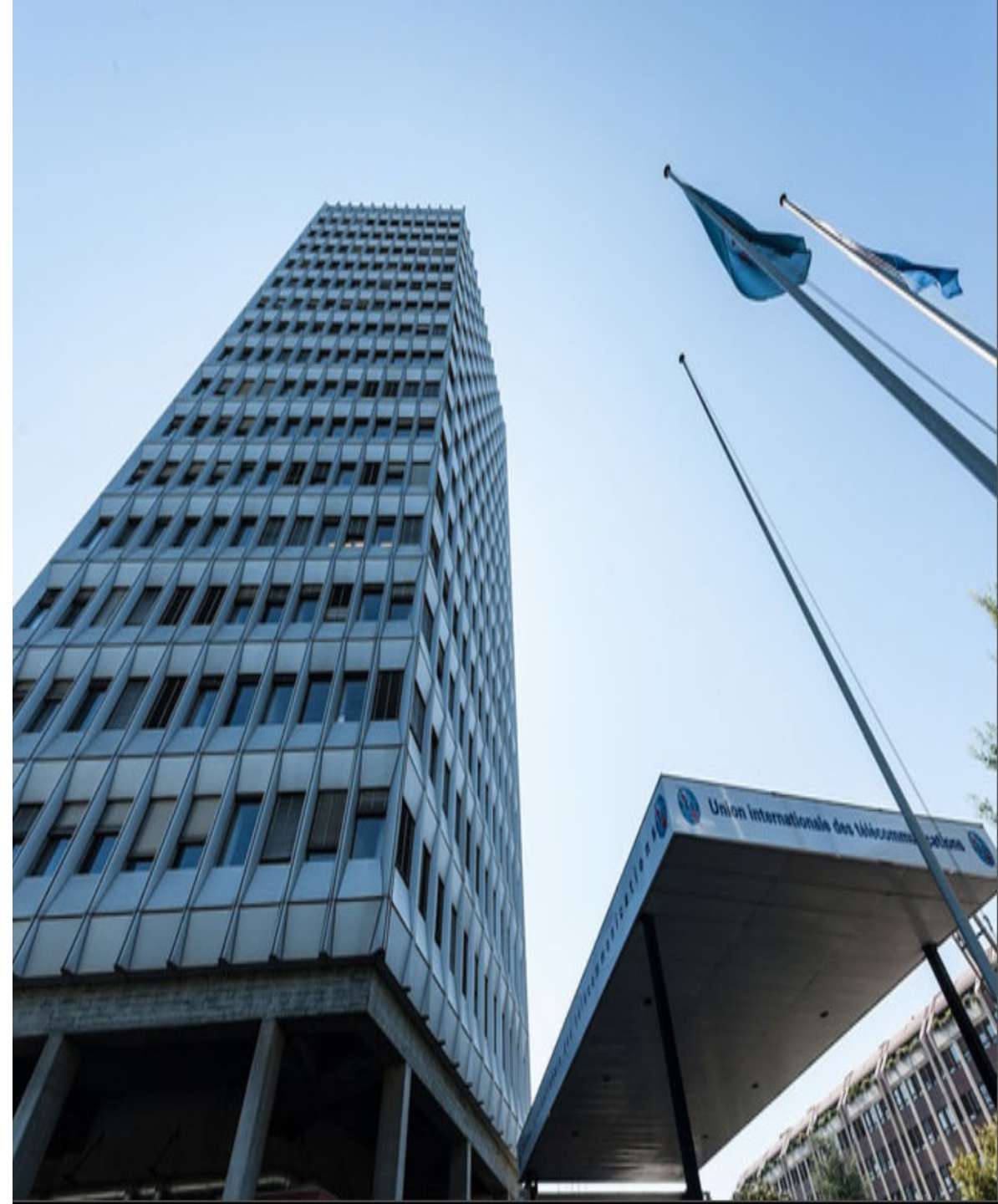
- United Nations specialized agency
- Headquartered in Geneva, Switzerland
- Works towards harnessing innovation and connecting everyone to ensure a better future for all

Oldest agency in the UN family

- Established in 1865
- Connecting the world since the dawn of the telegraph



**United
Nations**



ITU Members



194

Member states



1000+

Companies, universities and
international and regional organizations



ITU global presence



Regional offices

- . Brasilia
- . Addis Ababa
- . Cairo
- . Geneva
- . Moscow
- . Bangkok



Area offices

- . Tegucigalpa
- . Santiago
- . Bridgetown
- . Dakar
- . Yaounde
- . Harare
- . New Delhi
- . Jakarta



ITU Headquarters

- . Geneva



UN office

- . New York

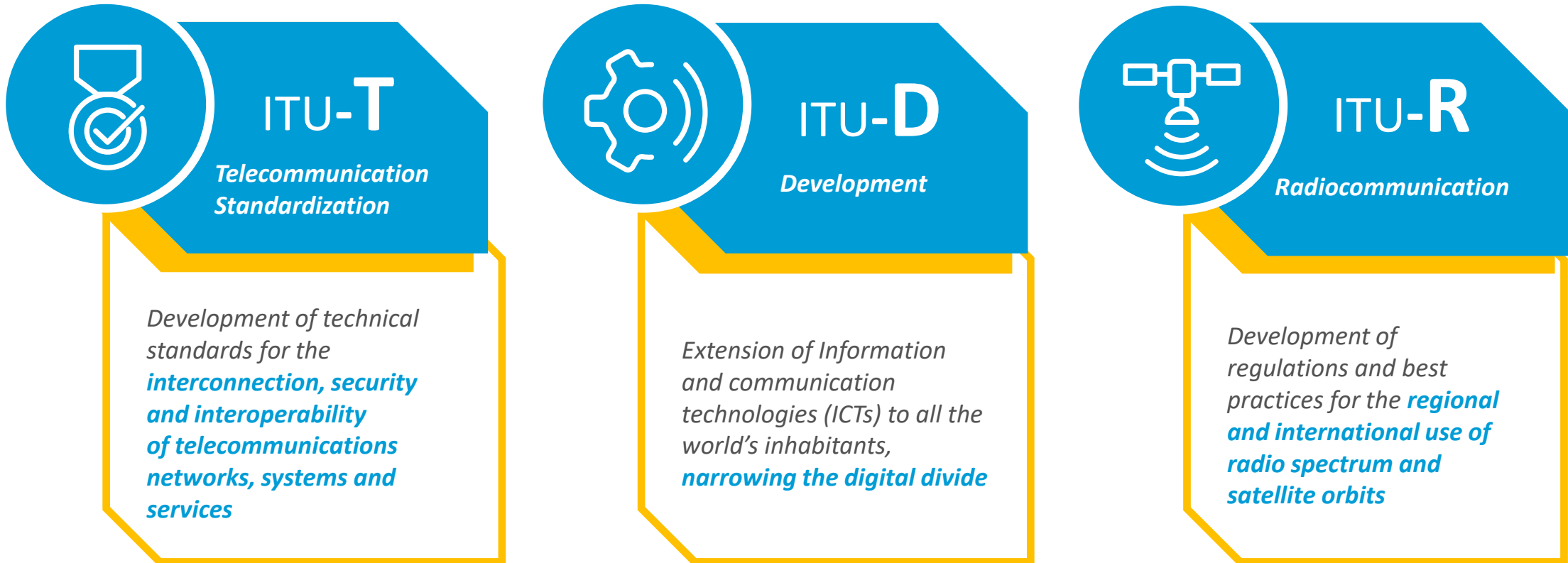


Innovation Centre

- . New Delhi



ITU Sectors





ITU Radiocommunication Sector



ITU-R Mission

Allocation of bands of the radiofrequency spectrum, allotment of radio frequencies and registration of radio frequency assignments and of any associated orbital position in the geostationary satellite orbit

Implementation of the Radio Regulations and regional agreements, and update of these instruments in an efficient and timely manner through the processes of world and regional radiocommunication conferences



Technical assistance and capacity-building support to developing countries in implementing the provisions of the radio regulations

Coordination of efforts to eliminate harmful interference between radio stations of different countries and to improve the use made of radio-frequencies and of the geostationary-satellite orbit for radiocommunication services

Elaboration of Recommendations intended to assure the necessary performance and quality in operating radiocommunication systems
(<https://www.itu.int/pub/R-REC>)

International radio regulation



Radiocommunication services and applications

Terrestrial Fixed and Mobile Services



Aeronautical and Maritime Services



Space and Science Services



Broadcasting Services

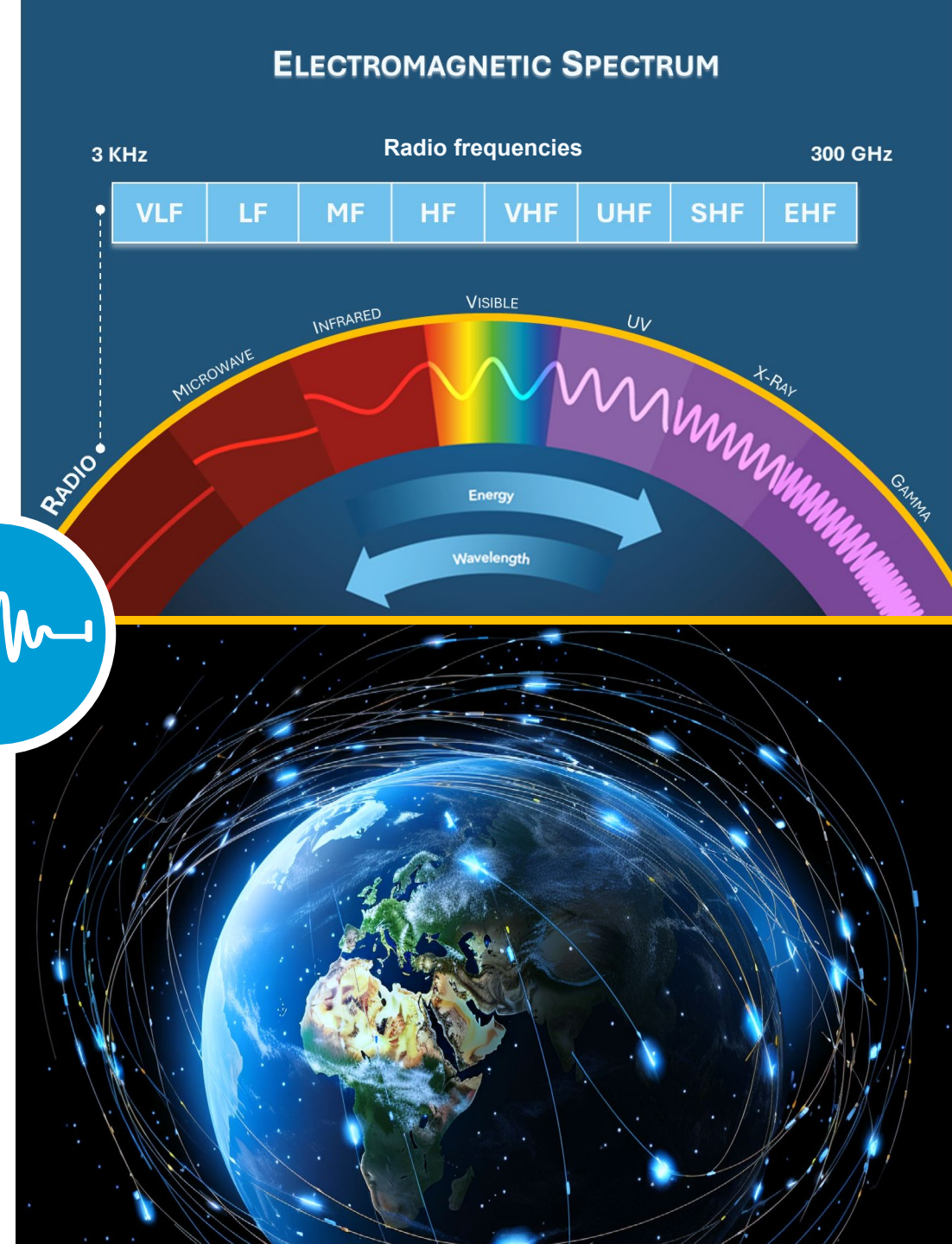


Radio spectrum and satellite orbits

The radio spectrum and satellite orbits are shared and **limited natural resources**

International regulation is necessary in order to ensure:

- **rational, efficient and economical use** of the radio frequency spectrum and satellite-orbit resources, with **equitable access** for all countries
- interoperability and operations of radiocommunication systems **free of harmful interference**
- necessary **performance and quality** in operating radiocommunication systems
- **regulatory certainty** for trillions of dollars of combined investment and economic activity that play an increasingly important role in the development of our societies



Radio Regulations

The Radio Regulations is the **international treaty** on the use of radio spectrum and satellite orbits (<https://www.itu.int/pub/R-REG-RR>)

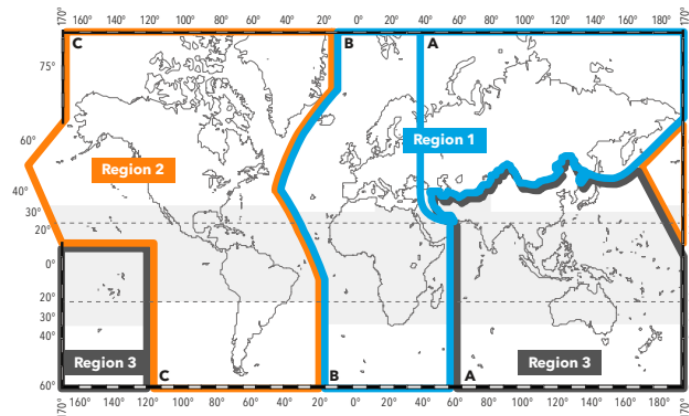
- 1st “International Radio Telegraph Convention” was signed in **1906**
- Updated every 4 years during the **World Radiocommunication Conference (WRC)**
- Decisions are taken mostly via **consensus** and aim for **harmonization**

Regional and global **spectrum harmonization**

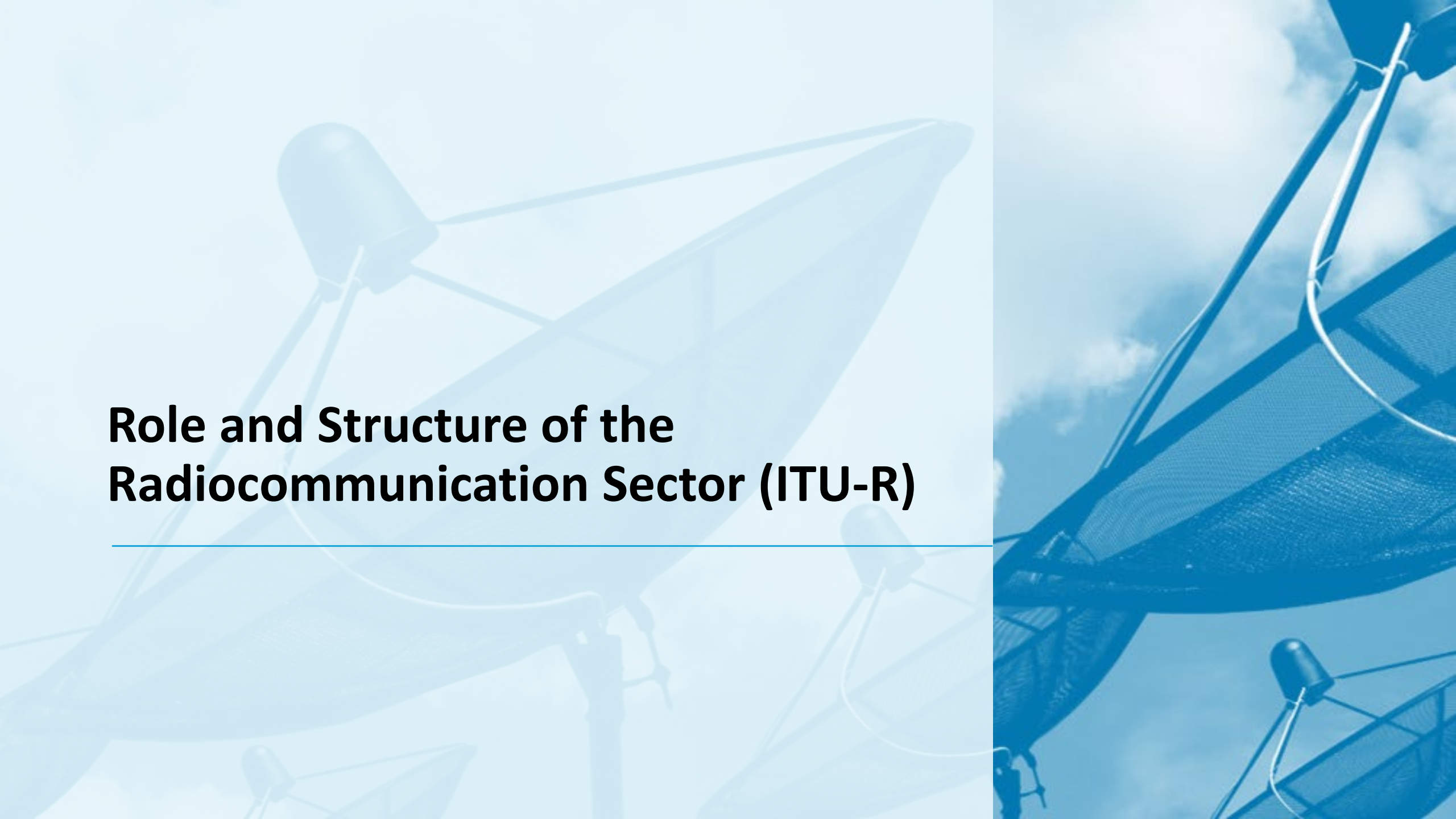
- ✓ creates **economies of scale**
(affordable devices and services)
- ✓ enables **international roaming**
(use of same device in different countries)
- ✓ facilitates **emergency communications**



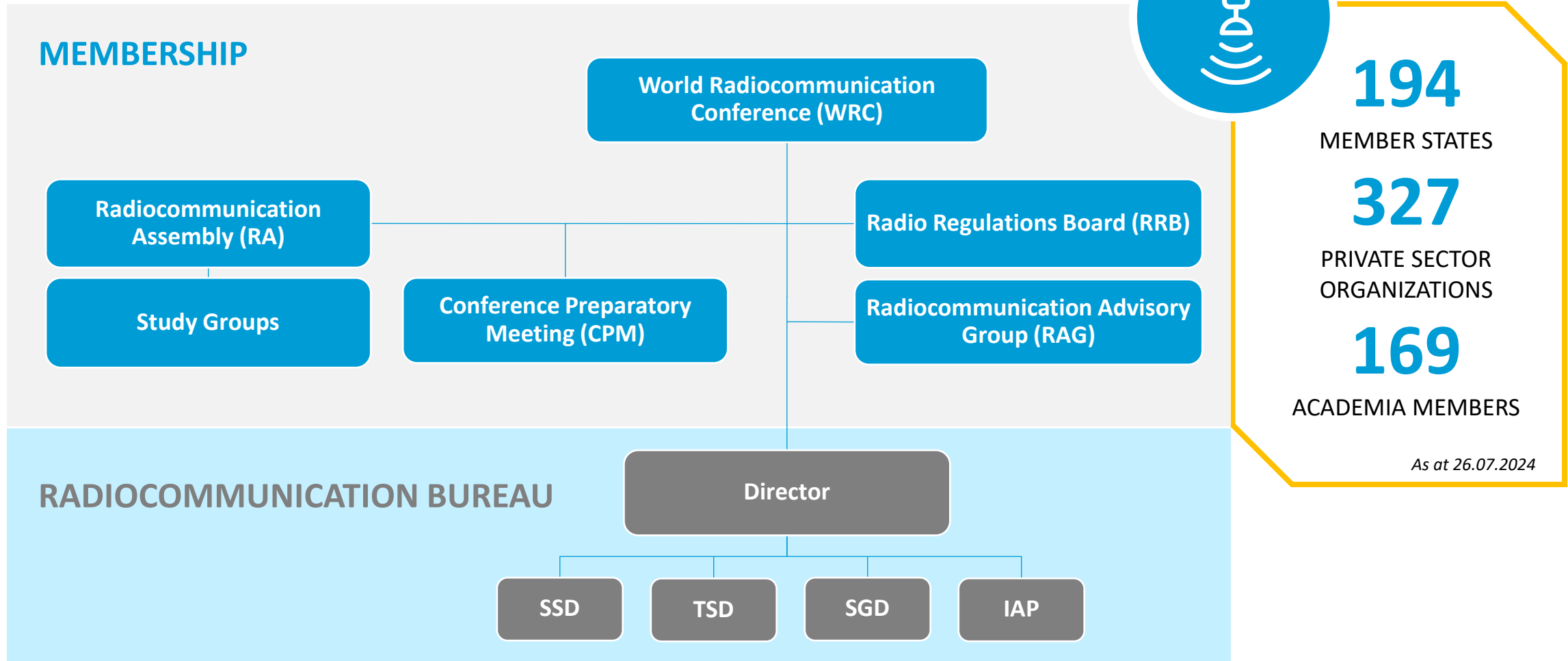
ITUWRC
WORLD RADIOCOMMUNICATION
CONFERENCE



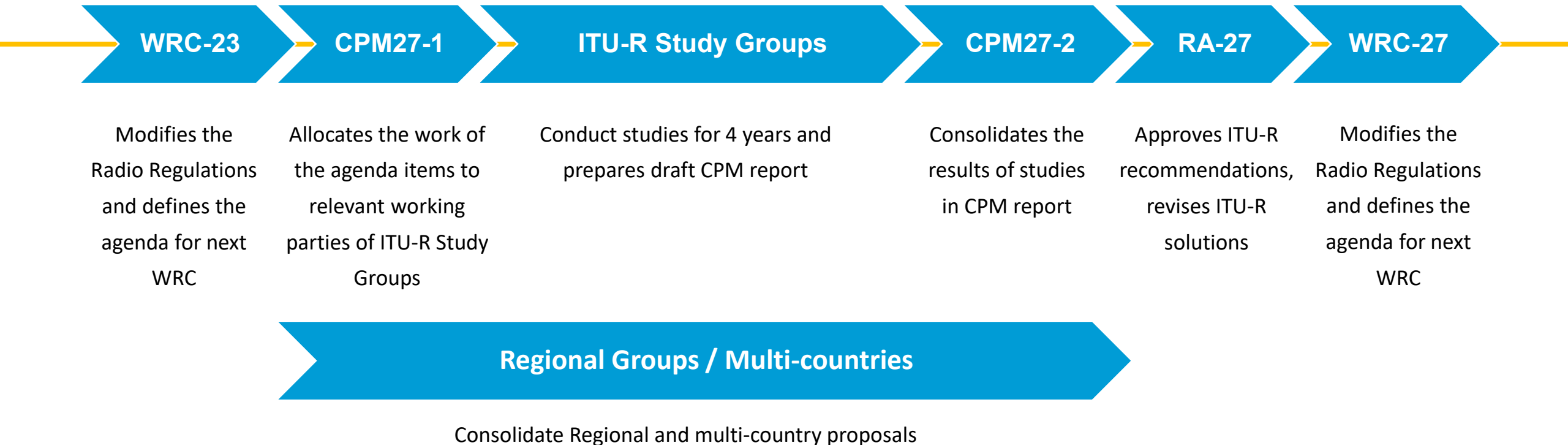
Role and Structure of the Radiocommunication Sector (ITU-R)



ITU-R Structure



ITU-R 4-Year Conference Cycle



Radiocommunication Bureau



Mario MANIEWICZ, Director
ITU Radiocommunication
Bureau

- Provides administrative and technical **support** to WRCs, RAs, ITU-R SG, WPs and Task Groups
- Applies the **provisions of the RR** and various **Regional Agreements**
- Records frequency assignments of space networks, with their associated orbital characteristics, and terrestrial stations in the **Master International Frequency Register (MIFR)** and Frequency Plans and maintains these databases
- Coordinates the preparation, editing and dispatch of **circulars, documents and publications** developed within the Sector

Radio Regulations Board (RRB)

12

MEMBERS ELECTED EACH
PLENIPOTENTIARY CONFERENCE

1

EXECUTIVE SECRETARY
(BR DIRECTOR)

3-4

MEETINGS EACH YEAR

- Approves **Rules of Procedure** used by the BR in applying the provisions of the Radio Regulations and registering frequency assignments made by the Member States
- Considers **matters referred by the BR** which cannot be resolved through application of the Radio Regulations and Rules of Procedure
- Addresses reports of **unresolved harmful interference** investigations carried out by the BR at the request of one or more administrations
- Provides **advice to WRC and RA**
- Considers **appeals** against decisions made by the BR regarding frequency assignments
- Performs any **additional duties** prescribed by a competent conference or by the Council

ITU-R Study Groups



**5000
Specialists**

*from administrations,
the telecommunications industry and
academic organizations*



**Study
Groups**

- efficient management and use of the **spectrum/orbit resource**
- **radio systems** characteristics and performance
- **emergency radiocommunications** for public protection and disaster relief
- operation of **radio stations**
- **spectrum monitoring**



ITU-R Study Groups

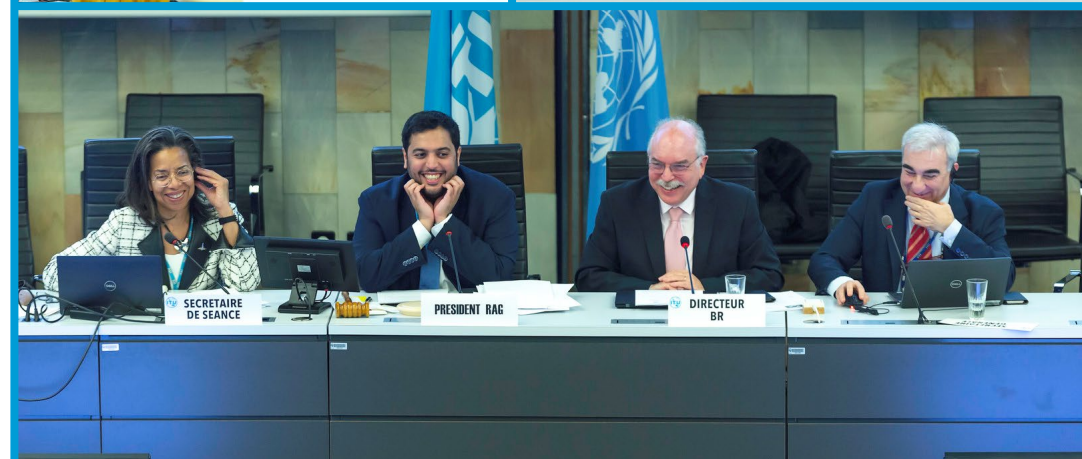
- Furthermore, ITU-R Study Groups carry out preparatory studies for **Regional Radiocommunication Conferences (RRCs)**.
- On the basis of the input material from the Study Groups, alongside any new material submitted by ITU Member States and ITU-R Sector Members, the **Conference Preparatory Meeting (CPM)** prepares a Report on the technical, operational and regulatory or procedural matters to be considered by a given Conference.
- Study Groups accomplish their work in **cooperation** with other international radiocommunication organizations. Particular attention is paid to the radiocommunication **needs of developing countries**.



Radiocommunication Advisory Group

The Radiocommunication Advisory Group (RAG) is tasked to:

- review the priorities and strategies adopted in the Sector;
- monitor progress of the work of the Study Groups;
- provide guidance for the work of the Study Groups;
- recommend measures to foster cooperation and coordination with other organizations and with the other ITU Sectors.
- The RAG provides advice on these matters to the Director of the Radiocommunication Bureau (BR). Radiocommunication Assemblies (RAs) may refer specific matters within its competence to the RAG.
- The RAG may be authorized to act on behalf of the RA between two Assemblies.





Thank you!

