



# **Future of Service Quality Regulations**

## ***From Consumers' Perspective***

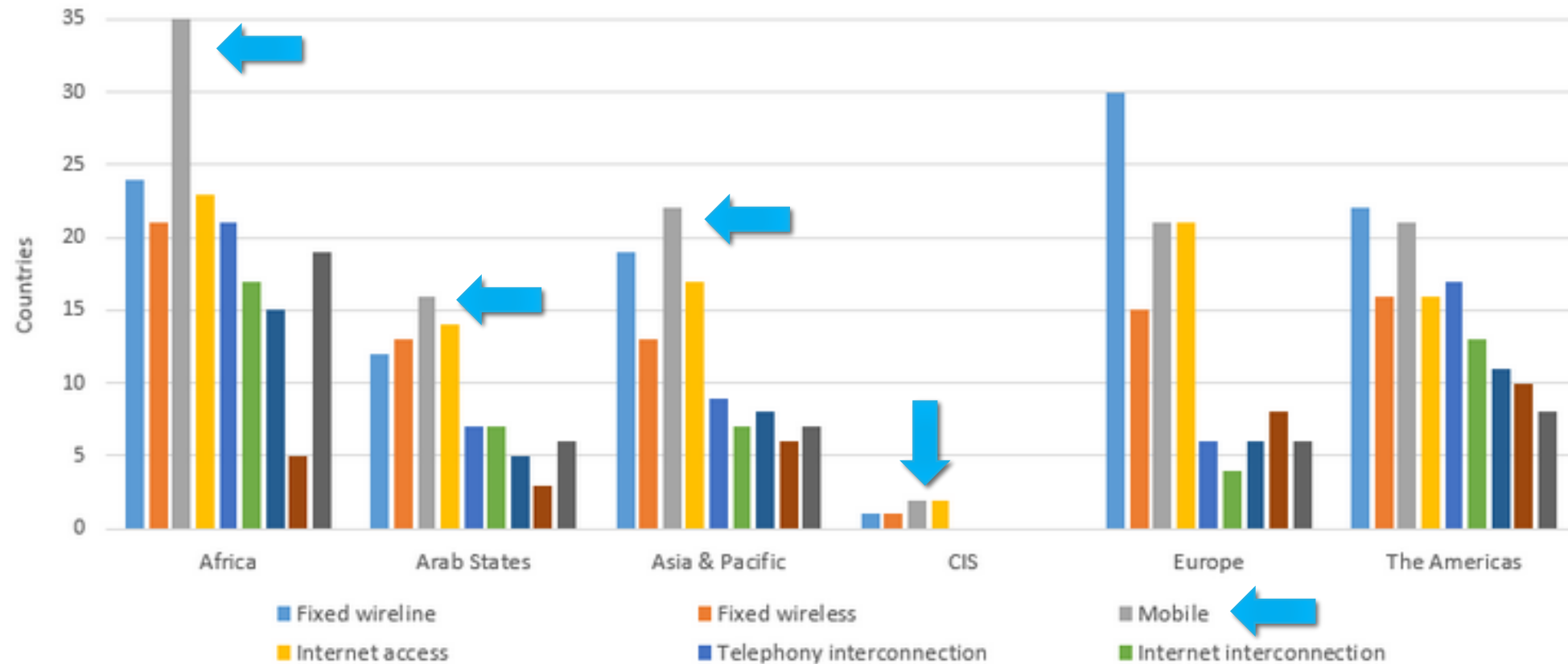
**November 26, 2018 | ITU Workshop, Geneva**

**UDAI SINGH MEHTA, CUTS INTERNATIONAL**



- A non-government leading consumer organisation pursuing social justice and economic equity both within and across borders established in 1983.
- Five operational areas: Consumer Protection; International Trade and Development; Competition, Investment and Economic Regulation; Human Development, and Consumer Safety
- Resource centres in Jaipur, New Delhi, Kolkata, Accra, Lusaka, Nairobi, Geneva, Washington DC and Hanoi
- Focus Areas - Research, Advocacy, Networking & Capacity-building

# SERVICES SUBJECT TO QOS REGULATIONS



Source: ITU World Telecommunication/ICT Regulatory Database

# QOS REGULATORY FRAMEWORK



- **Standards**  
*e.g. ITU, ETSI, National Standards, Industry Standards, Other Standardization bodies*

- **License condition**  
*e.g. India, Pakistan,*
- **Regulation**  
*e.g. India, Malaysia, Pakistan, Singapore, Tanzania*

- **Industry guidelines**  
*e.g. Australia*

- **Technical**  
*e.g. Call drop, call success rate, connection speed, SMS quality*

- **Customer focused**  
*e.g. Billing accuracy, fault*

- **Guideline**  
*e.g. Measurement methods*

- **Technical**  
*e.g. Network auditing, drive tests*

- **Customer survey**  
*e.g. Network auditing, drive tests*

- **Regulatory notice**  
*e.g. Website, Press release, Directive*

- **Publication**  
*e.g. Website, newspaper*
- **Penalty**
- **Dispute**

# QOS STANDARDS : TRAI REGULATIONS 2012

Name of Parameter	Benchmark
Service Activation/Provisioning	Within 4 hours with 95% success rate
Successful Data Transmission Download Attempts	> 80%
Successful Data Transmission Upload Attempts	> 75%
Minimum Download Speed	To be measured for each plan by service provider and reported to TRAI
Average Throughput for Packet Data	> 75% of the subscribed speed
Latency	Data < 250 ms
PDP Context Activation Success Rate	≥ 95%
Drop Rate	≤ 5%

**Quarterly Performance Monitoring Report (PMR) on Quality of Service of Wireless Data Services**

Report for quarter ending: March 2018

Compliance Status

	Sl No.	Parameters	Benchmarks	Generations	Airtel	BSNL	Idea	MTNL	Reliance JIO	TATA	Telenor	Vodafone
Delhi	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	99.00		99.22	99.36	99.99	98		99.71
	2	Successful data transmission download attempts	>80%	All Generations						100		
				2G (GSM)	99.73		100.00	94.89				99.18
				3G	100.00		100.00	98.79				98.93
				CDMA								
				4G					100.00			
	3	Successful data transmission upload attempts	>75%	All Generations						100		
				2G (GSM)	99.72		100.00	89.94				99.34
				3G	100.00		100.00	97.62				99.15
				CDMA								
				4G					100.00			
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA Plan 1						72(Photon whirl)		
				Plan 2						1584(Photon plus)		
				Plan 3						2038(Photon max)		
				2G Plan 1	24.00		60(Open plan)	90.70				79.45(Rs 125 Rental plan with 1GB free)
				3G Plan 1	1874.00		1074(Open plan)	696.87				1034(Rs 250 Rental plan with 1GB free)
				Plan 2								
				Plan 3								
				4G Plan 1					5970.69			
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA Plan 1						82(Photon whirl)		
				Plan 2						2031(Photon plus)		
				Plan 3						2786(Photon max)		
				2G Plan 1	85.24		154(Open plan)	98.42				178.14(Rs 125 Rental plan with 1GB free)
				3G Plan 1	2954.00		5161(Open plan)	920.39				2439.79(Rs 250 Rental plan with 1GB free)
				Plan 2								
				Plan 3								
				4G Plan 1					27706.33			
	6	Latency	Data <250ms	All Generations				138.33		77.5		
				2G (GSM)	227.00		132.00					205.33
				3G	87.00		56.00					71.67

Note 1: In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

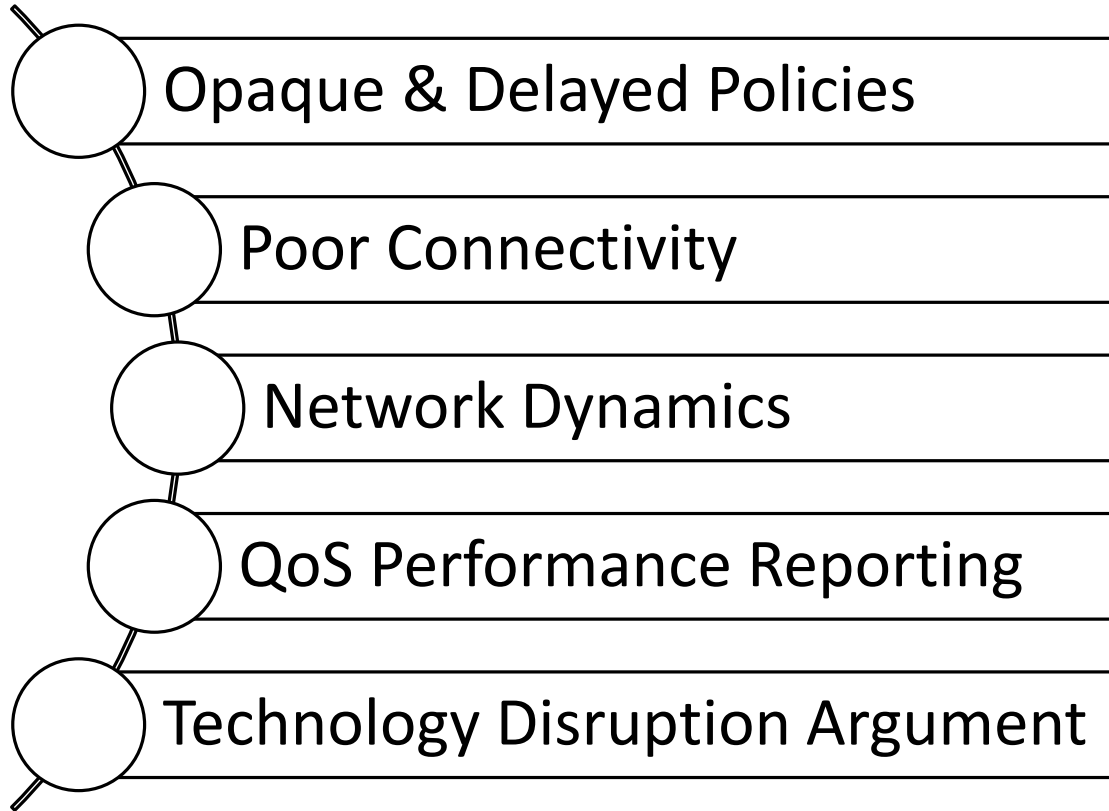
# MOBILE INTERNET QOS SURVEY (2016)

Summary of Key Findings			
Parameter	West Bengal	Rajasthan	NCR
Level of Satisfaction with QoS is good	45%	24%	52%
Awareness levels in respondents is good (regarding data plan)	63%	62%	82%
Service providers should regularly alert customers on data usage	83%	62%	58%
Service providers should mention the exact amount of data that is consumed per month by users	58%	73%	60%
Respondents do not know about QoS parameters but want to know	65%	93%	81%
Service providers should be ranked (quarterly) on the basis of their performance	91%	98%	97%

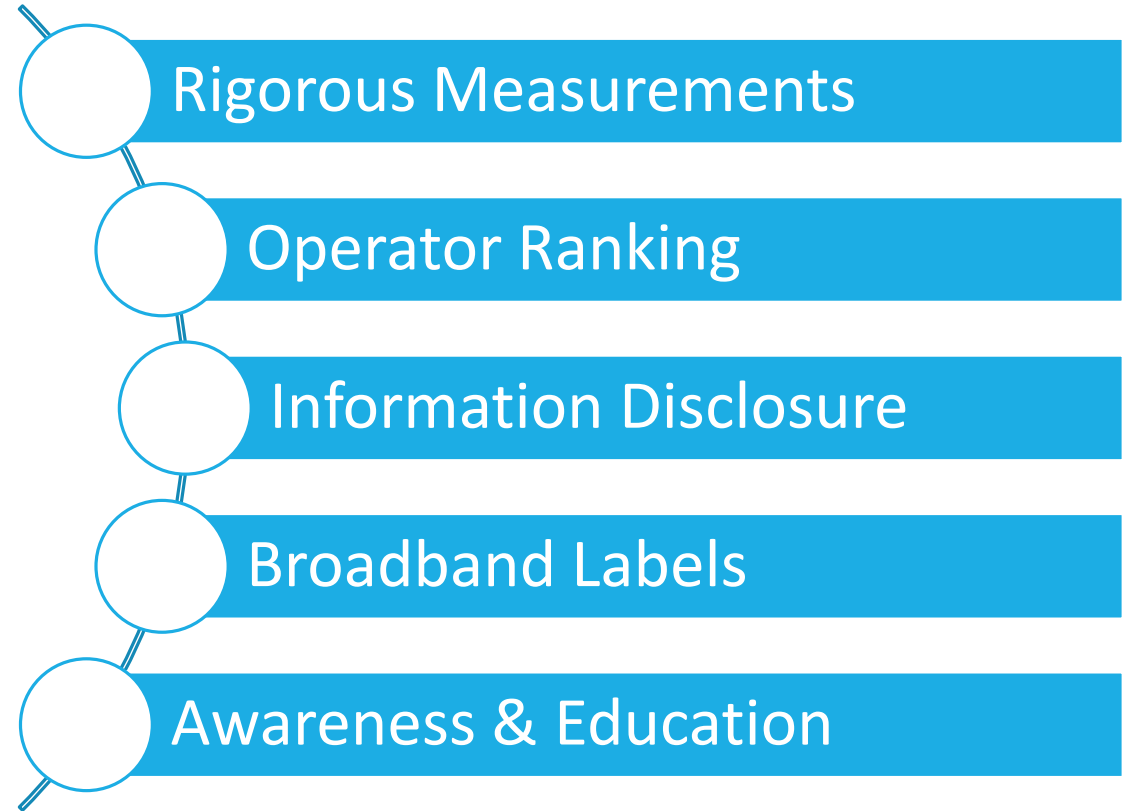
*\*Conducted by CUTS International*

# CHALLENGES

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# RECOMMENDATIONS





# CONSUMER BROADBAND LABELS

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## BENEFITS

### Operators

- Showcase better performance numbers
- Ensures compliance to regulations
- Increases transparency in the ecosystem

### Consumers

- Raises awareness & Assists in comparison
- Identify value-for-money features
- Better decisions based on usage habits

## CHALLENGES



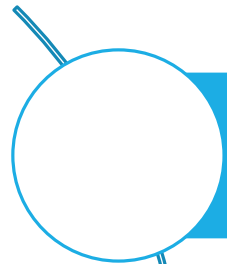
# CONSUMER BROADBAND LABELS

CONSUMER BROADBAND LABEL		
QoE Parameter	Download (in Mbps)	Upload (in Mbps)
Max Speed	1.8	1.2
Average Speed	1.2	1.0
Social networking	★★★★☆	
Video streaming	★★★★★	
HD video	★★★☆☆	
Mapping apps	★★★★☆	
Web browsing	★★★★☆	
Messaging apps	★★★★☆	
Voice calling	★★★★★	
Data pricing	Limit	Upgrade
Rs 100/pm	1 GB	5p / MB
Rs 200/pm	2 GB	5p / MB
Guidance notes: <ul style="list-style-type: none"><li>- Choose a plan based on your needs</li><li>- 5min of Youtube streaming @ 240p will consume 15MB of data</li><li>- 5min of Facebook browsing will consume XXX of data</li><li>- Example: With a 1GB plan, you can watch 30 Youtube videos of 5min each, and spend XXX minutes on Facebook</li></ul>		

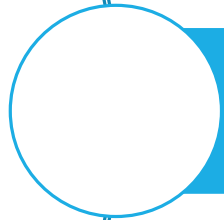
CONSUMER BROADBAND LABEL		
QoS Parameters	Download	Upload
Max Speed	1.8 Mbps	1.2 Mbps
Average Speed	1.2 Mbps	1.0 Mbps
Latency	32ms	
Availability	89%	75%
DNS delay	289ms	
Stability: Mean Time Between Switch	2.1s	3.5s
Service quality	Assessment	
Activation time	10 hours max, 3.5 hours avg	
Coverage	Bihar - Overall: 75% - Rural: 56% - Urban: 89%  National: 18/22 circles	
Performance improvement over last year	Speed: ++ (25%) Latency: No change Stability: - (10%) Coverage: +++ (50%)	
Network improvement practices		
Content Delivery Networks	Enhanced performance for Facebook, Youtube	
Data compression proxies	Ad blocker, image compression	
Available capacity for new users	65% utilization	
Goals for 2017	Coverage inc. to 95% Avg. speed to 1.5Mbps	

# HOW TO ACHIEVE BETTER QOS MEASUREMENTS?

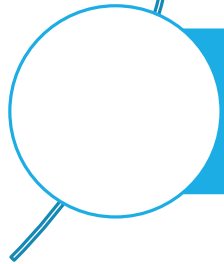
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Innovative Tools



Frugal Tools



Amendments to QoS Regulations



# THANK YOU

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**For any clarification/ information:**

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