

BEREC – EMERG –EAPEREG-REGULATEL SUMMIT

Challenges for Telecoms in the New Internet Ecosystem

**Improving the Quality of Broadband Services:
The Peruvian Experience**

Gonzalo Ruiz Díaz

Chairman of the Board



osiptel
EL REGULADOR DE LAS TELECOMUNICACIONES

INDICE

1. QoS, QoE and Customer Satisfaction
2. New trends on QoS Regulation in LATAM
3. Measuring Customer Satisfaction in Peru
4. Regulation of QoS in Peru
5. Regulation of other attributes
6. Regulation Working Group on Customer Protection
 - Current projects
 - Future agenda



1. QoS, QoE and Customer Satisfaction

QoS

Based on Networks performance

- Coverage
- Speed
- Completed/dropped calls, reliability
- Quality of voice
- Delay
- Degree of congestion

QoE

Based in user perception

- QoS
- Time of response, lines
- Clear information and advertising
- Freedom of choice
- Personal data protection
- Claim attention and solution



2. New trends on QoS Regulation in LATAM

Country	Telephony								Broadband							
	Fixed				Mobile				Fixed				Mobile			
	Service quality indicators?	Targets set?	Penalties when targets not met?	Measurement audited?	Service quality indicators?	Targets set ?	Penalties when targets not met?	Measurement audited?	Service quality indicators ?	Targets set?	Penalties when targets not met?	Measurement audited?	Service quality indicators?	Target Set?	Penalties when targets not met?	Measurement audited?
Argentina	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Brazil	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chile	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	No*	No	Yes	Yes	No*	No	Yes
Colombia	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes
Costa Rica	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
Ecuador	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Mexico	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes**	No	No	No	No	No	No	No	No
Peru	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: Cullen International and NRA websites.

* In 2013, Subtel (NRA from Chile) published a proposal for establish minimum QoS targets for Broadband, but proposal has not been approved yet.

** Mobile QoS indicators are measured only by NRA, not by operators.

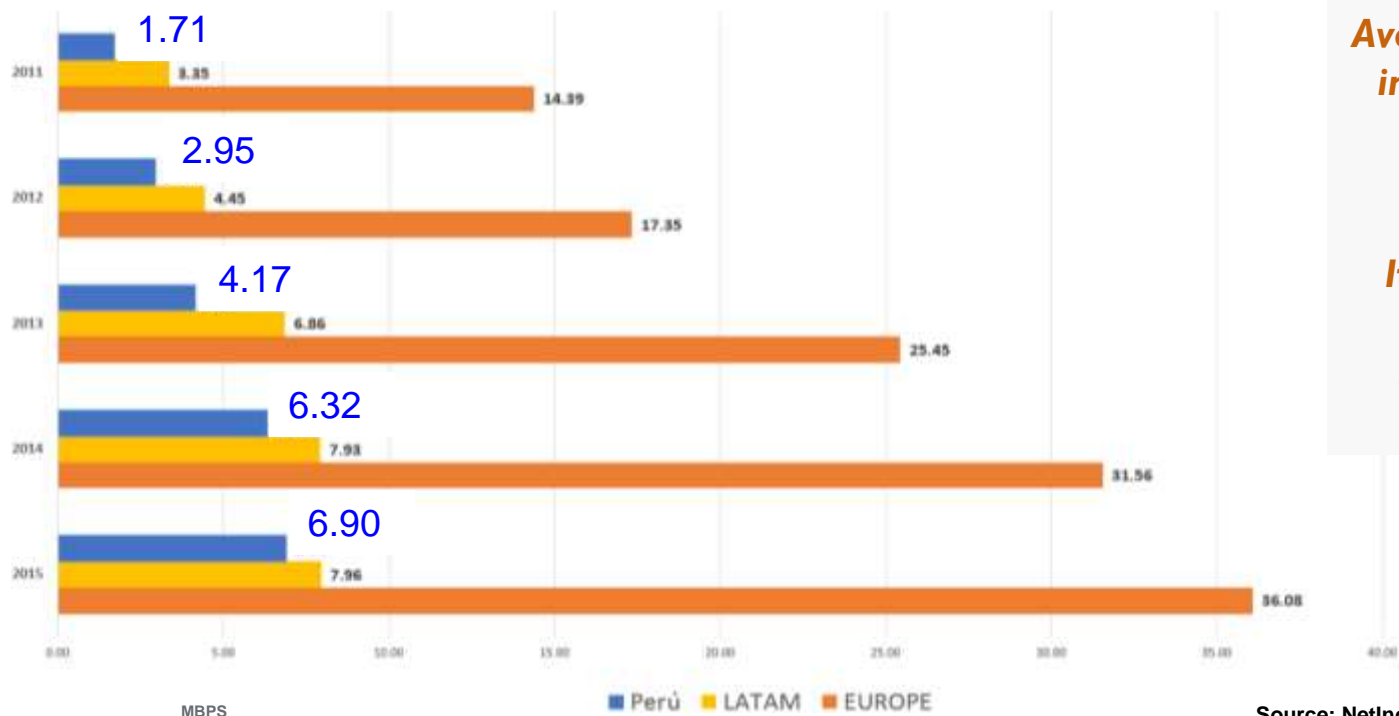
- All eight Latin American countries have imposed minimum QoS targets for Fixed and Mobile Telephony.
- 5 of 8 countries have imposed minimum QoS targets for Fixed Broadband.
- 5 of 8 countries have imposed minimum QoS targets for Mobile Broadband.

There is a marked trend in LATAM to regulate QoS by establishing indicators, target values, penalties and audits.



2. New trends on QoS Regulation in LATAM

Average Fixed Broadband Index⁽¹⁾ by Region



Average Broadband Index in LATAM is increasing, but not as fast as in Europe.

It is expected a rise of speed in Peru after Broadband National Backbone.

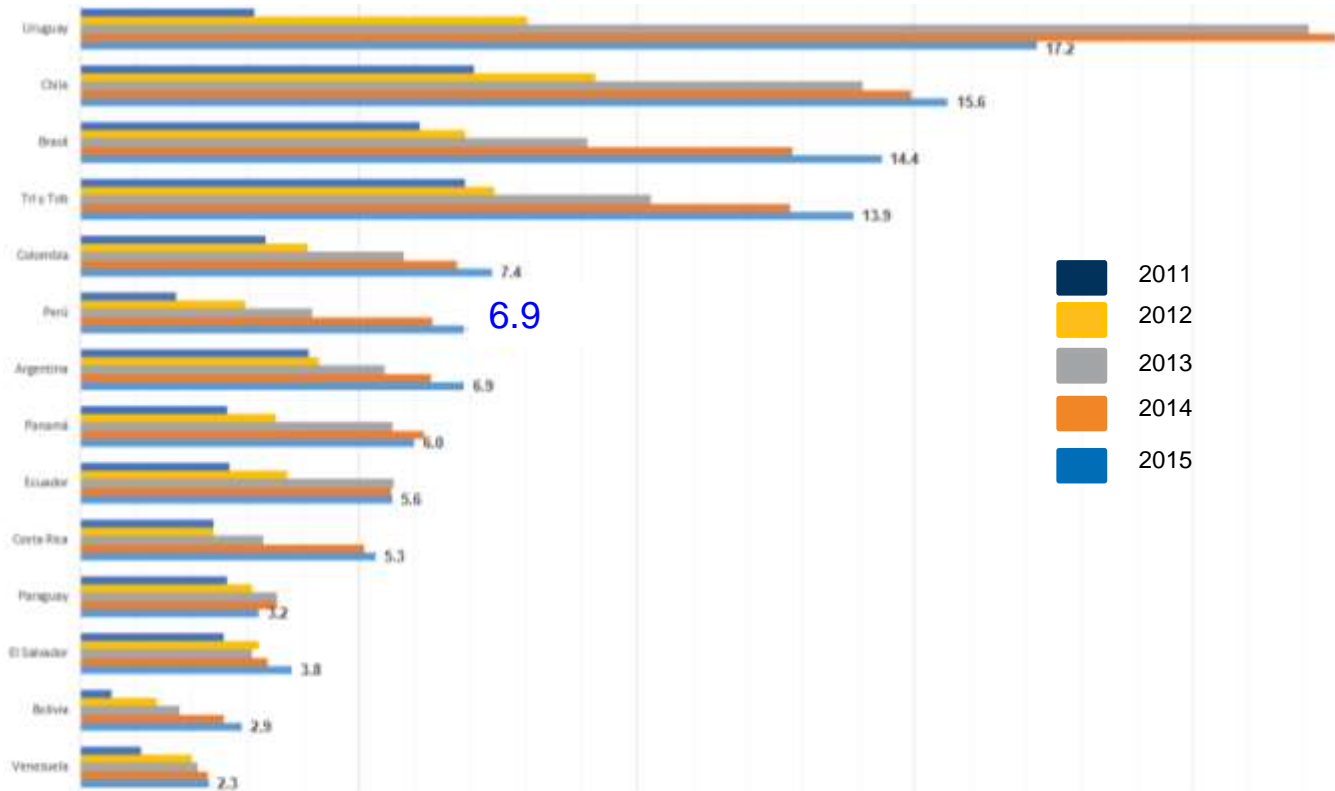
Source: NetIndex – Ookla (June 2015)

(1) **BroadBand Index**: Based on test results from Ookla Speedtest (<http://www.speedtest.net/>), this index compares and ranks consumer download speeds, mostly fixed.



2. New trends on QoS Regulation in LATAM

Evolution of Average Broadband Index by Country - LATAM

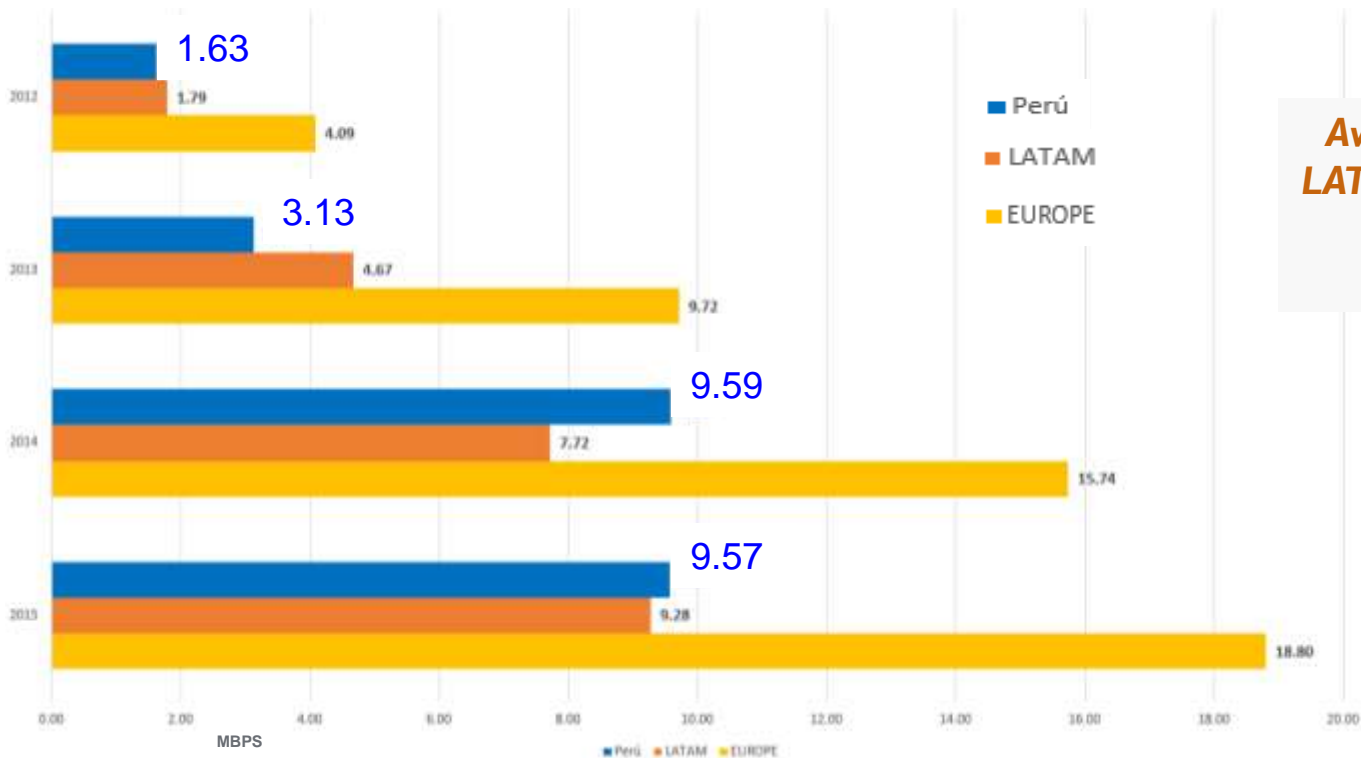


Source: NetIndex – Ookla (June 2015)



2. New trends on QoS Regulation in LATAM

Average Mobile Index⁽¹⁾ by Region



Average Mobile Index in LATAM is increasing due to adoption of LTE technology.

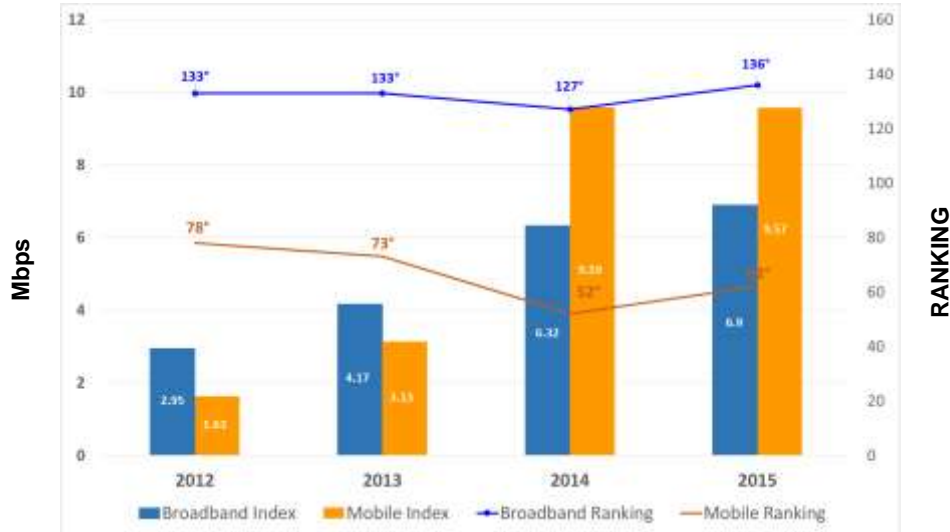
Source: NetIndex – Ookla (June 2015)

(1) **Mobile Index:** Based on test results from Ookla Speedtest iOS and Android apps (<http://www.speedtest.net/mobile/>), this index compares and ranks mobile Internet download speeds around the globe.



2. New trends on QoS Regulation in LATAM

Perú



Source: NetIndex – Ookla (June 2015)

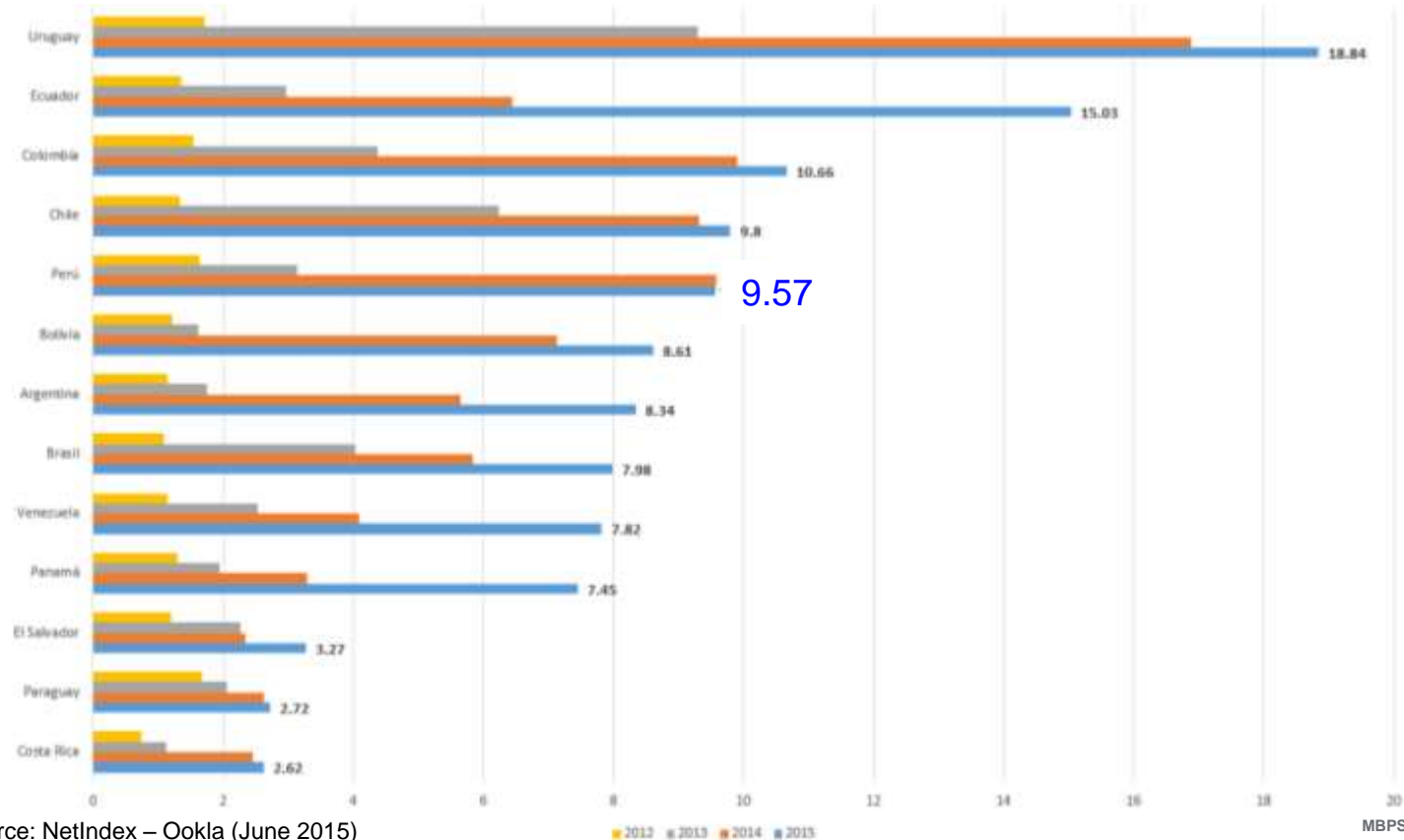
- In 2014, 4G-LTE services were launched by 3 Mobile Network Operators in Peru.

- 2 operators use AWS band (1.7/2.1 GHz) and 1 operator uses 1900 MHz Band, for 4G-LTE services.



2. New trends on QoS Regulation in LATAM

Evolution of Average Mobile Index by Country - LATAM



Source: NetIndex – Ookla (June 2015)

MBPS



3. Measuring Customer Satisfaction in Peru: Surveys (1/3)

Satisfaction of Users of Public Telecommunications Services

LEVEL OF SATISFACTION	
SERVICES	2014
Fixed Telephony	66.43
Mobile Phone	64.52
Fixed Internet access	64.84
Mobile Internet Access	66.24

Source: Study lead by Ipsos Apoyo - Feb 2014
Elaboration: OSIPTEL - GPSU

Valoration Scale	Value
Very satisfied	100
Satisfied	75
Neither satisfied / nor dissatisfied	50
Dissatisfied	25
Very dissatisfied	0

OSIPTEL has developed a methodology that measures customer preferences, based on:

- a) The quality of service provided by the operators
- b) The service provided
- c) Billing
- d) Plans and promotions



3. Measuring Customer Satisfaction in Peru: Surveys (2/3)

User Satisfaction Attributes (QoE)

QoS



ATTRIBUTES	Movistar	Claro
FIXED INTERNET SERVICE SATISFACTION		
Service Availability	59%	78%
Quality of Service (non-interrupted, non-interfered, etc.)	56%	70%
Navigation speed	55%	68%
Minimum navigation speed guaranteed (10%) (now 40%)	54%	66%
BUSINESS OFFICE ATTENTION SATISFACTION		
Waiting time for attention	34%	36%
Clarity of response	36%	35%
Problem solving	34%	33%
Ease to file a claim	38%	38%
CALL ATTENTION SATISFACTION		
Speed for answering calls	43%	46%
Clarity of response	41%	42%
Problem solving	43%	45%
Claim procedures	42%	43%

Fixed Internet Service

Source: Research by IPSOS APOYO – February 2014
Method: Top two box (Percentage of answers "Very satisfied" and "Satisfied" out of total, scale 1 to 5).
Baseline: Movistar: (1044) Claro: (188)



3. Measuring Customer Satisfaction in Peru: Surveys (3/3)

User Satisfaction Attributes (QoE)

ATTRIBUTES	Movistar	Claro
BILLING		
Delivery	59%	70%
Clarity	58%	71%
Due date	60%	68%
Billing information (correspondence with contracted ítems)	61%	67%
PLANS AND PROMOTIONS (P&P)		
Clarity of information	54%	62%
Availability of relevant information on P&P	51%	64%
P&P compliance	53%	65%
Phone Procurement	51%	66%

Fixed
Internet
Service

Source: Research by IPSOS APOYO – February 2014

Method: Top two box (Percentage of answers "Very satisfied" and "Satisfied" out of total, scale 1 to 5).

Baseline: Movistar: (1044) Claro: (188)



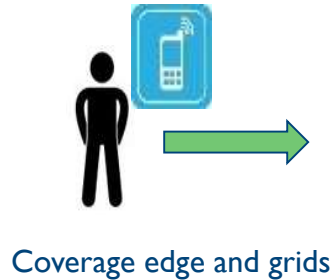
4. Regulation of QoS in Peru

For fixed and mobile services

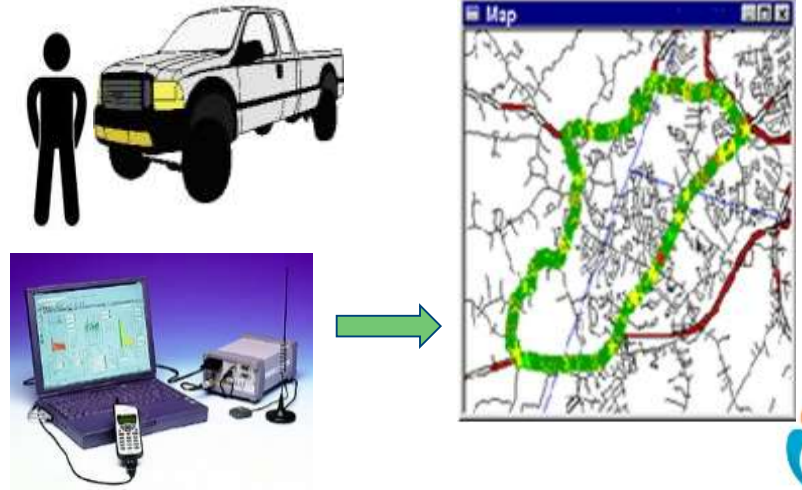
1. On field measurements. A number of measurements are collected in order to get statistical sample. Indicators calculated:

- Coverage quality
- Voice quality
- SMS end to end delivery time
- Minimum throughput accomplishment (speed test)

Technician with measurement equipment or probes deployed - automated collection:



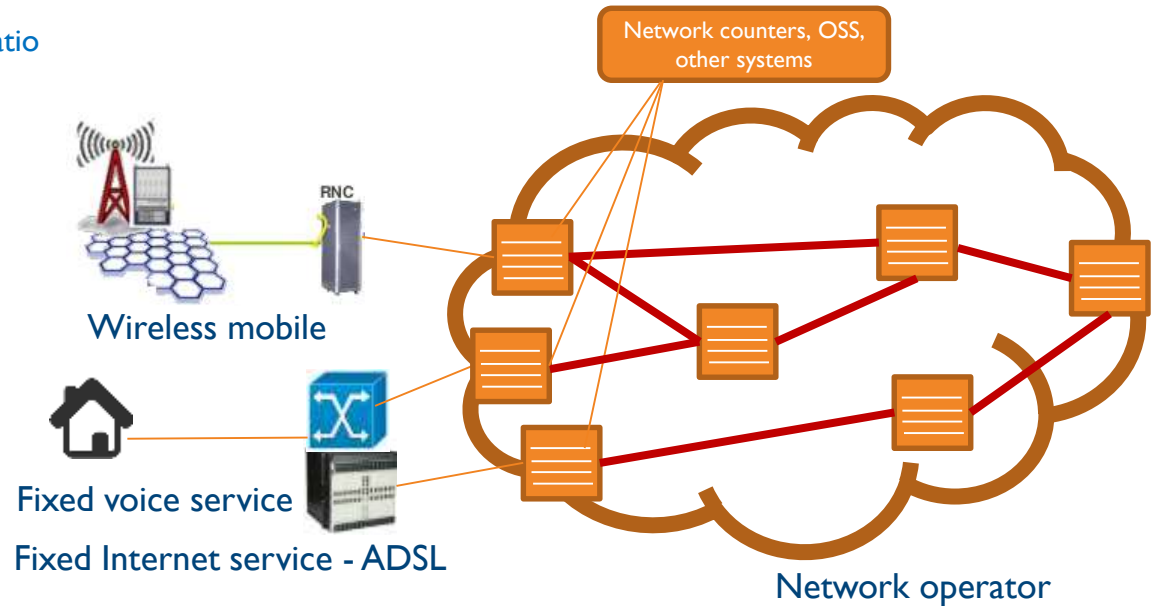
Drive Test: automated collection:



4. Regulation of QoS in Peru For fixed and mobile services

2. Network based measurement: Using data collected by operators systems. Indicators calculated:

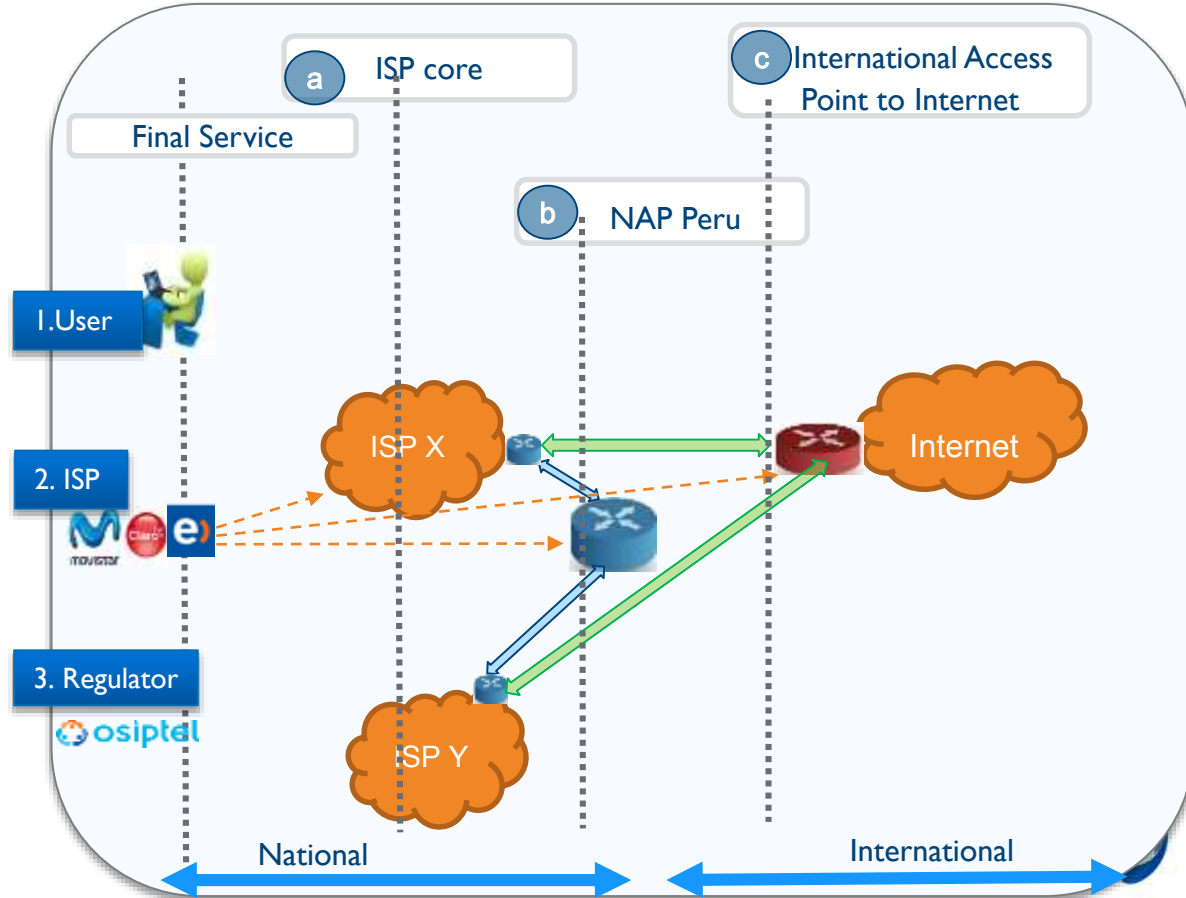
- Non successful establishment ratio
- Drop calls ratio
- Human Operator response
- Service availability



4. Regulation of QoS in Peru For fixed and mobile services

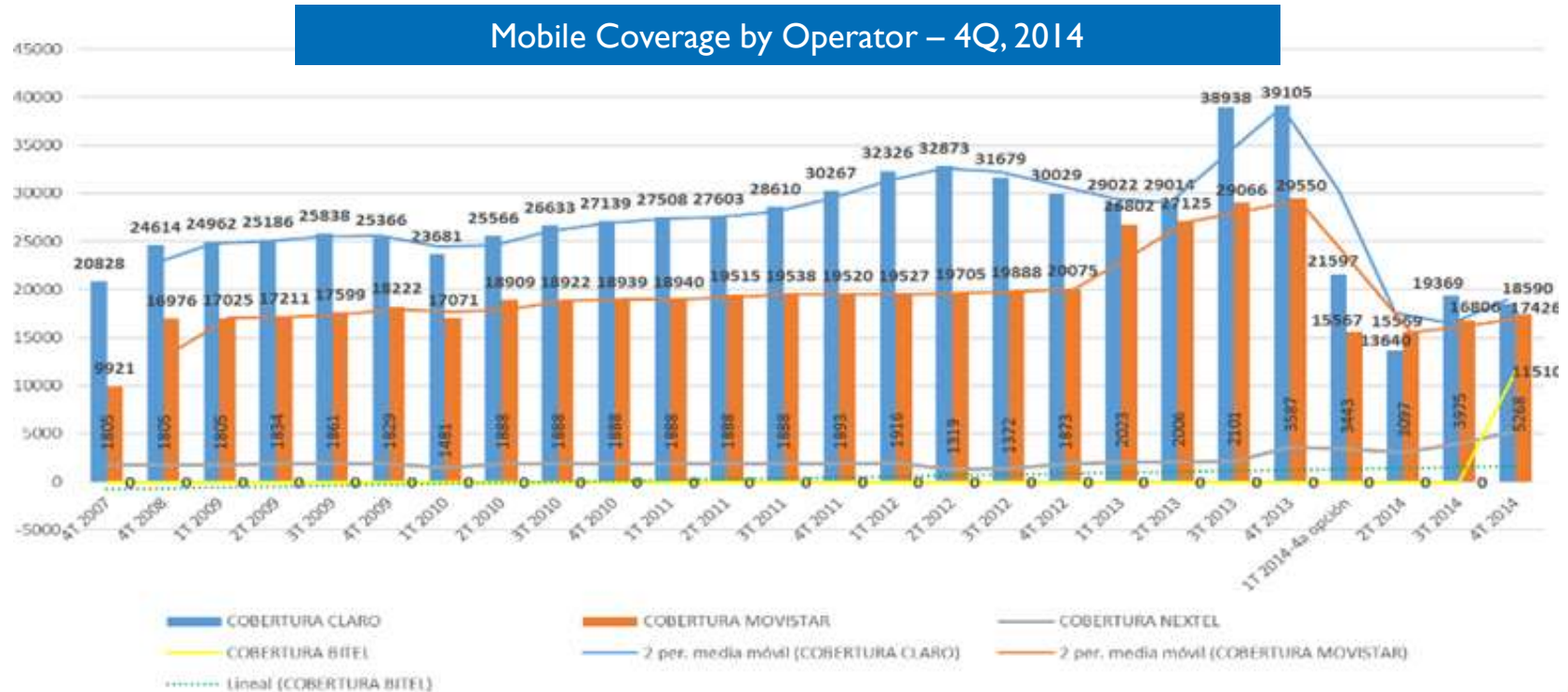
Measuring Internet Speed

- 3 points of measurement:
 - a) ISP (Core of the network)
 - b) National interchange point
 - c) International Access Point:
Datacenter: i.e. TERRAMARK
(Americas's NAP)
- Measurements are carried out by:
 - a) Users (web tools)
 - b) ISPs (If more than 100,000 subs,
must implement a monitoring
system)
 - c) Regulator (ISP must guarantee
40% of contracted speed by user)



4. Regulation of QoS in Peru: Mobile Coverage

Small Towns Coverage Evolution



Since Coverage Regulation was in force (October, 2013) reports were reviewed by operators, decreasing 50% aprox. the number of declared small towns



4. Regulation of QoS in Peru: The role of users

Service conditions in real time (QoS):

- Signal coverage – Antenna power
- QoS between operators
- Upload and Download speed
- Percentage of dropped and unsuccessful calls

TeVeo

<http://teveo.pe/>



3. Regulation of QoS in Peru: Coverage information systems

Mobile Coverage Information System

Señal Osiptel: <http://www2.osiptel.gob.pe/CoberturaMovil/>

Señal Osiptel

Información al 30/04/2015 - Visitas: 204766

Buscar COBERTURA

Ubicación:

Departamento: Arequipa

Provincia: Castilla

Distrito: Tiran

Localidad: Antapampa

Antena:

Ver cobertura Limpio

Seleccionar Operador(es):

Claro Movistar Entel

Bitel Sin Cobertura

Buscar reportes:

La información de Cobertura Móvil que figura en esta herramienta Web ha sido proporcionada por las empresas operadoras. Esta información está sujeta a verificación y modificación por Osiptel.

Ver cobertura Haga clic aquí

Se encontró 30 registros.

Departamento	Provincia	Distrito	Localidad	CLARO	MOVISTAR	ENTEL	BITEL
AREQUIPA	CASTILLA	TIRAN	ABRAMA	Si	No	No	No
AREQUIPA	CASTILLA	TIRAN	ANTAPAMPA	No	No	No	No
AREQUIPA	CASTILLA	TIRAN	AYATAYOC	No	No	No	No
AREQUIPA	CASTILLA	TIRAN	BELAVISTA	Si	No	No	No
AREQUIPA	CASTILLA	TIRAN	CARZA	No	No	No	No

Información de Estaciones Base (Sites)

Departamento: Arequipa

Provincia: Castilla

Distrito: Tiran

Empresa: N° BTS

Georeferenced views of mobile coverage reported by operators.

Users can interact with the system by sending comments (to confirm or refuse information reported)



5. Regulation of other attributes: maximum times for attention

General Indicators



Failure Attention System Rate

% of time without attention

Peer to Peer Indicators



Time for Attention Indicator

% of attentions within 15 minutes from arrival to commercial offices

Dropping out Indicator

% of users that leave offices before attention

By phone Attention Indicators



Dropped out call Indicator

% of not ended calls

Effectiveness in voice attention

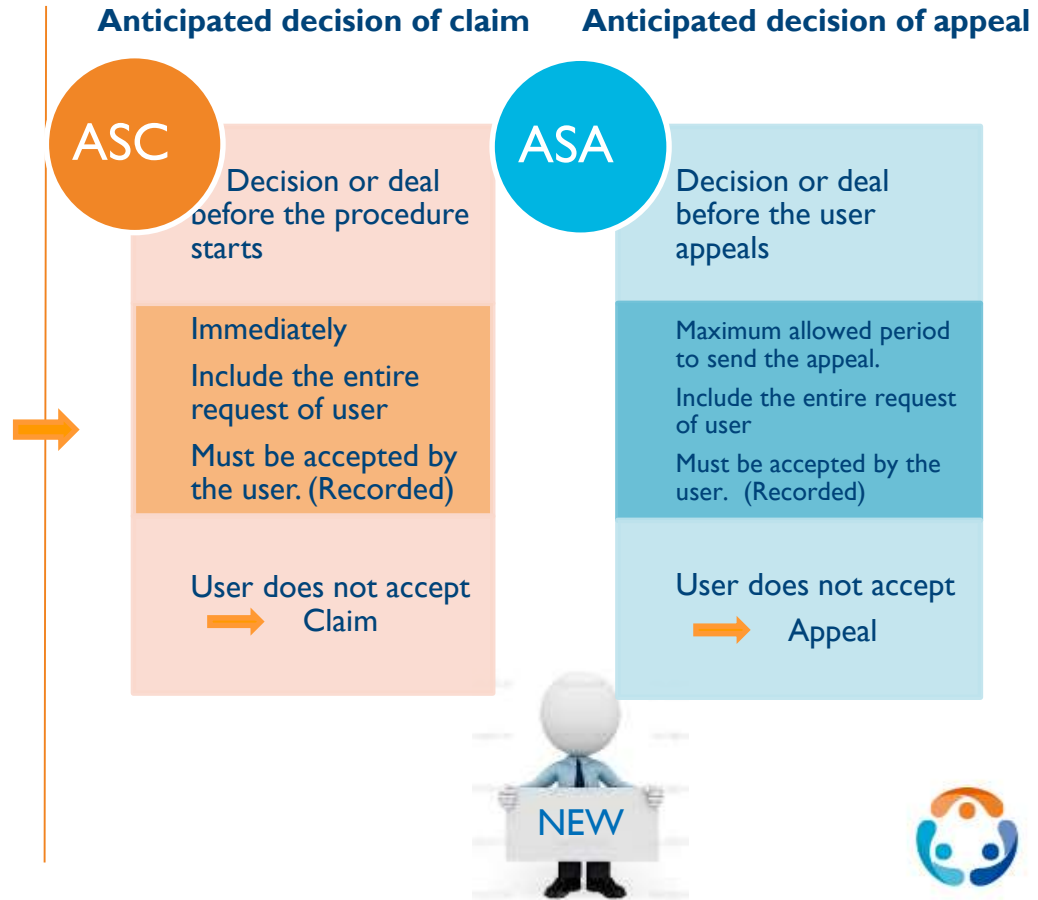
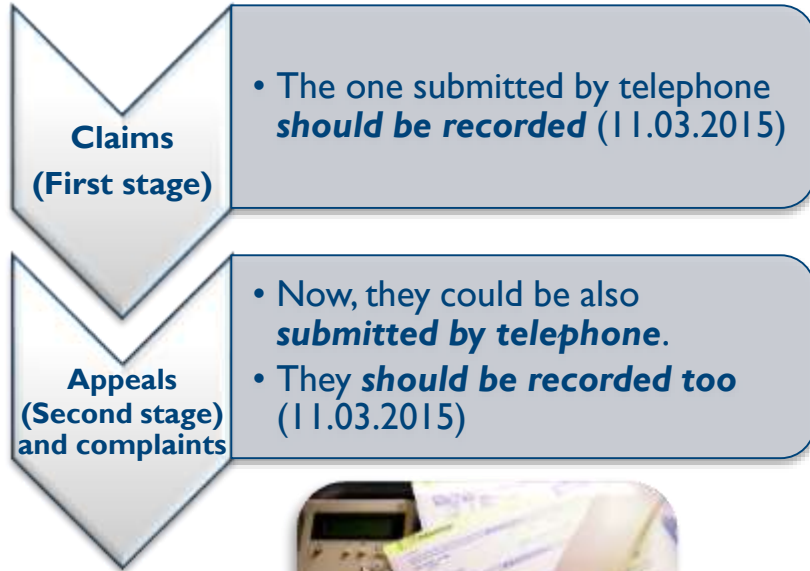
% of successful calls (time until getting in contact to a human operator)

Operators should publish monthly the results of this indicators.



5. Regulation of other attributes: New Claim Procedure Regulation

Promoting effective agreements between customers and operators



5. Regulation of other attributes: New Claim Procedure Regulation

More time to submit a claim and less time for processing it

Former Regulation

To file complaints:

Billing Claims: up to 2 months after the expiration date of the bill.

Payment request Claims: Up to 2 months after the request of payment.

New Regulation

To file complaints:

Billing Claims : Up to 2 years after the expiration date of the bill.

Payment request Claims : Up to 2 years after the request of payment.

	Resolution	Notification	Reconsideration	Notification	To send the appeal	Appeal	Notification
a) Directive	30	10	30	10	10	30	10
b) Regulation	20	5	0	0	5	25	5
c) Saving (a-b)	10	5	30	10	5	5	5

Companies
30 → 20 days
TRASU
30 → 25 days

Directive
130 days

Regulation
60 days

Procedure time is reduced in 54%



5. Regulation of other attributes: New Claim Procedure Regulation

Improving access to the claim procedure: the digital claim file



CLAIM FILES available through the operators WEBSITE.



5. Regulation of other attributes: New Claim Procedure Regulation

OSIPTEL: Closer to customers

23 Regional Offices

7 Guidance Centers
for Users



6. Regulatel Working Group on User Protection

WG Creation

- XV REGULATEL Plenary - San Jose - Costa Rica, November, 2012

1rst Meeting

- Lima – Peru. 18 - 19 September, 2013
- OSIPTEL was appointed as Coordinator of the WG
- Projects were launched
- 1rst International Seminar on Consumer Protection

Contribution to REGULATEL

- Participation on REGULATEL WG meetings and Plenary Sessions.
- Presentation of projects outcomes: regional diagnosis, WG website, QoS
- Invitation to members to present contributions

2nd Meeting

- Lima – Peru. 25 - 26 September, 2014
- Agenda in course (projects)
- Best Practice recognition: QoS and QoE
- 2nd International Seminar on Consumer Protection



6. Regulate! Working Group on User Protection

III International Seminar on Protection of Rights of Users of Telecommunications Services:

“The Role of ICT in the Protection of Rights Users of Telecommunications Services”

(01, 02 September 2015 – On line)





Fonoayuda

0-801-121-21

Facebook

 /OsiptelOficial

Twitter

@OSIPTEL