برنامج بناء القدرات للاتحاد الدولي للاتصالات
المعني بإحتساب وتقدير تكاليف وأسعار البنية التحتية للاتصالات للمنطقة العربية

ITU Capacity Building Programme on Quadplay:
Costing and Pricing of Infrastructure Access for Arab Region

الرباط – المغرب، 9–12 يوليوز 2018
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Tariff Policies Context in the Arab States

Eng. Mustafa Al Mahdi

ITU Arab Regional Office

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1.1 Introduction

- The ICT sector is recognized as a critical backbone of socio-economic development. It affects all facets of society, health, education, tourism, governance

- Adoption of broadband-enabled mobile devices has made access to the digital world more ubiquitous and pervasive.

- ICT industry has moved from distinct infrastructure platforms and connected devices to an interconnected ecosystem of computing.

- The growth of mobile broadband has largely outpaced that of fixed broadband, while mobile-broadband prices have dropped by 50 per cent on average over the last three years. These factors have resulted in about half of the world's population getting online and broadband services being available at much higher speeds.

One to many to any: ICTs from happy few to the masses

- Mainframe (1 computer, many people)
- PC (1 person, 1 computer)
- Digital native computing (1 person, many screens)
- Internet of everything

Artificial intelligence

Mass wearables

Mobile broadband, smartphones, tablets

Cognitive computing

Social Media

Connected car

Volumes, B

Internet born

Internet of things

www

1960 1970 1980 1990 2000 2010 2020 2030 2040 2050
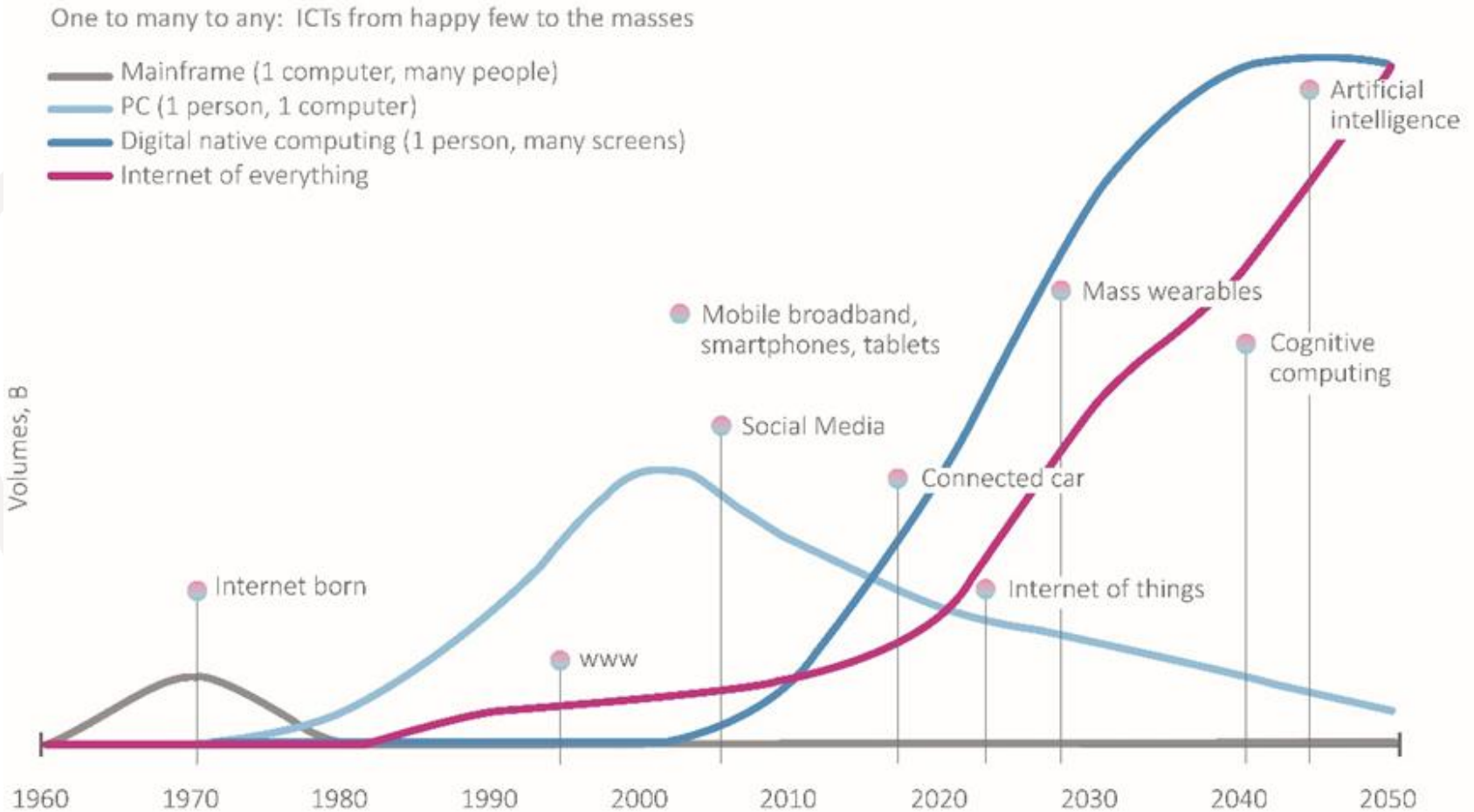
Technology has moved from being uncommon and difficult to use to being pervasive, intuitive, and more user-friendly. Digitization has accelerated technological developments over the last two decades

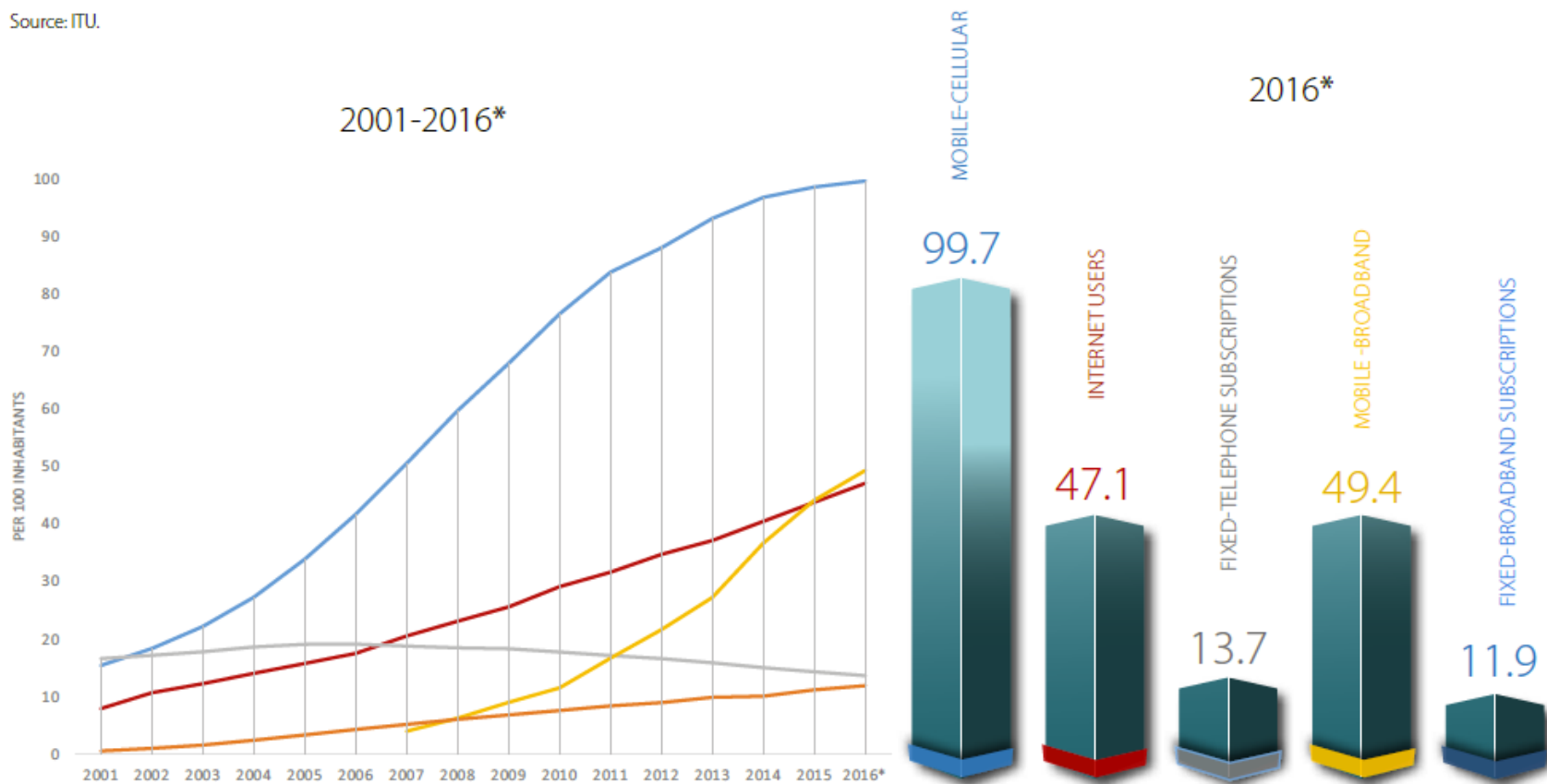# 1.3 Global ICT Developments Worldwide

GLOBAL ICT DEVELOPMENTS WORLDWIDE, PER 100 CAPITA, 2001-2016 AND 2016
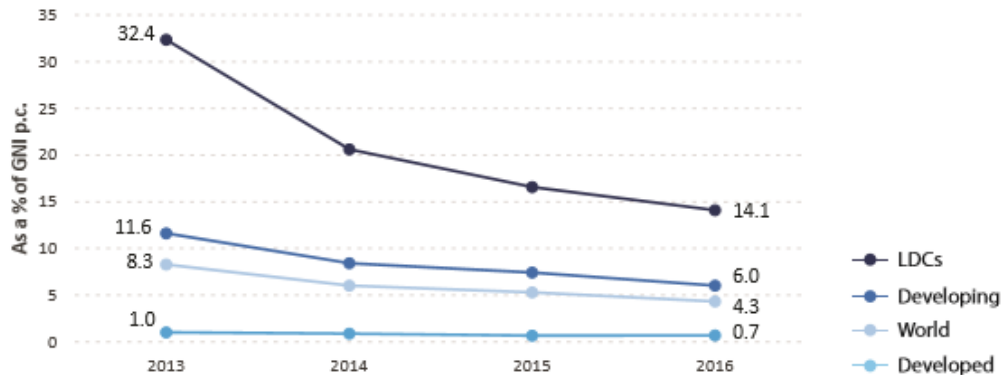
Note: *Estimates.
Source: ITU.

While the overall growth for mobile is flattening out, mobile broadband is booming and promises to reach more people more rapidly than any other technology in history. Mobile-broadband services have become more affordable than fixed-broadband services.

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1.4 Mobile broadband is more affordable than fixed broadband

Mobile broadband prices as a percentage of GNI per capita, 2016

Source: ITU.
Note: Based on simple averages including data for 136 countries. Prices are based on entry-level computer-based mobile-broadband plans with a minimum data allowance of 1 GB per month.
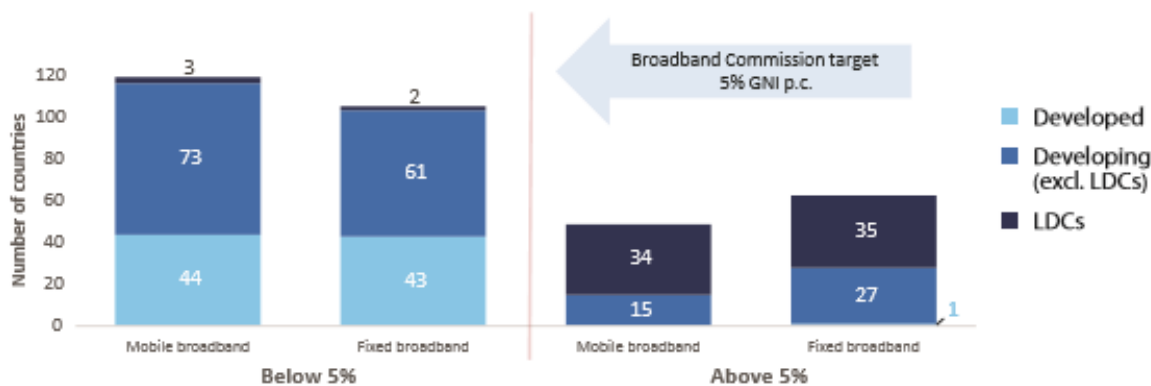
Mobile-broadband prices as a percentage of GNI per capita halved between 2013 and 2016 worldwide.

The steepest decrease occurred in LDCs, where prices fell from 32.4 to 14.1% of GNI p.c.

Broadband prices as a percentage of GNI per capita, 2016

Mobile broadband is more affordable than fixed-broadband services in most developing countries. However, mobile broadband prices represent more than 5% of GNI per capita in most LDCs and are therefore unaffordable for the large majority of the population.

Source: ITU Facts and Figures 2017

Basic pricing goals:

❖ Encouragement of the effective completion via avoidance of:
   - ✓ Price squeeze
   - ✓ Predatory pricing and
   - ✓ Excessive pricing practices
❖ Transmission of the correct economic signals
❖ Coverage of the incumbent's accounting cost and allowance for a reasonable rate of return.

Basic costing principles:

- ❖ Cost causation principle
  - ✓ Activity based costing
  - ✓ Network costing
- ❖ Objectivity principle
- ❖ Consistency principle
- ❖ Transparency principle
  - ✓ Auditability
  - ✓ Accounting Separation

in direct

Basic cost elements:

- ❖ Salaries of personnel

- ❖ Depreciation of network elements

- ❖ Depreciation of buildings and vehicles

- ❖ Transport costs

- ❖ Marketing cost

- ❖ Overhead

- ❖ …etc.

Basic Tariff Principles:

The prices have to be:
- ❖ Adequately unbundled
- ❖ Publiced
- ❖ Competition oriented
- ❖ Non discriminatory
- ❖ Cost orientated

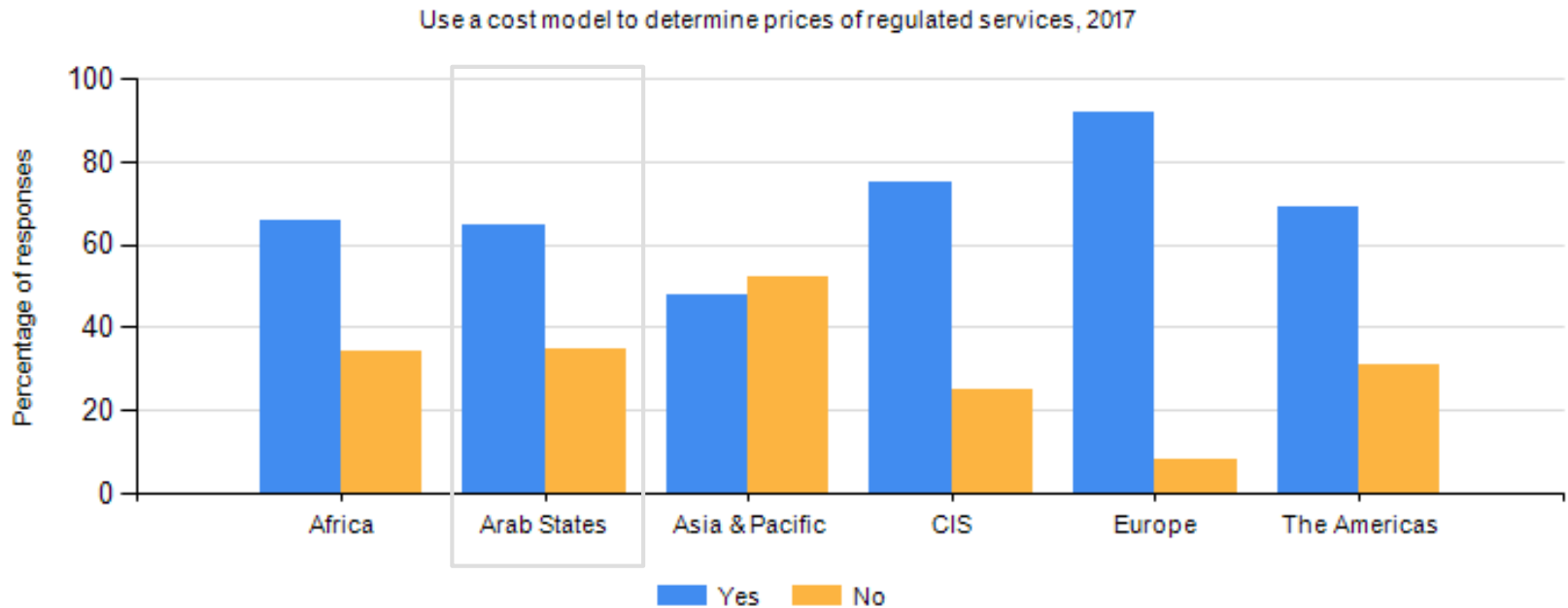# Cost and Pricing Models:

❖ Traditional

  ✓ Historical Costs Accounting (HCA)
  ✓ Fully Distributed Cost across services (FDC)

❖ Modern

  ✓ Forward-looking analysis methods
  ✓ Explicit build-up and allocation of Joint and Common Costs (JCCs) methods

3.1 ITU TARIFF POLICY SURVEY- ARAB REGION

Use a cost model to determine prices of regulated services, 2017

In terms of tariff regulation, more and more countries are applying cost models to determine the price of regulated services, especially wholesale services, such as interconnection. **117** countries out of **168** who responded the ITU Tariff Policies survey reported to apply cost modelling to calculate the cost of telecom/ICT regulated services.

In the Arab Region **11** out of **17** reported to apply cost modelling.
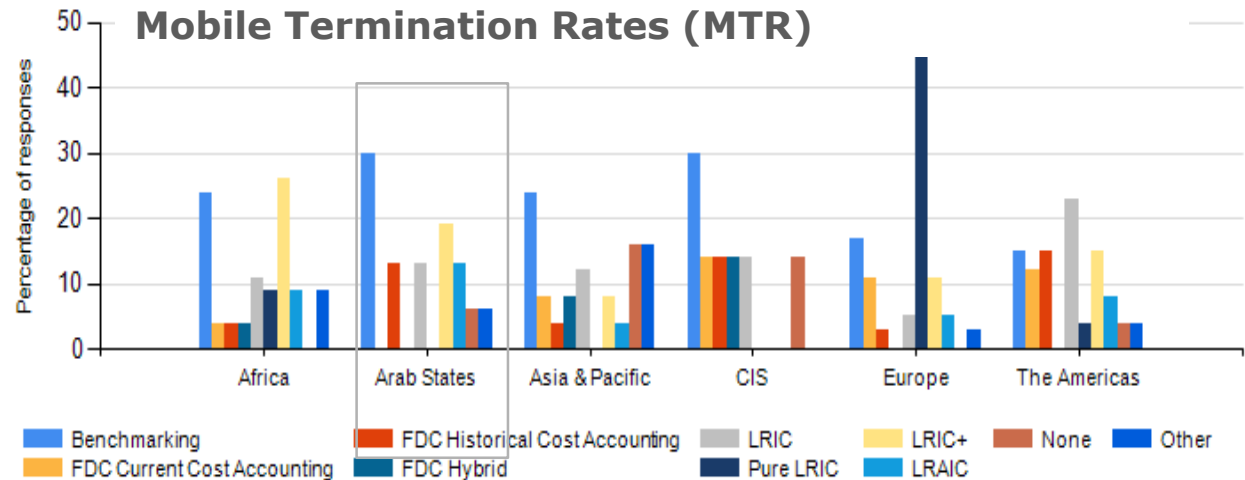
Source: ITU

3.2 Approach applied for costing Termination Rates, 2017

Interconnection issues: Which approach do you apply for costing regulated interconnection prices?, 2017

Fixed Termination Rates (FTR)

Interconnection issues: Which approach do you apply for costing regulated interconnection prices?, 2017

## Mobile Termination Rates (MTR)

Source: ITU

13
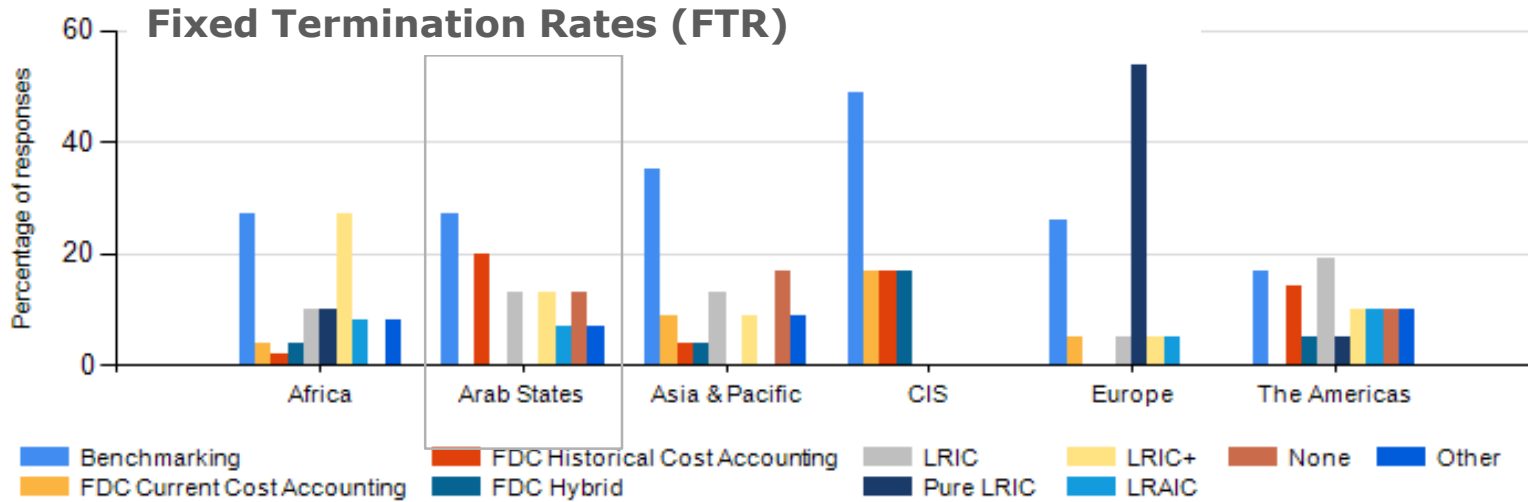
3.3 Approach used to regulate interconnection prices - Arab States, 2017

Country	Fixed Termination	Fixed Origination	Mobile Termination	Mobile Origination	National Transit
Algeria	☒ FDC Historical Cost Accounting ☒ LRIC		☒ FDC Historical Cost Accounting ☒ LRIC		☒ FDC Historical Cost Accounting ☒ LRIC
Bahrain	n/a	n/a	n/a	n/a	n/a
Comoros	n/a	n/a	n/a	n/a	n/a
Djibouti	n/a	n/a	n/a	n/a	n/a
Egypt	n/a	n/a	n/a	n/a	n/a
Iraq	n/a	n/a	n/a	n/a	n/a
Jordan	n/a	n/a	n/a	n/a	n/a
Kuwait	☒ LRAIC ☒ Other: Regulations under development	☒ LRAIC ☒ Other: Regulations under development	☒ LRAIC ☒ Other: Regulations under development	☒ LRAIC ☒ Other: Regulations under development	☒ LRAIC ☒ Other: Regulations under development
Lebanon	n/a	n/a	n/a	n/a	n/a
Libya	☒ None	☒ None	☒ None	☒ None	☒ None
Mauritania	☒ LRIC+[2]	☒ LRIC+[2]	☒ LRIC+[2]	☒ LRIC+[2]	☒ LRIC+[2]
Morocco	☒ Benchmarking ☒ LRAIC	☒ Benchmarking ☒ LRAIC	☒ Benchmarking ☒ FDC Historical Cost Accounting	☒ Benchmarking ☒ FDC Historical Cost Accounting	☒ Benchmarking ☒ LRAIC
Oman	☒ LRIC+	☒ LRIC+	☒ LRIC+	☒ LRIC+	☒ LRIC+
Qatar	☒ FDC Historical Cost Accounting	☒ FDC Historical Cost Accounting	☒ FDC Historical Cost Accounting	☒ FDC Historical Cost Accounting	☒ FDC Historical Cost Accounting
Saudi Arabia	☒ Benchmarking	☒ Benchmarking	☒ Benchmarking	☒ Benchmarking	☒ Benchmarking
Somalia	n/a	n/a	n/a	n/a	n/a
Sudan	☒ Benchmarking	☒ Benchmarking	☒ Benchmarking	☒ Benchmarking	☒ Benchmarking
Syria	n/a	n/a	n/a	n/a	n/a
Tunisia	☒ Benchmarking ☒ LRIC	☒ Benchmarking ☒ LRIC	☒ Benchmarking ☒ LRIC	☒ Benchmarking ☒ LRIC	
United Arab Emirates	☒ Benchmarking ☒ LRIC+	☒ Benchmarking ☒ LRIC+	☒ None	☒ None	☒ Benchmarking ☒ LRIC+
Yemen	n/a	n/a	n/a	n/a	n/a

Source: ITU

Interconnection charging principle adopted, 2017
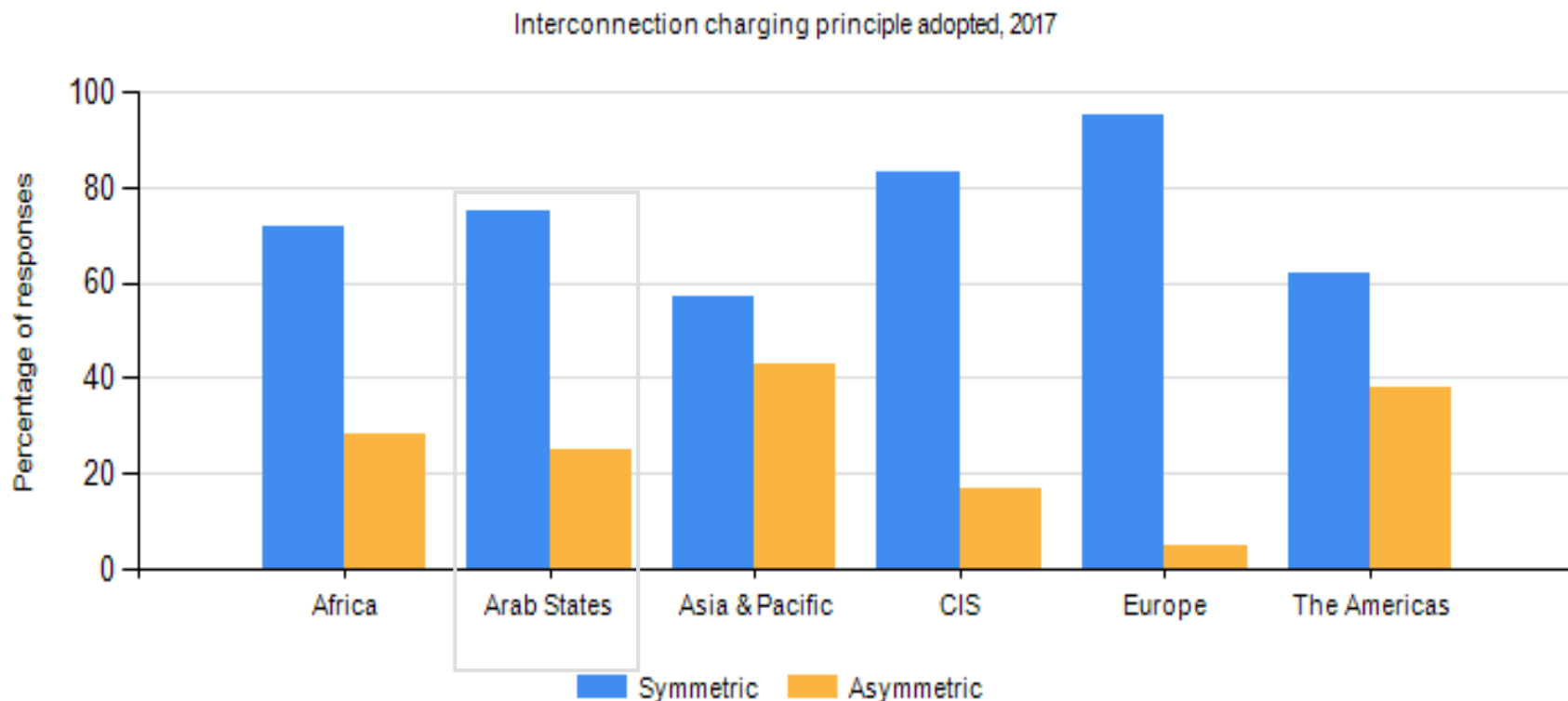
The symmetric approach seems to be the most applied in all the world. Only some countries in Asia and Pacific and The Americas reported to apply Asymmetry.
In Arab States **15** countries out of **20** reported to apply Symmetry.

Source: ITU

3.5 Charging regime for mobile interconnection services, 2017

Which charging regime for mobile interconnection services is applied in your country?, 2017
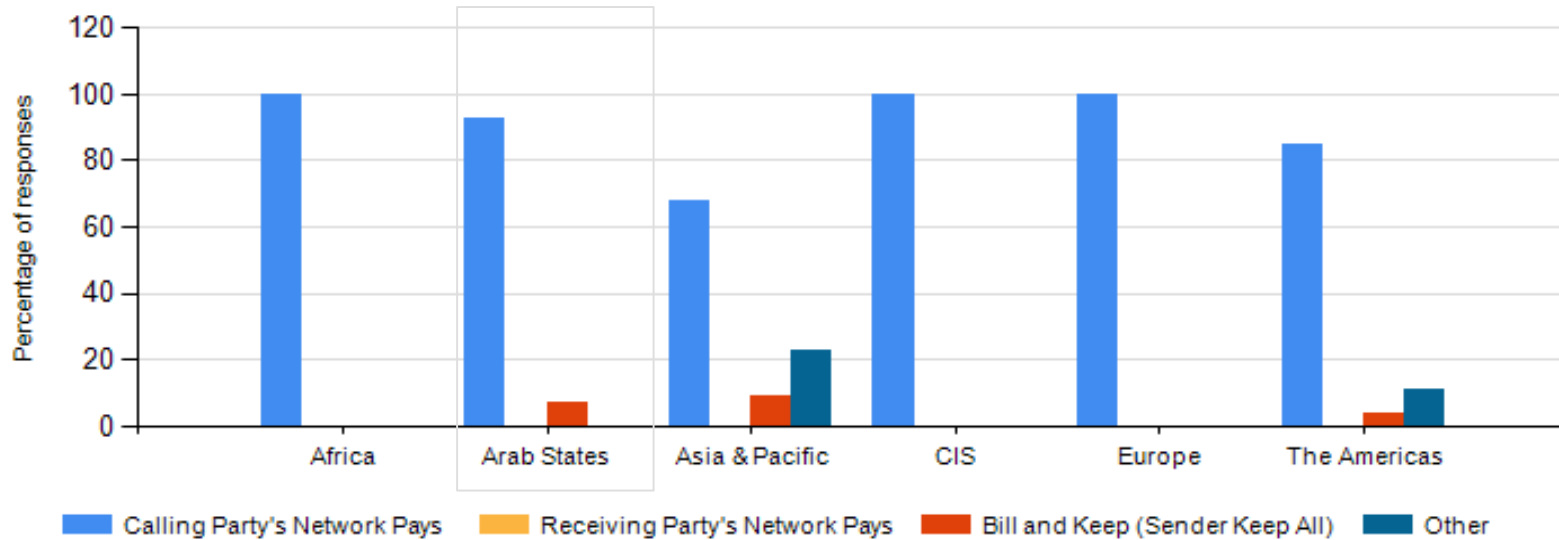
Indicator		Africa	Arab States	Asia & Pacific	CIS	Europe	The Americas	Total
Which charging regime for mobile interconnection services is applied in your country?	Calling Party's Network Pays	37	13	15	6	38	24	133
	Receiving Party's Network Pays	0	0	0	0	0	0	0
	Bill and Keep (Sender Keep All)	0	1	2	0	0	1	4
	Other	0	0	5	0	0	3	8

Source: ITU

4.1 ITU GSR INITIATIVE

GSR-17 Best Practice Guidelines on Policy and Regulatory Incentive for Affordable Access to Digital Services - Cont.

Strengthening the regulatory foundation for affordable access to digital services, by

- Adopting and leveraging national digital policies, strategies and plans which seek to ensure that broadband and IP technologies are available to as wide a community of users as possible

- Adopting a flexible, transparent approach to promoting robust competition in the provision of network access and end-user digital services

- Designing flexible, incentive-based and market-oriented policy and regulatory frameworks with regard to allocation and assignment of spectrum, in particular for broadband services

- Encouraging the deployment of Internet exchange points as well as content distribution networks at the national, regional and international level

- Adopting innovative licensing regimes and incentivizing new business models for covering remote and rural areas that more effectively integrate the use of terrestrial, satellite, and submarine telecommunication infrastructure

GSR17
BEST PRACTICE GUIDELINES
ON POLICY AND REGULATORY INCENTIVE
FOR AFFORDABLE ACCESS TO DIGITAL SERVICES

Regulating the ever-changing ICT sector requires skills, foresight and innovation. Developing and using best practices is the best way to fast-track our efforts to adapt to change and embrace new technologies to foster development and business.

4.2 GSR-17 Best Practice Guidelines on Policy and Regulatory Incentive for Affordable Access to Digital Services - Cont.
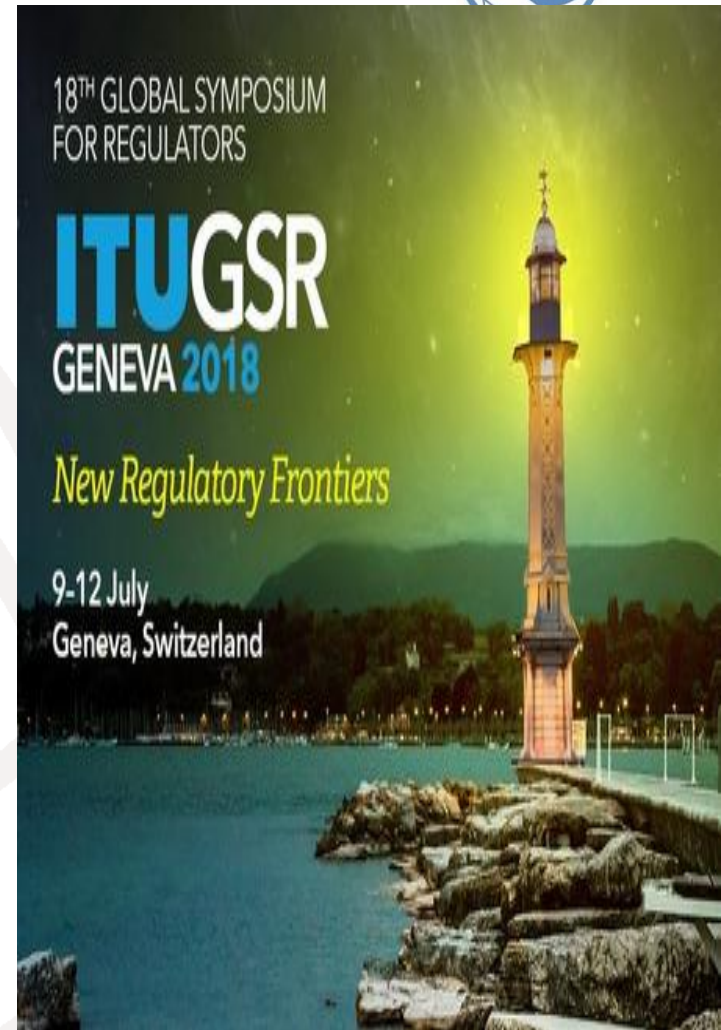
- Fostering multi-infrastructure mapping and deployment, including working with local government to lift restrictions on infrastructure deployment

- Monitoring and, if necessary, setting mobile and fixed interconnection rates, including through sound regulatory accounting

- Requiring dominant incumbent providers to provide wholesale, unbiased access to its network for the purposes of interconnection and infrastructure sharing

- Enabling number portability over fixed and mobile networks

- Considering the efficiency of licensing and spectrum fees

- Using holistic universal access and service strategies and financing mechanisms for both network expansion, connectivity for public institutions and the community as well as demand stimulation measures, such as end-user subsidies

- Promoting the development of innovative new technologies that enhance rural and remote coverage at lower cost

- ...

GSR18: New Regulatory Frontiers

- **Thematic Events:**
- Global Dialogue on AI, IoT and Cybersecurity – Policy and regulatory challenges and opportunities
- [Chief Regulatory Officials (CRO)/ Industry Advisory Group for Development (IAGDI) Meeting](#)
- Regional Regulatory Associations Meeting
- More information and event outcomes, please visit: https://www.itu.int/net4/ITU-D/CDS/GSR/2018/default.asp#second

18TH GLOBAL SYMPOSIUM FOR REGULATORS

ITUGSR GENEVA 2018

New Regulatory Frontiers

9-12 July
Geneva, Switzerland

- ✓ *Knowledge Sharing Platforms and Strategic Dialogues,* in particular *The Global Symposium for Regulators (GSR)*, our annual flagship event for and with ICT Policy Makers and Regulators and Members to network, exchange, learn and collaborate

- ✓ *Cutting-edge data, research and publications for evidence-based decision making*, including:

  - **Global ICT Regulatory Outlook Report**, tracking market, regulatory and policy trends in the ICT sector and their implications across the sectors and the economy

  - **ICT Regulatory Tracker** – a unique tool covering 185+ countries for the period 2007-2016, showcasing regulatory progress within the same country, amongst regions and worldwide

  - **Various Thematic Reports and Portals** focusing on the evolution of and role of ICTs on digital transformation including on Collaborative Regulatory Frameworks, Digital Financial Inclusion, Affordable Access to Digital Services, the ITU International Mobile Roaming Portal, Digital Ecosystem Portal, Quality of Service Portal, etc.

  - **ICT Regulation Toolkit**, offering an online resource designed to address complex policy and regulatory challenges

  - **ICTeye**, a unique one-stop shop for telecommunications/ICT regulatory data collection and dissemination resulting from the annual Telecommunication/ICT Regulatory Survey and the Tariff Policies Survey

SAVE DATES FOR ITU UPCOMING EVENTS

1) 2018 ITU upcoming events:
Please visit:
https://www.itu.int/en/events/Pages/default.aspx
2) 2018 ITU Arab Regional Office upcoming events:
Please visit: https://www.itu.int/en/ITU-D/Regional-Presence/ArabStates/Pages/default.aspx
3) 2019 ITU Arab proposed activity on regulatory environment:
  - Enabling Regulatory Environment of New Technologies (4G, 5G, IoT and M2M)- PLEASE show your interest to host it

THANK YOU

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